ATTACHMENT A

Mount Hope Mine Project
Water Resources Monitoring Plan

1) This Water Resources Monitoring Plan (WRMOP) has been developed by Eureka Moly, LLC (EMLLC), in conjunction with the BLM, Eureka County and Nevada Department of Wildlife (NDOW). EMLLC proposes this WRMOP to provide a means to assess impacts to water resources from the Mt Hope Mine Project, currently the subject of an Environmental Impact Statement (EIS) being conducted in the Battle Mountain BLM Mount Lewis Field office (MLFO). As such, it is based on Mt Hope Mine potential impacts to BLM-administered resources as predicted by the groundwater modeling conducted to support the EIS. EMLLC may also have additional monitoring responsibilities associated with the Water Pollution Control Permit administered by Nevada Division of Environmental Protection, water rights administered by the Nevada Division of Water Resources (NDWR), or other permit or regulatory programs. This WRMOP is intended to accompany the Plan of Operations (POO) and only addresses the POO and EIS requirements as administered by BLM.

2) EMLLC will install newly proposed monitoring wells diligently upon receipt of the Record of Decision (ROD) and acknowledgment of cultural clearance of the locations by the Nevada State Historic Preservation Office and BLM. The intent is to provide for monitoring of baseline data from the new wells prior to changes induced by pumping or pit dewatering.

3) Mitigation of project-related impacts may be required by BLM (or NDWR) based on the degree of impact identified by the data collected under this WRMOP. Potential mitigation elements and thresholds are not discussed in this document.

4) Revisions to the monitoring program may be warranted in the future. This WRMOP is considered to be a living document that will be modified to accommodate changes in the hydrologic understanding of the area, data collected, advances in monitoring methodology, and other reasons as appropriate.

5) EMLLC will be responsible for collecting, managing, and reporting monitoring data. EMLLC may propose modifications to the WRMOP based on the data collected under this plan.

6) EMLLC will provide monitoring data collected under this WRMOP on an annual basis to BLM and members of the Technical Advisory Panel. A written annual report will be provided and a meeting will be scheduled during which EMLLC will present the annual report data.

7) A Technical Advisory Panel (TAP) is proposed to provide stakeholders with access to hydrologic monitoring data and to have a venue to bring forth their comments and concerns. TAP membership and member roles and responsibilities would be developed with BLM upon project approval.

8) Peak groundwater extraction rates of up to 11,300 acre-feet annually (afa) are proposed, with the majority of groundwater coming from the Kobeh Valley wellfield and the remainder coming from pit dewatering operations. Water flowing to the pit is anticipated to come from Kobeh Valley and Diamond Valley, with the majority from Diamond Valley. Based on predicted dewatering rates, the Diamond Valley withdrawal rate will be approximately 460 gpm (740 afa) near the end of mining. The groundwater extracted for mining use will be consumptively used in processing activities of the Project (i.e. no water will be returned to the aquifer).

9) As previously stated, the purpose of this Monitoring Plan is to identify and characterize changes to the hydrologic environment that could be caused by groundwater withdrawals for the Mt Hope Mine. It is recognized that impacts to water resources may occur from natural processes, non-project related water resource development, and land management practices, as well as from the Mt Hope mining operation.

10) Specific objectives of this WRMOP are to:
- Confirm or improve the understanding of the hydro-geologic system.
- Measure changes to surface water flows and groundwater levels caused by the groundwater withdrawals for the project.
- Characterize impacts to streams, seeps and springs caused by the project.
- Evaluate impacts to vegetation and/or wildlife habitat caused by the project.
- Support periodic updates to the hydrologic model to improve the predictive quality of the model.
- Provide an early warning capability to detect adverse impacts before they become unmanageable

11) Monitoring elements include measuring water extraction, surface water (streams and springs) flow, groundwater elevations, health and trends of wetland, riparian and phreatophyte vegetative communities, water quality, and meteorological data. Pre-development data will be collected to provide a baseline against which to assess data collected after the project pumping begins.

12) Monitoring locations, parameters, and frequencies have been selected to facilitate identification and assessment of impacts. Thus, an overview of the predicted impacts is warranted:
- Significant ground water consumption in Kobeh Valley is expected to remove water from storage and lower groundwater elevations in portions of Kobeh Valley.
- Reduction of spring or surface water flows in portions of Kobeh Valley is possible as a result of the lowered groundwater levels.
- Groundwater drawdown in the extreme western portion of Diamond Valley, in the vicinity of Tyrone Gap, is predicted to occur as the open pit extends below the water table.

- Predicted impacts to groundwater in Diamond Valley are minimal. Current data suggests that the hydrologic interconnection between Kobeh Valley and Diamond Valley is limited. Historical data document a significant reduction in water levels in Diamond Valley due to extensive agricultural uses of groundwater.
- As the cone of groundwater depression propagates to the north from the well field or to the north and northwest from the pit area, it could encroach upon the southernmost or south-easternmost portions of the Roberts Mountains. This could result in reduction of spring or surface water flows or lowering of shallow groundwater tables that support wet meadow complexes and associated wildlife habitat in these areas.
- Water rights within the cone of depression could be affected: Appropriated surface waters could experience diminished flows. Appropriated groundwater could experience groundwater elevation declines which could impact well efficiencies or pumping costs.
- Ground subsidence and development of fissures at the ground surface could occur due to removal of interstitial water from a substantial volume of alluvial sediments in Kobeh Valley.
- In general, the potential for impacts increases both with proximity of a given resource to the proposed well field and with increased duration of pumping.
- Figures 1 and 2 depict the area that is predicted to experience groundwater drawdown in excess of ten feet at 44 years following project start-up. Figures 1 and 2 also show monitoring locations selected for the WRMOP.

13) Data collection completed by EMLLC will be used by EMLLC to assist in defining baseline conditions. EMLLC has also collected and compiled available water resources data and information in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas, including data collected by Eureka County, the USGS, and the NDWR. This information includes location of existing supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow rates at springs and streams, water quality, and precipitation data.

14) To provide appropriate coverage of the potentially affected area, EMLLC will construct 14 new monitoring wells and observe their water levels on a daily basis utilizing down-hole transducers and data loggers. The preliminary proposed location of these wells is shown on Figures 1 and 2; actual locations may be adjusted in consultation with the BLM, NDWR, and/or TAP. These wells are generally near the extent of the area predicted to experience drawdown in excess of ten feet at Project Year 44, and will provide a sentinel function.

15) As part of the wellfield construction, it is anticipated that a test well would be drilled near each planned production well location. The test wells would be converted to monitoring wells and equipped with down-hole transducers and data loggers for continuous monitoring. The anticipated test well/monitor well locations are within the well field corridor as shown on Figures 1 and 2.

16) In addition to collecting data, EMLLC will compile data collected by USGS, NDWR and Eureka County that is made publicly available and use this data to refine and calibrate the numeric model. EMLLC will incorporate data from the monitoring sites shown on Figures 1 and 2, provided that these data continue to be collected and made available by USGS and NDWR. Eleven USGS sites are considered to provide important coverage, and EMLLC will monitor these locations if USGS discontinues this monitoring (see Figures 1 and 2, and Table 1).

17) As provided in Figure 1, EMLLC will provide for the monitoring of flows in

- Steiner Creek in southeast Grass Valley, west of Kobeh Valley
- Pine Creek in southern Monitor Valley, south of Kobeh Valley; and
- Allison Creek in Antelope Valley, south of Kobeh Valley.

These regional streams will serve as analogs to provide improved understanding of seasonal or regional conditions that may be impacting the flows in perennial streams. Stage- flow relationships will be established at these locations and the streams will then be equipped with pressure transducers to allow continuous measurement.

18) The information collected pursuant to this WRMOP will be entered by EMLLC into a project database on a regular basis, once it has been checked for laboratory quality control and quality assurance procedures, generally reflecting the monitoring interval.

19) EMLLC has developed a numeric model to simulate the groundwater flow system and the model will be updated to incorporate the data collected for this WRMOP. EMLLC will update the model after recovering 6 months of post-operational monitoring data. Thereafter, EMLLC will update the model on a schedule to reflect the requirements of the BLM.

20) EMLLC will analyze water chemistry to assist in evaluating water source contributions for the specific monitoring locations.

21) EMLLC will implement documented quality assurance and quality control procedures. Monitoring data will be recorded using a standardized (NDEP-compliant) protocol and format for each monitoring event. Protocols will be submitted to BLM for approval. It is anticipated that protocols will be based on those described by Rantz and others (1982) for surface water flow monitoring, Lapham and others (1995) for groundwater level monitoring, and Wilde (2005) for water sampling. Laboratory analyses will be conducted by Nevada-certified laboratories using standard laboratory quality control procedures.

22) EMLLC will survey production wells, monitoring wells and surface water locations to establish ground surface and measuring point elevations.

23) Tables 1 and 2, provided at the end of this document, lists the proposed monitoring site locations, type of monitoring, monitoring frequency and a brief rationale for selecting

each location, Wells identified in Table 1 include both existing wells and wells that EMLLC proposes to construct upon project approval. Some wells are located within pit limits that would be mined out as the project advances, and these locations would be dropped from the monitoring plan at that time. Site locations are shown on the attached figures. The monitoring sites in Tables 1 and 2 are organized by locations corresponding to those shown on the attached figures. The monitoring sites were selected in consideration of the type of data to be collected and the potential impact they are designed to evaluate and assess, as described below.

a. Production Wells: Extraction rates and groundwater levels will be measured continuously (daily readings following an initial period of hourly readings) in production wells.

b. Monitor Wells: Monitoring wells provided in Figure 1 and 2, and as amended in the future under this plan will be monitored to determine depth to groundwater, according to the frequency provided in Table 1. This data is anticipated to assist in characterizing the extent of drawdown within the well field and open pit areas and the propagation of the drawdown away from those areas. Transducers will be placed in the new monitoring wells to provide for continuous monitoring (daily readings following an initial period of hourly readings). It is recognized that the data collection frequency may be adjusted at BLM's direction

c. Surface Waters: Selected springs and surface flow sites in Kobeh Valley, Diamond Valley, and Pine Valley will be monitored to determine flow rates. Continuous flow recording devices will be installed at Roberts Creek, Pete Hanson Creek, Birch Creek, South Fork of Henderson Creek, Vinini Creek, and Tonkin Springs. For low flow conditions or where flow is diffuse on the ground surface, flow measurements may not be practicable, and flow would be estimated.

   Site selection for surface water flow monitoring seeks to generally measure flow within perennial reaches, while considering aspects such as accessibility and channel morphology. At each site, flows and depths will be measured monthly to establish a stage-flow relationship. Pressure transducers will be installed for hourly measurement of head, which will be converted to flow via the stage-flow relations.

d. Baseline chemistry analyses will be completed at all water monitoring sites provided within this plan. Future water chemistry analyses will be conducted as warranted. The suite of baseline parameters will consist of NDEP Profile II constituents plus isotopes of oxygen and hydrogen.

e. Vegetation monitoring will be conducted on transects to represent four wet meadow complexes in the Roberts Mountains to measure species composition, species richness, and plant cover. Minimal impact (hand-augered) monitoring wells or other field assessment will be conducted to identify the source of water

that supplies these meadows. The four wet meadow complexes include a pair relatively close to the open pit and well field, and a pair outside of the predicted area of drawdown.

Vegetation monitoring will also be conducted at representative transects in the lower portions of Kobeh Valley and in the lower portions of Roberts Creek. Vegetation monitoring will also be conducted in the Roberts Mountains to augment the larger-scale remote-sensing monitoring described in subsection "f" below.

f. Remote sensing will be conducted to assess vegetation distribution in the Roberts Mountains. The remote sensing will allow the relatively large areas to be monitored economically, provide a more extensive monitoring data set and reduce potential observer bias.

g. Precipitation data will be collected hourly at the existing meteorological station located at Mt Hope. High altitude precipitation storage and measuring sites will be established in the Roberts Mountains, to help in understanding the relationship between precipitation and elevation in this area. Regional data from BLM or NOAA stations will also be evaluated periodically to better define regional and local meteorological inputs.

h. Macroinvertebrate monitoring will be conducted in Roberts Creek, Henderson Creek and Vinini Creek to provide an indication of the ecological health of these streams.

i. Subsidence monitoring will be conducted in Kobeh Valley to measure ground subsidence in response to production water pumping, identify the formation of any fissures caused by pumping, and quantify the rate of growth of any fissures that develop from pumping.

REFERENCES

Lapham, W.W., Wilde, F.D., and Koterba, M.T., 1995, *Ground-water data collection protocols and procedures for the National Water-Quality Assessment Program: Selection, installation, and documentation of wells, and collection of related data:* U.S. Geological Survey Open-File Report 95-398, 70 p.

Rantz, S.E., et al., 1982. *Measurement and computation of streamflow,* U.S. Geological Survey Water Supply Paper 2175, Volumes 1 and 2, 631 p.

Wilde, F.D., 2005, *National field manual for the collection of water-quality data:* Book 9, Handbooks for Water-Resources Investigations, U.S. Department of the Interior and the U.S. Geological Survey.

Table 1 – Hydrologic Monitoring

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale / Target
Diamond Valley Groundwater	GMI-PDT-1	Depth to Water	Continuous	Vinini hornfels	Pit area groundwater drawdown monitoring
	GMI-PDT-2	Depth to Water	Continuous	Vinini and hornfels	Pit area groundwater drawdown monitoring
	GMI-PDT-3B	Depth to Water	Continuous	Vinini Hornfels	Pit area groundwater drawdown monitoring
	IGMI-152	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-155	Depth to Water	Continuous	Qtz Porphyry	Pit area groundwater drawdown monitoring
	IGMI-156	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-157	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGM-169	Depth to Water	Continuous	Vinini Hornfels	Pit area groundwater drawdown monitoring
	IGMI-226P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-228P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-230P	Depth to Water	Continuous	Tuff	Pit area groundwater drawdown monitoring
	IGMI-232P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-233P	Depth to Water	Continuous	Tuff	Pit area groundwater drawdown monitoring
	IGMI-MH-248	Depth to Water	Continuous	Bedrock	Pit area groundwater drawdown monitoring
	NDWR-15462	Depth to Water	Continuous	Alluvium	Pit area groundwater drawdown monitoring
	MH-300	Depth to Water	Continuous	Alluvium	Monitoring groundwater gradient changes in Tyrone Gap with MH –

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
					301
Diamond Valley Groundwater	MH-301	Depth to Water	Continuous	Alluvium	Monitoring groundwater gradient changes in Tyrone Gap with MH – 300
	MH-302	Depth to Water	Continuous	Alluvium	Monitor influence of potential increased transmissivity zone through Whistler Range.
	MH-303	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH-304	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH-305	Depth to Water	Continuous	Alluvium	Monitor drawdown east of pit.
	IGMI-158	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	IGMI - 236P	Depth to Water	Continuous	Vinini Fm	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	Romano Well	Depth to Water	Continuous	Vinini Fm	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH – 306 (153 N21 E52 10AAAC1)	Depth to Water	Continuous		Monitor groundwater elevation trend on west side of Diamond Valley
	MH – 307 (153 N20 E52 26AABC1)	Depth to Water	Continuous		Monitor groundwater elevation changes in Devil's Gate.
	MH – 308 (153 N20 E52 26AABC2)	Depth to Water	Continuous		Monitor groundwater elevation changes in Devil's Gate.
Diamond Valley Springs	KV-059 (Stinking)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-060 (Hash)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	KV-061 (Railroad)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-062 (Trap Corral)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	DV -065 (Shipley)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-1 (McBride)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-2 (Garden pass)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-3 (unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-4 (Mt Hope)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-7 (unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
Kobeh Valley Groundwater	All production wells	Flow and Depth to Water	Continuous	Alluvium and carbonate	Measure well field production, individual well response to pumping stress, and drawdown progression in wellfield
	GMI-RWX-228T	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	GMI-RWX-229	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	RWX -205	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH-400	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in alluvium on west side of Whistlers paired w/ MH-401 to assess connection between alluvium and bedrock aquifers; assess effect of inferred structure located to the east.
	MH-401	Depth to Water	Continuous	Bedrock	Monitor groundwater elevation

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
Kobeh Valley Groundwater					change in bedrock on west side of Whistlers paired w/ MH-400 to assess connection between alluvium and bedrock aquifers; assess effect of inferred structure located to the west.
	MH-402	Depth to Water	Continuous	Alluvium	Monitor drawdown at east edge of Kobeh Valley.
	MH-403	Depth to Water	Continuous	Alluvium	Monitor potential drawdown in upper Roberts Creek; Sentinel.
	MH-404	Depth to Water	Continuous	Bedrock	Monitor potential drawdown in western part of Robert's Creek watershed; Sentinel.
	MH – 405	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 406	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 407	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 408	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 409	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 410	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 411	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 412	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area
	MH- 413	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	MH - 414 (139 N21 E49 25BBDA)	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	MH - 415 (139 N21 E50 17BACC)	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	MH - 416 (139 N20 E51 05CBCC)	Depth to Water	Continuous	Alluvium	Monitoring of south side of KV wellfield drawdown
	MH - 417 (139 N21 E51 36DCDB1)	Depth to Water	Continuous	Alluvium	Monitoring of southeast side of KV wellfield drawdown
	MH -418 (139 N21 E51 24DDDB1)	Depth to Water	Continuous	Alluvium	Monitoring of southeast side of KV wellfield drawdown
	MH – 419 (139 N20 E49 23ACCB1)	Depth to Water	Continuous	Alluvium	Monitoring of drawdown between wellfield and Bean Flat phreatophytes
	MH – 420 (139 N20 E49 24ACAB)	Depth to Water	Continuous	Alluvium	Monitoring of drawdown between wellfield and Bean Flat phreatophytes
	MH – 421	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	RWX - 209 shallow and deep	Depth to Water	Continuous	Alluvium /Vinini	Monitoring of northwest side of KV wellfield drawdown
	MRCMW	Depth to Water	Continuous	Alluvium	Monitoring of potential drawdown in Roberts Creek watershed
	LRCMW	Depth to Water	Continuous	Alluvium	Monitoring of potential drawdown in Roberts Creek watershed
	IGM-154,	Depth to Water	Continuous	Alluvium	Pit area groundwater monitoring
	IGMI-234P	DTW and Chemistry	Continuous	Alluvium	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	IGMI-235P	DTW and Chemistry	Continuous	Vinini Fm	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	IGMI-237P	DTW and	Continuous	Vinini Fm	Monitor groundwater elevation

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
		Chemistry			change in Whistler Range; Sentinel well.
	TM1-B	DTW and Chemistry	Continuous	Alluvium	Monitoring of east side of KV wellfield drawdown
	Atlas 1	DTW/ pressure	Continuous	Alluvium	Monitoring northwest of predicted 10 foot drawdown contour
	Bartine Ranch Well 1, 2, 3 (flowing)	DTW/pressure	Continuous	Alluvium	Assess impact of pumping on artesian flows outside predicted 10 foot drawdown contour
	Big Windmill	DTW/pressure	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area
	Colby well	DTW/pressure	Continuous	Alluvium	Assess impact of pumping on artesian flows outside predicted 10 foot drawdown contour
	KV 064	DTW/pressure	Continuous	Alluvium	Assess impact of pumping on artesian flows outside predicted 10 foot drawdown contour
	Depco INC;	DTW/pressure	Continuous	Alluvium	Monitoring of drawdown between wellfield and Bean Flat phreatophytes
	Etcheverry Windmill	DTW/pressure	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	IGMI-MH-RWX-203 T	DTW/pressure	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area
	NDWR9211R	DTW/pressure	Continuous	Alluvium	Assess impact of pumping on artesian flows outside predicted 10 foot drawdown contour
	RWX- 204	DTW/pressure	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area
	KFE	DTW/pressure	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between

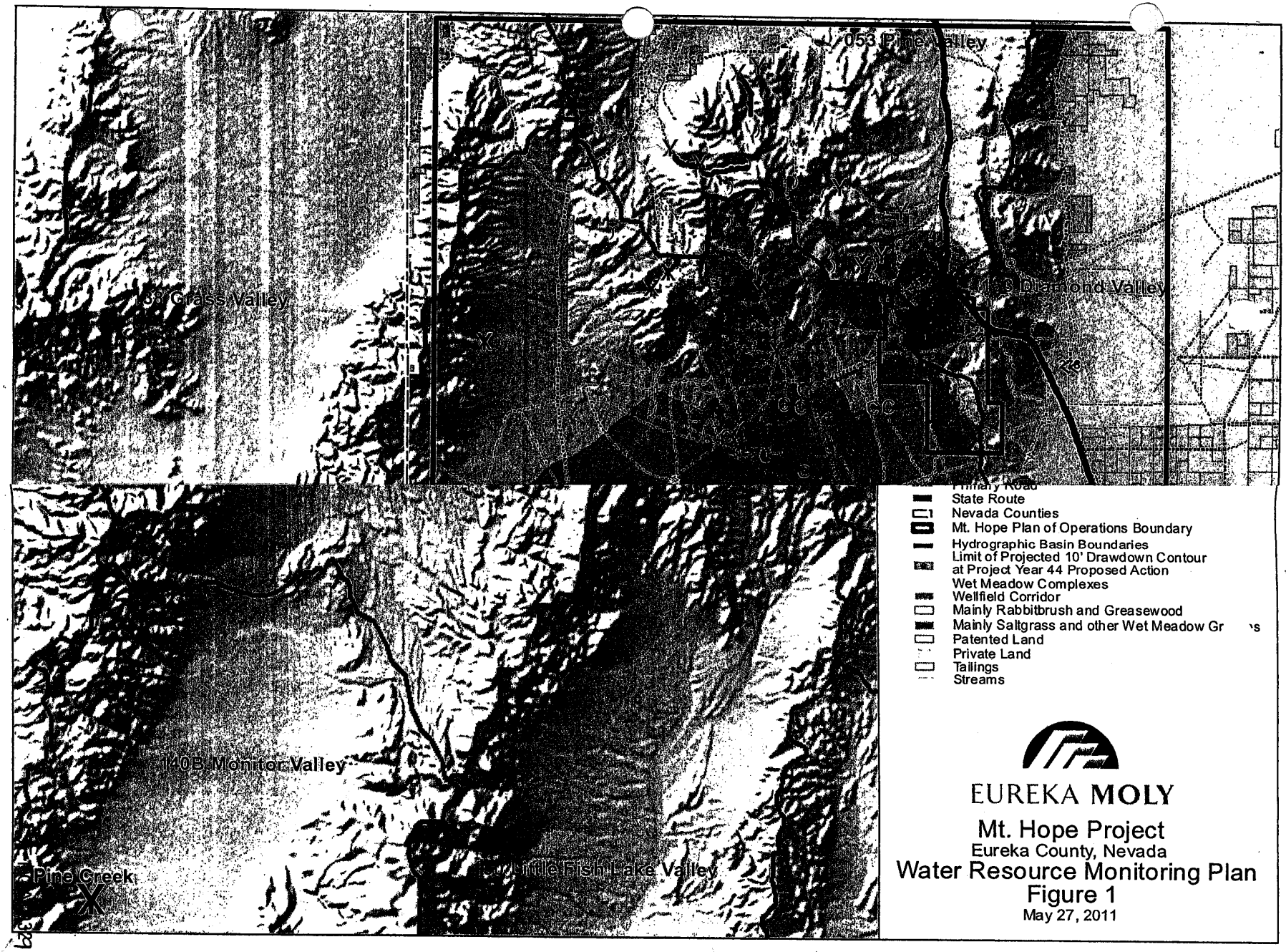
Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
					wellfield and pit area
	KFW	DTW/pressure	Continuous	Alluvium	Monitoring northwest of predicted 10 foot drawdown contour
	Treasure Well	DTW/pressure	Continuous	Alluvium	Assess impact of pumping on artesian flows outside predicted 10 foot drawdown contour
	GMI-RWX-223	DTW/pressure	Continuous	Alluvium	Measure drawdown progression in wellfield
Kobeh Valley Streams	LRC (Lower Roberts Creek)	Flow Rate; Water Quality	Continuous		Potential indirect impacts to perennial streams
	URC (Upper Roberts Creek)	Flow Rate; Water Quality	Continuous		Potential indirect impacts to perennial streams
	MH 700 (Cottonwood Canyon)	Flow	Continuous		Potential indirect impacts to perennial streams
	MH 701 (Cottonwood Canyon)	Flow	Continuous		Potential indirect impacts to perennial streams
Kobeh Valley Springs	KV-002 (Potato Canyon)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-026 (Rutabega)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts near wellfield
	KV-034 (Mud)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts near wellfield
	KV-035 (Lone Mtn)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts south of wellfield
	KV-044 (Hot)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-015 (Unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-016 (Unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-020 (Unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	OT-6 (Unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	OT-7 (Nichols Spring)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	MH - 702 (Jack Spring)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts, west side of Roberts Mtn.
	MH – 703 (Klobe Spring)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts in Antelope Valley
Pine Valley Springs	PV-059 (Dry Creek headwater spring)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-060	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-061	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-062	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-063	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-064	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	PV-065	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
Pine Valley Springs	OT-2	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	OT-3	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	OT-5	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	OT-10A	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	OT-11	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
Pine Valley Streams	LBC (Lower Birch Cr.)	Flow Rate	Continuous		Potential indirect impacts to perennial streams
	LHC (Lower Henderson	Flow Rate	Continuous		Potential indirect impacts to

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	Cr.)				perennial streams.
	UHC (Upper Henderson Cr.)	Flow Rate	Continuous		Potential indirect impacts to perennial streams
	LPHC (Lower Pete Hanson Cr.)	Flow Rate	Continuous		Potential indirect impacts to perennial streams.
	UPHC (Upper Pete Hanson Cr.)	Flow Rate	Continuous		Potential indirect impacts to perennial streams.
	Tonkin Springs	Flow Rate	Continuous		Potential indirect impacts to perennial streams
	LVC (Lower Vinini)	Flow Rate	Continuous		Potential indirect impacts to perennial streams.
	UVC (Upper Vinini Cr.	Flow Rate	Continuous		Potential indirect impacts to perennial streams.
	WC (Willow Cr.)	Flow Rate	Continuous		Potential indirect impacts to perennial streams.
Pine Valley Groundwater	MH-500	Depth to Water	Continuous	Bedrock	Sentinel well in mountain block south of Henderson Creek
	MH-501	Depth to Water	Continuous	Alluvium	Henderson Creek groundwater elevations
	MH-502	Depth to Water	Continuous	Bedrock	Sentinel well in mountain block east of springs in upper Henderson Creek

Table 2 - Biological and Meteorological Monitoring

Area	Site Name(s)	Parameters	Frequency
Wet Meadow Complexes in Roberts Mountains	Three to five vegetation transects in each of the WMC, locations to be determined;	Species composition, species richness, and plant cover.	Semi-Annually (May and July)
Phreatophytic vegetation in lower Kobeh Valley	Three to five vegetation transects in each of the phreatophyte vegetation communities, locations to be determined;	Species composition, species richness, and plant cover.	Transects - Semi-Annually (April and June);
Phreatophytic and riparian vegetation in lower Roberts Creek	Three to five vegetation transects in the watershed, locations to be determined	Species composition, species richness, and plant cover.	Transects - Semi-Annually (April; June);
Phreatophytic and riparian vegetation in Henderson Creek	Three to five vegetation transects in the watershed, locations to be determined	Species composition, species richness, and plant cover.	Transects - Semi-Annually (April; June);
Roberts Mountain	Not applicable	Remote sensing (Aerial photography or satellite imagery)	Initially for entire mountain; Every two years for riparian areas.
Streams in Roberts Mountains.	Roberts Creek, Vinini Creek, Henderson Creek	Macro-invertebrate monitoring	Annually (late summer/early fall base flow)
Mine site	Existing Mt Hope met station	Temperature, precipitation, humidity, wind speed and wind direction	Hourly
Roberts Mountains	Minimum of 3 high-altitude sites in Roberts Mountains, locations to be determined.	Precipitation	To be determined



EUREKA **MOLY**

Mt. Hope Project

Eureka County, Nevada

Water Resource Monitoring Plan

Figure 1

May 27, 2011

ATTACHMENT B

ATTACHMENT B

COST ESTIMATES FOR MITIGATION FUNDING

Mitigation costs were developed by including two springs (Mud Spring and Lone Mountain Spring) and one domestic well at Roberts Creek Ranch that meet the approach described in the 3M Plan. For purposes of this cost estimate, this approach includes:

1. The resource must lie within the 5-foot drawdown contour in the first five years (expanded to ten years to be conservative) of project-related groundwater pumping
2. The resource is in the alluvial basin, and
3. The resource could potentially be adversely impacted according to Nevada Water Law.

While Lower Roberts Creek carries a water right, it has been determined through previous studies and Ruling 6127 that this surface water source will not be adversely affected by the groundwater pumping by the project. Similarly, the previous studies indicate that sources in the mountain block are not directly connected to the groundwater aquifer, so are not predicted to be adversely impacted. It should be noted that while Lone Mountain Stockwater Well, Wagon Well, Garden Spring, McBrides Spring, and Mt. Hope Spring may meet one or two of these criteria, they do not meet all three required for this pre-determined mitigation, specifically:

- Drawdown at Lone Mountain Stockwater Well is predicted to be 13 feet at the end of ten years of pumping, and is not considered to constitute an adverse impact.
- Drawdown at Wagon Well is predicted to be 5 feet at the end of ten years of pumping, and is not considered to constitute an adverse impact.
- Garden Spring, McBride Spring and Mt Hope Spring are in the mountain block and not predicted to be adversely impacted. In addition, the water rights associated with these springs are held by BLM (PWR claims) and BLM and EMLLC have stipulated an agreement to resolve potential adverse impacts to these sources.

Drawdown predictions used for the cost estimate in this 3M are taken from the hydrology model that was submitted to support the environmental analysis in the Mt Hope EIS and in the Nevada State Engineer's (NSE) 2010 water rights hearings. For the EIS analysis and NSE hearings, the hydrologic model was used to plot the ten-foot drawdown contour. For both the BLM and NSE assessments, the ten-foot drawdown contour was deemed appropriate in identifying potential impacts. EMLLC agrees that the ten-foot contour is appropriate for these analyses, but has accommodated Eureka County's request to base mitigation financial assurance on the five-foot contour. Thus, the use of the five-foot contour to estimate costs for potential mitigation provides a conservative assessment of potential adverse impacts.

All of the aforementioned sites and their spatial relation to the project area, the proposed pumping corridor, and the drawdown contours may be seen on the attached map titled, "5 and 10 Year Drawdown Contours".

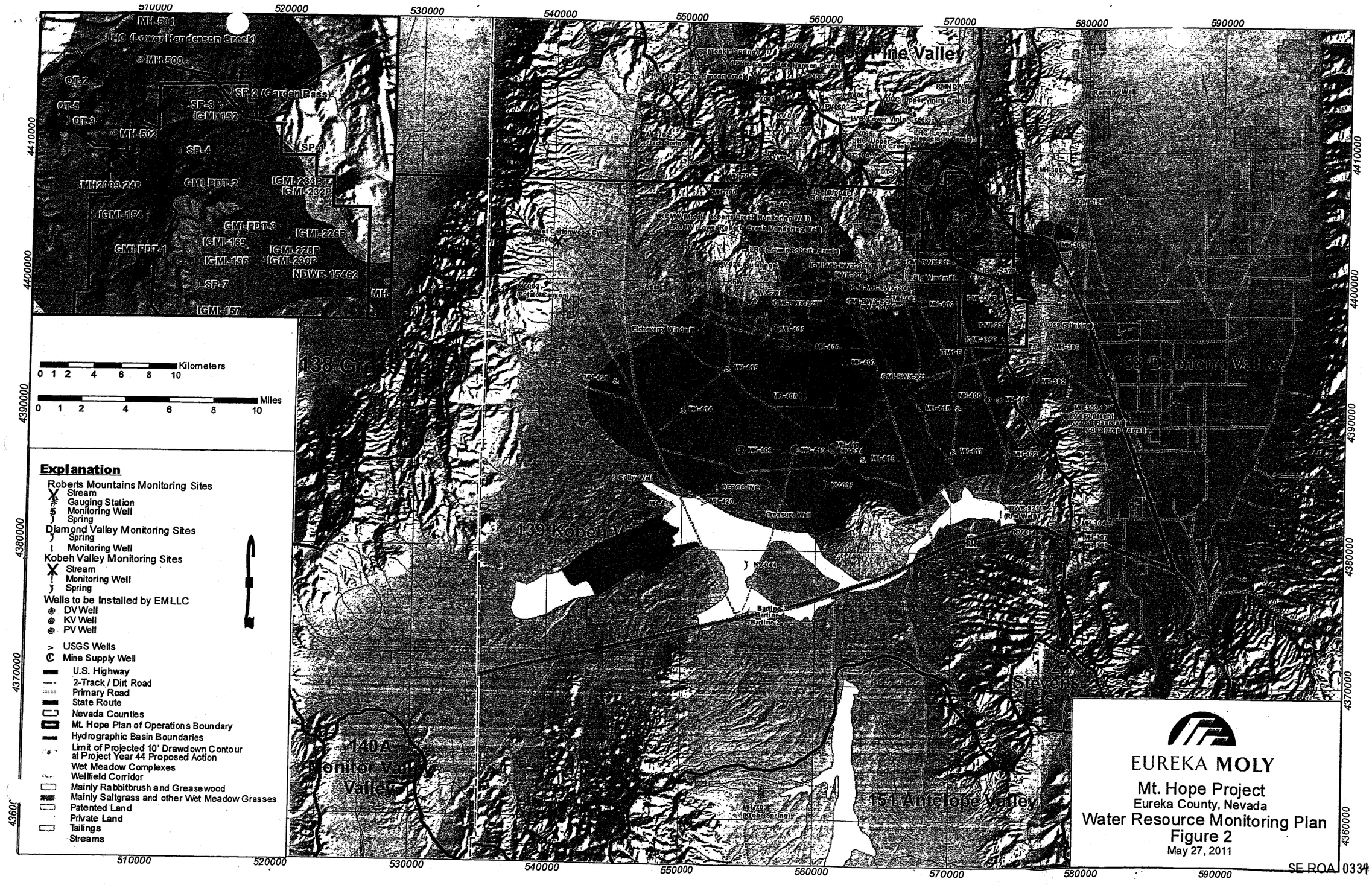
The proposed mitigation for the springs includes the drilling and completion of new wells to access the source water, installation of solar-powered pumps and piping, and the addition of stock tanks with float indicators and heaters to ensure water will continue to be available for stock watering. The domestic well owner will be paid for incremental operating costs due to higher pumping heads to take into account the lowering of the groundwater table.

The costs were determined from vendors or in-house cost information from similar projects. The cost of the new wells to replace the spring flows was estimated at $125 per linear foot for drilling and completion, plus $2,500 per well to cover mobilization costs. The solar power packages each include a 2-horsepower pump and the miscellaneous costs include stock tanks, additional parts, and labor to set up the monitoring systems. For cost estimating, an assumption was made that the wells would be 100 feet in total depth.

Pumping requirements for the domestic well was estimated to be an additional 23 feet of lift based on potential drawdown as derived from the hydrologic model at Year 10. Using a pump efficiency of 70% and a pumping rate of 7.5 gpm for 4 hours per day to deliver a 2 afa domestic water right, an incremental additional requirement of 0.06 horsepower is derived. The incremental operating costs are then determined to be $23 per year, based on a power cost of $0.35/kWh (small unit generator).

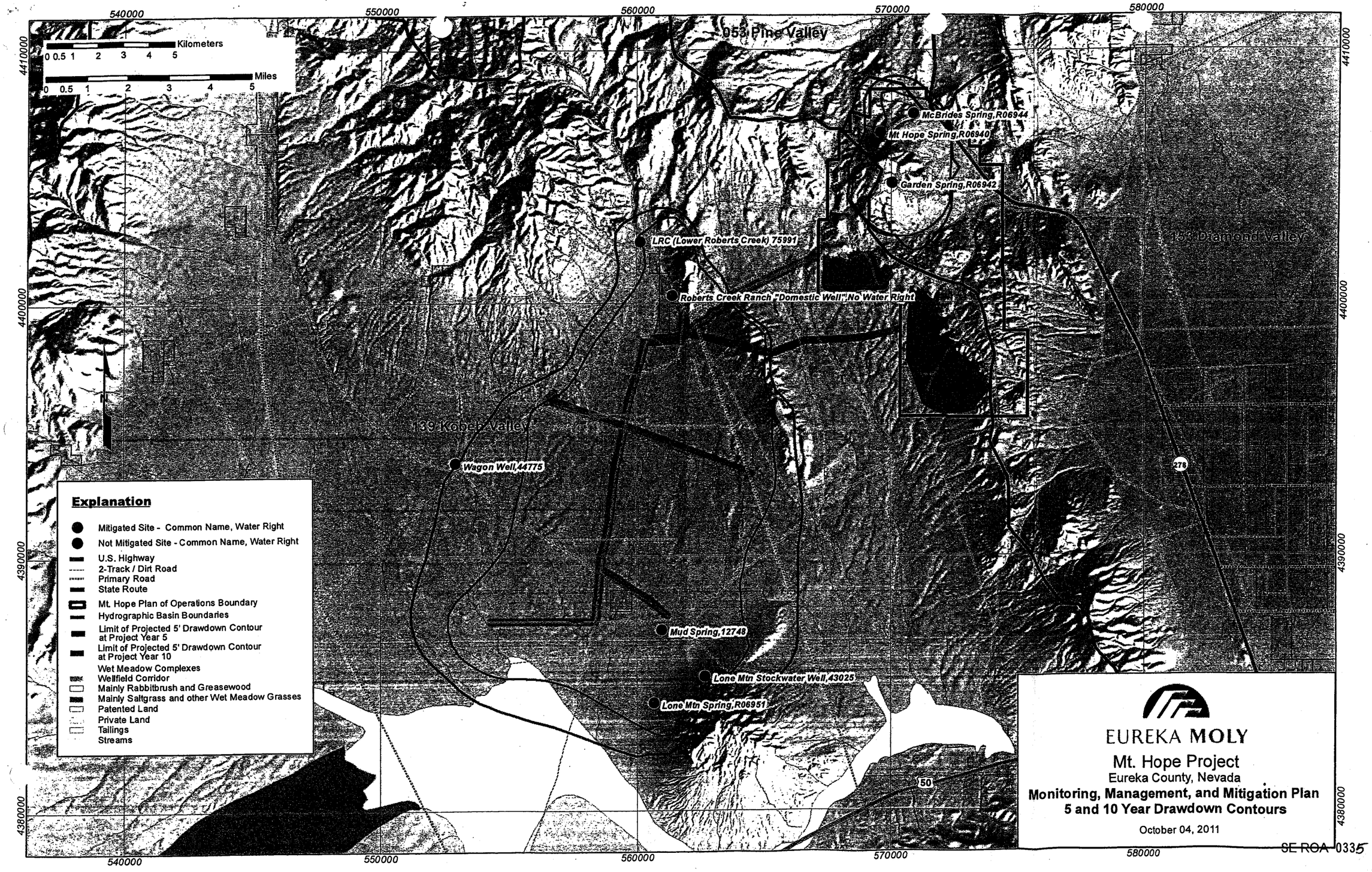
Annual operation and maintenance costs for the solar-powered pump systems are estimated at 5% of the installation costs and are applied for a ten year period. Monitoring, for the purposes of this mitigation, is considered for a period of the first five years of pumping and an additional five years beyond to year 10. The scope includes continuous monitoring/recording of pumping rates at each production well, flow rates at surface monitoring sites and groundwater levels at each production and monitoring well. Monitoring costs are estimated based on quarterly site visits by two staff personnel for three days to download recorded data plus a full week per year for a single staff member to compile an annual report. This estimate totals to 29 personnel-days per year, and using an average rate of $1,000 per day, including expenses, total costs are $29,000 per year. Additionally, miscellaneous costs of $1,000 per year are added. National Environmental Policy Act (NEPA) compliance may be required to obtain BLM authorization for installation of the proposed mitigation, and $50,000 is estimated to pay for this analysis and permitting effort.

Sites: Mud Spring, Lone Mountain Spring			
Item	unit cost	units	item cost
Well drilling and completion	$15,000	2	$30,000
Solar power package	$10,000	2	$20,000
Miscellaneous (tanks, etc.)	$8,000	2	$16,000
Subtotal – Well development and equipment			$66,000
Site: Roberts Creek Ranch "Domestic Well"			
Item	unit cost	years	item cost
Incremental increase in operating cost (annual)	$23	10	$230
Subtotal –Incremental operation cost			$230
Indirect costs & services			
Item	annual cost	years	item cost
Monitoring	$30,000	10	$300,000
Operation and Maintenance	$3,300	10	$33,000
NEPA Analysis	$50,000	NA	$50,000
Subtotal – Indirect			$383,000
Subtotal			$449,230
Contingency of estimate (30%)			$134,769
Goodwill Rounding-up			$416,001
TOTAL			$1,000,000



EUREKA MOLY

Mt. Hope Project
Eureka County, Nevada
Water Resource Monitoring Plan
Figure 2
May 27, 2011


540000
550000
560000
570000
580000
4410000
4400000
4390000
4380000
Kilometers
0 0.5 1 2 3 4 5
Miles
0 0.5 1 2 3 4 5
053 Pine Valley
McBrides Spring,R06944
Mt Hope Spring,R06940
Garden Spring,R06942
LRC (Lower Roberts Creek) 75991
Roberts Creek Ranch "Domestic Well", No Water Right
139 Kobeh Valley
Wagon Well,44775
Mud Spring,12748
Lone Mtn Stockwater Well,43025
Lone Mtn Spring,R06951
278
50
Explanation
Mitigated Site - Common Name, Water Right
Not Mitigated Site - Common Name, Water Right
U.S. Highway
2-Track / Dirt Road
Primary Road
State Route
Mt. Hope Plan of Operations Boundary
Hydrographic Basin Boundaries
Limit of Projected 5' Drawdown Contour at Project Year 5
Limit of Projected 5' Drawdown Contour at Project Year 10
Wet Meadow Complexes
Wellfield Corridor
Mainly Rabbitbrush and Greasewood
Mainly Saltgrass and other Wet Meadow Grasses
Patented Land
Private Land
Tailings
Streams
EUREKA MOLY
Mt. Hope Project
Eureka County, Nevada
Monitoring, Management, and Mitigation Plan
5 and 10 Year Drawdown Contours
October 04, 2011

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction rates of up to 11,300 acre-feet per year (af/yr) from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling #6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County. The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater ~~would~~will be ~~extracted~~developed by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The Lessee of the water rights and operator of the Project is EMLLC. The groundwater ~~would~~will be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater ~~extraction would~~will include water derived from open pit dewatering at rates that are predicted to reach a maximum of 742 af/yr. The distribution of this ~~extraction~~water from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights ~~and the customary uses of local water dependent public resources (e.g., wildlife, grazing forage, recreation).~~.

B. The 3M outlines a process by which adverse impacts will be identified and if they occur will be ultimately mitigated. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water ~~and water dependent resources~~.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M, and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under

Formatted: (none)

Formatted: (none)

Nevada State Law that obligate County officials, both elected and appointed, to actively participate in the planning and management of resources within Eureka County. Eureka County, and representatives from locally potentially affected farming, ranching, and domestic interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under MANAGEMENT and in accordance with this 3M.

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input, as described herein.

~~D.~~ This 3M is separate from the requirements placed upon EMLLC by other agencies including the United States Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW).

~~E.~~D. ~~All~~The BLM has claimed Federal Public Water Reserves (PWR 107) within the area of ~~the participants in this~~concern. The BLM and EMLLC have entered into a stipulated settlement agreement as a condition of the BLM withdrawal of protests of EMLLC's water right applications and NDOW is included as a party to the settlement agreement. The 3M will allow access for wildlife that customarily uses the source and will ensure that any existing water rights are ~~hereinafter referred to as "Parties" satisfied~~ to the extent of the water right permit.

Formatted: Font color: Auto

Formatted: Font color: Auto

Formatted: Font color: Auto

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy and Operating Guidelines under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

Formatted: (none)

Formatted: (none)

B. **Water Advisory Committee:**

a. ~~The WAC will have one member from each Party, with the exception of the USGS, which participates only in the TAC.~~ Within 30 days after NSE approval of this 3M, EMLLC, NSE, and Eureka County representatives will convene~~. Upon~~ as the three (3) founding members of the WAC. Upon the three founding members convening, the Diamond Natural Resources Protection and Conservation Association (DNRPCA) and the Eureka Producers Cooperative (EPC) (~~representing~~DNRPCA and EPC represent the bulk of water rights holders in the Diamond Valley Flow System) will each be invited to bring forward one representative nominated from their respective membership for inclusion ~~into~~ as members of the WAC. Letters of interest will also be accepted from potentially affected ranching interests (i.e., Kobeh Valley rancher) for inclusion ~~into~~as a member of the WAC. Eureka County, NSE, EMLLC, DNRPCA, and EPC will make the determination on the affected ranching interest to be included on the WAC based on letters of interest received. If any of ~~these initial Parties~~the potentially affected ranching and farming interests cease to exist, the remaining WAC members will develop a process ~~for inclusion of~~in the WAC Operating Guidelines so that replacement ~~ranching and farming interests on~~members can be selected to join the WAC. The WAC, through its Operating Guidelines, may also invite other potentially affected water rights holders to participate as members. The ~~WAC will have no more than seven (7) members. A representative of~~member of the WAC representing the NSE will be invited to participate as the chair of the WAC. If the NSE member representative declines this invitation, the WAC will elect the chairman. Each ~~Party~~WAC member, at its sole discretion, may invite such additional staff or consultants to attend WAC meetings as ~~each~~it deems necessary.

b. After the full WAC has been convened ~~it~~, the WAC will establish policy, define additional roles and responsibilities of the WAC and TAC, and develop Operating Guidelines (hereinafter "OG~~)~~") such as scheduling of meetings, agenda setting, publication of minutes, receiving input from the public ~~participation~~, and any other necessary components. These policies and OG will be consistent with Nevada Water Law, the requirements and conditions of the NSE, and the terms and provisions of this 3M.

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M ~~and through~~with the ~~five years of Project groundwater extraction. Meeting~~primary focus to establish OG and ensure water monitoring is actively in place. Future meeting frequency may then be adjusted as decided by the WAC, but will be no less than once annually.

d. Purposes and Functions of the WAC will be to:

i. Provide a ~~public~~ forum for ~~Parties~~the WAC to discuss relevant data and analyses, which will allow for the public to attend.

ii. Share information regarding modeling efforts and model results.

Formatted: (none)

Formatted: (none)

iii. Make modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, based on recommendations from the TAC.

iv. Provide status reports and recommendations to the ~~Parties~~WAC.

v. Recommend values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the ~~Parties~~WAC and could require mitigation or management actions.

vi. Make recommendations on what constitutes an adverse impact on a case-by-case basis, but based on Nevada Water Law.

vii. Form and ensure implementation of groundwater management or mitigation measures approved by the WAC based on ~~reports from~~recommendations of the TAC.

viii. Review financial assurance periodically and make ~~adjustment~~adjustments to amount as appropriate and recommend release ~~fund~~of funds for mitigation and/or management measures.

ix. Provide the NSE, ~~Parties~~WAC, and the local stakeholders with data and results of any analyses or technical evaluations, along with reports of specific implemented mitigation or management actions.

x. Through its OG, develop and implement a procedure to remove and replace WAC and TAC members as it deems necessary, excluding, however, removal of the founding members consisting of the NSE, EC, and EMLCC.

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each ~~Party represented on the~~ WAC ~~will be able to~~member shall appoint a representative and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding for the USGS's participation in the 3M will be borne by EMLLC either through new or ~~financial contribution to~~through existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. The WAC will develop criteria for membership in the TAC under its OG. Other TAC members may be appointed by the WAC in addition to the individual TAC members representing each ~~Party~~member. Each ~~Party,~~TAC member at its sole discretion~~,~~ may invite ~~such~~ additional staff or consultants to attend TAC meetings ~~as each deems necessary~~.

b. The TAC will meet within 30 days after WAC appointment to review the proposed monitoring provided as Attachment ~~A~~B to this 3M. Upon completing this review, the TAC will make recommendations to the WAC for any changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals

Formatted: (none)

Formatted: (none)

deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

c. At a minimum, purposes and functions of the TAC will be to:

i. Review the proposed monitoring and recommend to the WAC implementation, including any changes to the specific monitoring elements, as appropriate.
ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.
iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.
v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria to the WAC for management or mitigation measures based upon available data and analyses.
vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations to the WAC regarding the numerical groundwater flow model, including appropriate times for any model updates and ~~the most useful~~ modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first six months of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as ~~recommended~~determined under the provisions of the 3M.

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts and to help ~~frame~~define action criteria.

Formatted: (none)
Formatted: (none)

~~E. Dewatering:~~

E. ~~Water pumped for mine dewatering will be isolated from processing facilities. Therefore, water extracted from Diamond Valley will have no connection, piped or other, into the processing facilities which return water to the tailings dam in Kobeh Valley. No water from dewatering will be used outside of Diamond Valley and the pit complex. The pit complex includes the pit and the contiguous waste rock disposal facilities.~~ **Prevention of Interbasin Transfer from Diamond Valley Basin:**

a. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the ~~basin using some acceptable method under the provisions of this 3M.~~ Diamond Valley Hydrographic Basin using some acceptable method, which will be determined according to the provisions of this 3M. As described in Section 6.E., water derived from pit dewatering and consumed will be documented and reported to verify that the volume of water extracted from Diamond Valley is equal to or less than the volume of water consumed in Diamond Valley (e.g. no transfer of water out of Diamond Valley).

~~The volume of water derived from pit dewatering and consumed will be documented and reported to verify that all water extracted from Diamond Valley was consumed in Diamond Valley.~~

~~b.~~

Formatted: Indent: Left: 0.85", No bullets or numbering

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed by the WAC with recommendations from the TAC. These criteria will be developed to provide early warning of any potential adverse impacts to water rights, ~~local water dependent public resources, and other locally important water uses arising from~~determined to be caused by Project groundwater pumping ~~by the Project~~.

~~b. In addition to action criteria that will be developed as described above, any water level decline in Diamond Valley or any other basin attributable to Project groundwater pumping will serve as an action criterion to require EMLLC to purchase and permanently retire an equal or greater volume of active and current water rights (water currently pumped) within Diamond Valley or the affected basin.~~

~~c.~~b. When any action criterion that has been adopted as part of this 3M is reached, the following management actions will be triggered:

i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is ~~a result of~~caused by Project groundwater ~~extraction by the Project~~pumping and present their findings to the WAC.

ii. If the WAC determines that any action criterion exceedance is ~~attributable to~~caused by Project groundwater ~~extraction by the Project~~pumping, the

Formatted: (none)

Formatted: (none)

TAC will expeditiously develop mitigation or management measures for the WAC to consider. The TAC will analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.

iii. The WAC will determine whether or not to ~~require~~recommend implementation of the mitigation or management measures and ~~will~~to also ~~have access to~~recommend if the funds described in MITIGATION MEASURES will be used to ~~ensure that any required~~implement such measure ~~is implemented~~.

iv. The effectiveness of any implemented measure will be evaluated by the TAC to ensure the measure met or exceeded the intended result. Results and recommendations for any additional measures will be reported to the WAC.

v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC and accompanied by analyses to support the proposed change. ~~If the supporting analyses are found to be technically sound by the TAC, then the WAC may adjust the action criterion.~~

Formatted: Font: Not Bold

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made ~~in consideration of~~after considering the evaluation and recommendations of the TAC.

b. ~~The WAC shall make~~Any decisions made by the WAC under this 3M shall be by unanimous vote with at least 5 WAC members present and all ~~Parties~~members must be afforded the opportunity to attend meetings where decisions will be made. Additionally, the WAC shall not vote unless EMLLC's WAC member is present. If unanimity is not achieved, the ~~Parties~~WAC may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not successful, ~~the Parties~~any WAC member may refer the issue, accompanied with ~~their respective~~its opinion, to the NSE for final determination.

c. Decisions made by the WAC regarding ~~changes~~recommended modifications to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be ~~under~~subject to the jurisdiction and authority of the NSE.

d. Nothing herein ~~limits~~seeks to limit, alter, modify or ~~changes~~change the ~~NSE~~exclusive authority~~, and any Party can petition~~ of the NSE to ~~consider any issue~~approve or modify the 3M.

Formatted: (none)

Formatted: (none)

e. Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.

H. **Modification of the 3M**

a. The WAC may ~~modify~~recommend modifications to this 3M under the provisions ~~contained herein.~~ of the 3M.

b. ~~The Parties~~Any WAC member(s) may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the ~~other Parties.~~WAC. Prior to the NSE decision, all ~~Parties~~WAC members will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided ~~as~~in Attachment A to this 3M. It was developed to describe the monitoring that will be conducted to meet BLM monitoring requirements, and is incorporated into the Mt Hope Project Plan of Operations. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations to the WAC regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations to the WAC for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring frequencies. Upon acceptance ~~under~~by the ~~terms~~NSE of this 3M, EMLLC will implement ~~these~~the monitoring requirements as set forth in Attachment A.

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the ~~Parties~~WAC members, as agreed upon by the ~~Parties~~WAC, that interfere with data collection.

D. Groundwater

Formatted: (none)

Formatted: (none)

a. Groundwater ~~extraction amounts~~pumping will be measured by ~~flowmeters~~flow meters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in wells installed ~~in~~related to the Project network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The Project monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond, Pine and Antelope valleys; between the wellfield and the headwaters of Henderson and Roberts Creek; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

d. Test wells constructed at each Project production well site will be maintained as monitoring wells, as is feasible, and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request USGS permission or seek other means to collect data from these wells. If permission cannot be obtained, the WAC will seek an evaluation by the TAC for replacement.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and proportioned between the ~~two~~Kobeh and Diamond Valley basins through hydrogeological analysis by the TAC. Water truck loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley for mine environmental dust suppression. The amount of water used in Diamond Valley for other ~~ancillary uses (e.g., truck wash)~~ will be metered or estimated and recorded in the database.

F. **Surface Water**

a. At a minimum, the monitoring of stream flow will be conducted as follows:

Formatted: (none)

Formatted: (none)

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.
ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and other vegetation communities will be conducted. These locations will be expanded to include additional sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

Formatted: (none)
Formatted: (none)

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and determined by the WAC in consideration of TAC recommendation.

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular, timely, and continual basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be fully and cooperatively shared among the ~~Parties~~WAC members. Verified data within the 3M database will become available to the public, upon request.

b. In addition to updating the 3M database on a regular and continual basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the ~~Parties~~WAC for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

~~6.~~7. MITIGATION MEASURES

A. EMLLC will mitigate adverse impacts, if any, as agreed upon under the provisions of this 3M. The WAC will take necessary steps ~~and will have access to~~, including recommending whether funding described below may be used as outlined in this 3M, to ensure that mitigation actions are feasible, reasonable, timely, and effective.

~~B. Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s).~~

~~C.~~B. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will ~~provide~~demonstrate its financial ~~assurance necessary~~capability to complete any ~~future monitoring and subsequent~~such approved mitigation ~~work based on predicted impacts~~and monitoring by providing reasonable financial assurances under the provisions of this 3M. ~~A mutually agreeable Trustee will be selected by the WAC to administer the account and release funds upon approval by the WAC under the provisions of this 3M.~~

Formatted: Outline numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 7 + Alignment: Left + Aligned at: .0" + Indent at: 0.25"

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: List Paragraph, Indent: Left: 0"

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: (none)

Formatted: (none)

~~D.~~C. ~~Initial~~EMLLC's financial assurances (FA) funding will be placed into an interest bearing trust account ~~under~~ to be established as a part of this 3M. ~~This~~The initial funding will occur in a manner as follows:

a. Funding will be based on costs to mitigate any potential adverse impacts that could occur ~~no later than~~as a result of the first five years of pumping, per the milestones provided below.

~~a.~~b. Initial funding will occur within 60 days of the GMI Board of ~~Directors~~Directors' approval to ~~construct~~commence construction of the Project.

~~b.~~c. ~~Funding~~Additional funding will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).

~~c.~~d. ~~Funding~~Supplemental funding, if any, will occur ~~each~~one year thereafter ~~during the first five years of operations.~~(about year 1.5 following initial mineral processing)

~~d.~~e. Funding will be adjusted periodically and following the first five years of pumping under the provisions of this 3M to ensure that sufficient funding is in place to mitigate all ~~predicted~~potential adverse impacts, including funding for operating and maintenance and long-term replacement costs, and adjusted for inflation ~~(~~and interest (inflation is estimated at ~~least~~ 3% per year based on the 20 year average reported by the U.S. Bureau of Labor Statistics). This financial assurance will also be used to fund ~~20 years of~~ post-mining monitoring under the provisions of this 3M.

~~e.~~f. The initial funding contribution is $~~1~~250,000~~,000~~.

The ~~minimum~~additional six month funding contribution is $~~1~~750,000~~,000~~.

~~The minimum year one~~Supplemental funding ~~contribution is $4,000,000~~

~~The minimum year two funding contribution is $4,000,000~~

~~The minimum year three funding contribution is $4,000,000~~

~~The minimum year four funding contribution is $4,000,000~~

~~The minimum year five funding contribution is $4,000,000~~

~~f. At the end of five years of operation, the account shall have a minimum of $22,000,000.~~

g. ~~A total of 34 springs, 2 streams,~~ if any, will be evaluated and ~~12 wells fall within the maximum extent of the predicted 5 foot drawdown contour calculated~~estimated by the ~~current version of the FM. The level of funding is based on best estimates of the cost in today's (2011) dollars~~TAC, subject to ~~replace each spring with a well/solar pump, the cost to mitigate the loss of each stream water source, and the cost to replace each existing well. Also included is the cost for post mining monitoring and the cost for NEPA analysis needed to perform mitigation on public land. Additionally, this funding covers impacts that could arise that are not currently predicted or if the mine ceases operations earlier than planned when no revenue would be present to adjust the fund if needed.~~approval by the WAC.

h. ~~Upon continuation of this 3M after~~The assumptions and components used to develop the FA amount are provided in Attachment C.

~~E.~~D. After cessation of mining and groundwater pumping by EMLLC, if the ~~WAC~~NSE determines that there is no longer a reasonable potential for future impacts attributable to

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, ... + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, ... + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: (none)

Formatted: (none)

the Project, any excess funds, including interest, remaining in the account will be returned to EMLLC.

~~F. Modeling and analyses conducted by EMLLC and submitted to the NSE predicts declining water levels due to Project pumping in Kobeh, Pine and Diamond valleys. This 3M does not outline which specific mitigation measures would address these impacts, but outlines the procedures to validate occurrence of predicted impacts, to identify occurrence of impacts not predicted, and implement mitigation prior to or at occurrence.~~

~~G. To ensure wildlife have continued access to customary use, adversely impacted surface water sources will be mitigated through such measures, including but not limited to, installation and maintenance of replacement of water sources of equal or greater volume (e.g., guzzlers) in the same area as the impacted water source.~~

E. ~~Mitigation measures~~ In the Kobeh Valley alluvial basin, EMLLC will mitigate permitted water sources should adverse impacts occur. Mitigation could consist of installation of wells and solar-powered pumps. However, it is also recognized that alternative mitigation measures may be considered, recommended and implemented. The FA funding includes estimated costs for any mitigation of Kobeh Valley permitted water rights in the event any adverse impacts occur during the first ten years of pumping.

~~H.~~F. Mitigation measures, if necessary, will be developed and implemented on a case-by-case basis under provisions of this 3M.

~~I.~~G. Potential mitigation measures could include the following:

a. Supply (Project) water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

~~c. Restoration, modification, or replacement of existing habitat or forage using a variety of means (e.g., seeding and planting, thinning or other vegetative treatments).~~

~~d.~~c. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater adversely impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, ... + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: Outline numbered + Level: 2 + Numbering Style: A, B, C, ... + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.55"

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: List Paragraph, Indent: Left: 0"

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: (none)

Formatted: (none)

)   )

accessible to both livestock and wildlife).). If livestock water sources are adversely impacted, it will be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

e.d. Any impact to individual water rights attributabledetermined to thebe caused by Project groundwater pumping could be compensated financially or, if agreed upon, property (i.e., land and water rights) of equal value could be purchased for replacement or the individuals livelihood in another location outside of the impacted area.

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

f.e. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins, are attributabledetermined to thebe caused by Project groundwater pumping, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

g.f. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

h. Water dependent recreation such as fishing, swimming, and camping may be mitigated by replacement, enhancement or augmentation of recreation opportunities in the vicinity of the impacted resource.

i. Other measures as agreed to by the PartiesWAC and/or required by the NSE.

g.

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: (none)

Formatted: (none)

Replaced 6-1-12
CH

9

YAHOO! MAIL Classic

FW: EMLLC 3M plan Monday, October 17, 2011 2:45 PM

From: "Pat Rogers" <progers@generalmoly.com>

From: Pat Rogers
Sent: Monday, October 17, 2011 2:02 PM
To: 'Rick Felling'; Jake Tibbitts
Cc: Jason King; Kelvin Hickenbottom
Subject: RE: EMLLC 3M plan

Rick,

I have a conference call at 10:00 on the 27th, but I expect it will be brief and could do it on my cell in Carson, fitting it in around a meeting to discuss the 3M. So, the 27th and 28th both work for me.

Pat

General Moly, Inc.
775.748.6008 (o)
775.397.4448 (c)

From: Rick Felling [mailto:rfelling@water.nv.gov]
Sent: Monday, October 17, 2011 11:21 AM
To: Jake Tibbitts
Cc: Pat Rogers; Jason King; Kelvin Hickenbottom
Subject: EMLLC 3M plan

Jake,

EMLLC submitted a 3M plan on Oct 11. As promised, we would like to discuss the plan with you before making a decision on approval. The plan is attached for your review. Are you and Pat available to meet the 27th or 28th of October? I would like to hold the meeting here in Carson City.

Rick

Richard A. Felling
Chief, Hydrology Section
Nevada Division of Water Resources
901 S. Stewart Street, Suite 2002
Carson City, NV 89701
Phone: (775) 684-2866
Fax: (775) 684-2811
rfelling@water.nv.gov

Replaced 6-1-12

10

EUREKA MOLY

2215 North 5th Street
Elko, NV 89801
Phone: 775-748-6000
Fax: 775-753-7722
Email: progers@generalmoly.com
Website: www.generalmoly.com

December 16, 2011

Mr. Richard A. Felling
Chief, Hydrology Section
Division of Water Resources
State Engineer's Office
901 S Stewart St. Suite 2002
Carson City, NV 89701

RE: Monitoring Management and Mitigation Plan – Mt. Hope Project

Dear Mr. Felling:

This letter transmits Eureka Moly, LLC's (EMLLC) proposed Monitoring, Management and Mitigation Plan (3M) for the Mt Hope Project. This 3M is being provided in accordance with Nevada State Engineer (NSE) Ruling 6127. This 3M supersedes and replaces the version submitted on October 7, 2011. Modifications to the previous version are those agreed upon during the collaborative meeting with NSE staff and Eureka County representatives on December 8, 2011.

Should you have any questions, please feel free to contact me at (775) 748-6008.

Sincerely,

Patrick C. Rogers
Director, Environmental and Permitting

Enclosures

cc: Dave Berger, U.S. Geological Survey, with enclosures
Jake Tibbitts, Eureka County Natural Resources Department, with enclosures

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling 6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County (EC). The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater will be developed by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The Lessee of the water rights and operator of the Project is EMLLC. The groundwater will be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater will include water derived from open pit dewatering at rates that are predicted to reach a maximum of 742 af/yr. The distribution of this water from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights.

B. The 3M outlines a process by which adverse impacts will be identified and ultimately mitigated. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M, and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County (EC) holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under Nevada State Law that obligate County officials, both elected and appointed, to actively participate in the planning and management of resources within Eureka County. Eureka County, and representatives from locally potentially affected farming, ranching, and

domestic interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under MANAGEMENT and in accordance with this 3M.

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input, as described herein.

D. This 3M is separate from the requirements placed upon EMLLC by other agencies including the United States Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW). The BLM has claimed Federal Public Water Reserves (PWR 107) within the area of concern. The BLM and EMLLC have entered into a stipulated settlement agreement as a condition of the BLM withdrawal of protests of EMLLC's water right applications and NDOW is included as a party to the settlement agreement.

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

B. **Water Advisory Committee:**

a. Within 30 days after NSE approval of this 3M, EMLLC, NSE, and Eureka County representatives will convene as the three (3) founding members of the WAC. Upon the three founding members convening, the Diamond Natural Resources Protection and Conservation Association (DNRPCA) and the Eureka Producers Cooperative (EPC) (DNRPCA and EPC represent the bulk of water rights holders in the

Diamond Valley Flow System) will each be invited to bring forward one representative nominated from their respective membership for inclusion as members of the WAC (hereinafter "Parties"). Letters of interest will also be accepted from potentially affected ranching interests (i.e., Kobeh Valley rancher) for inclusion as a member of the WAC. Eureka County, NSE, EMLLC, DNRPCA, and EPC will make the determination on the affected ranching interest to be included on the WAC based on letters of interest received. If any of the potentially affected ranching and farming interests ceases to exist, the remaining WAC members will develop a process so that replacement members will be selected to join the WAC. The WAC may also invite other potentially affected water rights holders to participate as members. The WAC will have no more than seven (7) members. The member of the WAC representing the NSE will be invited to participate as the chair of the WAC. If the NSE member representative declines this invitation, the WAC will elect the chairman. Each WAC member, at its sole discretion, may invite such additional staff or consultants to attend WAC meetings as it deems necessary.

b. After the full WAC has been convened, the WAC will establish policy and define additional roles and responsibilities of the WAC and TAC, such as scheduling of meetings, agenda setting, publication of minutes, receiving input from the public, and any other necessary components.

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M with the primary focus to ensure water monitoring is actively in place. Future meeting frequency may then be adjusted as decided by the WAC, but will be no less than once annually.

d. Purposes and Functions of the WAC will be to:

   i. Provide a forum for the WAC to discuss relevant data and analyses.
   ii. Share information regarding modeling efforts and model results.
   iii. Make modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, based on recommendations from the TAC.
   iv. Provide status reports and recommendations to the Parties.
   v. Establish values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the Parties and could require mitigation or management actions.
   vi. Determine what constitutes an adverse impact on a case-by-case basis, based on Nevada Water Law.
   vii. Form and ensure implementation of groundwater management or mitigation measures approved by the WAC based on recommendations of the TAC.

viii. Review financial assurance periodically and make adjustments to amount as appropriate and recommend release of funds for mitigation and/or management measures.
ix. Provide the NSE, Parties, and the local stakeholders with data and results of any analyses or technical evaluations, along with reports of specific implemented mitigation or management actions.
x. Develop and implement a procedure to remove and replace WAC and TAC members as it deems necessary, excluding, however, removal of the founding members consisting of the NSE, EC, and EMLCC.

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each Party represented on the WAC will be entitled to appoint a representative and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding for the USGS's participation in the 3M will be borne by EMLLC either through new or through existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System or by a "pass-through" agreement with the NSE. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. Each Party, at its sole discretion may invite additional staff or consultants to attend TAC meetings.

b. The TAC will meet within 30 days after WAC appointment to review the proposed monitoring provided as Attachment A to this 3M. Upon completing this review, the TAC will make recommendations to the WAC for any changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

c. At a minimum, purposes and functions of the TAC will be to:

i. Review the proposed monitoring and recommend to the WAC implementation, including any changes to the specific monitoring elements, as appropriate.
ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.
iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.

v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria to the WAC for management or mitigation measures based upon available data and analyses.
vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations to the WAC regarding the numerical groundwater flow model, including appropriate times for any model updates and modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first year of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as determined under the provisions of the 3M.

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts and to help define action criteria.

E. **Prevention of Interbasin Transfer from Diamond Valley Basin:**

a. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the Diamond Valley Hydrographic Basin. As described in Section 6.E., water derived from pit dewatering and consumed will be documented and reported by EMLLC to verify that the volume of water extracted from Diamond Valley is equal to or less than the volume of water consumed in Diamond Valley (e.g. no transfer of water out of Diamond Valley).

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed by the WAC with recommendations from the TAC. These criteria will be developed to provide early warning of potential adverse impacts to water rights, determined to be caused by Project groundwater pumping.

b. When any action criterion that has been adopted as part of this 3M is reached, the following management actions will be triggered:

i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is caused by Project groundwater pumping and present their findings to the WAC.

ii. If the WAC determines that any action criterion exceedance is caused by Project groundwater pumping, the TAC will expeditiously develop mitigation or management measures for the WAC to consider. The TAC will analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.

iii. The WAC will determine whether or not to recommend implementation of the mitigation or management measures and to also recommend if the funds described in MITIGATION will be used to implement such measure.

iv. The effectiveness of any implemented measure will be evaluated by the TAC to ensure the measure met or exceeded the intended result. Results and recommendations for any additional measures will be reported to the WAC.

v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC and accompanied by analyses to support the proposed change.

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made after considering the evaluation and recommendations of the TAC.

b. Any decisions made by the WAC under this 3M shall be by unanimous vote with both EMLLC and EC present and all Parties being afforded the opportunity to attend meetings where decisions will be made. If unanimity is not achieved, the Parties may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not successful, the Parties may refer the issue, accompanied by their respective opinions, to the NSE for final determination.

c. Decisions made by the WAC regarding recommended modifications to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be subject to the jurisdiction and authority of the NSE.

d. Nothing herein limits or changes the NSE authority, and any Party can petition the NSE to consider any issue.

H. **Modification of the 3M**

a. Nothing herein seeks to limit, alter, modify or change the exclusive authority of the NSE to approve or modify the 3M.

b. The Parties may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the other Parties. Prior to the NSE decision, all Parties will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

c. Any modification to the 3M must be approved by the NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided in Attachment A to this 3M. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations to the WAC regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations to the WAC for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring frequencies. Upon acceptance by the NSE of this 3M, EMLLC will implement the monitoring requirements as set forth in Attachment A.

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the Parties, as agreed upon by the Parties, that interfere with data collection.

D. Groundwater

a. Groundwater pumping will be measured by flow meters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in all wells included as part of the Project monitoring network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The Project monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond, Pine and Antelope valleys; between the pumping wells and the headwaters of Henderson and Roberts Creeks and Tyrone Gap; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

d. Test wells constructed at each Project production well site will be maintained as monitoring wells, as is feasible, and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request USGS permission or seek other means to collect data from these wells.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and allocated to the basin in which the well is located. Water truck loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley for mine environmental dust suppression. The amount of water used in Diamond Valley for other uses will be metered or estimated and recorded in the database.

F. **Surface Water**

a. At a minimum, the monitoring of stream flow will be conducted as follows:

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.

ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and plant succession will be conducted. These locations, as itemized in Attachment A will include sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and determined by the WAC in consideration of TAC recommendation.

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular, timely, and continual basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be fully and cooperatively shared among the Parties. Verified data within the 3M database will become available to the public, upon request.

b. In addition to updating the 3M database on a regular and continual basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the Parties for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

7. MITIGATION

A. EMLLC will mitigate adverse impacts, if any, as agreed upon under the provisions of this 3M. The WAC will take necessary steps, including recommending whether funding described below may be used as outlined in this 3M, to ensure that mitigation actions are feasible, reasonable, timely, and effective.

B. Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s).

C. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will demonstrate its financial capability to complete any such approved mitigation and monitoring by providing reasonable financial assurances under the provisions of this 3M.

D. EMLLC's financial assurances (FA) funding will be placed into an interest bearing trust account to be established as a part of this 3M. The initial funding will occur in a manner as follows:

a. Initial funding of $250,000 will occur within 60 days of the GMI Board of Directors' approval to commence construction of the Project.

b. Additional funding of $750,000 will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).

c. Funding will be examined and adjusted, as recommended by the WAC, every three years to ensure that sufficient funding is in place to mitigate all potential adverse impacts, including funding for operating and maintenance and long-term replacement costs.

E. After cessation of mining and groundwater pumping by EMLLC, if the NSE determines that there is no longer a reasonable potential for future impacts attributable to the Project, any excess funds, including interest, remaining in the account will be returned to EMLLC.

F. This 3M does not outline specific measures to mitigate the occurrence of predicted drawdown, but outlines a procedure to identify and mitigate adverse impacts.

G. To ensure wildlife have continued access to customary use, adversely impacted surface water sources will be mitigated through such measures including, but not limited to, installation and maintenance of replacement water sources or equal or greater volume (e.g. guzzlers) in the same area as the impacted water source.

H. EMLLC will mitigate permitted water rights and determined and undetermined claims of vested or reserved rights should adverse impacts occur.

I. Mitigation measures, if necessary, will be developed and implemented on a case-by-case basis under provisions of this 3M.

J. Potential mitigation measures could include the following:

a. Supply (Project) water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

c. Environmentally sound revegetation in selected areas considering utilization of alternative plant biomes. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater adversely impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank). If livestock water sources are adversely impacted, it will

be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

d. Any impact to individual water rights determined to be caused by Project groundwater pumping could be compensated financially or, if agreed upon, property (i.e., land and water rights) of equal value could be purchased for replacement.

e. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins are determined to be caused by Project groundwater pumping, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

f. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

g. Other measures as agreed to by the Parties and/or required by the NSE.

Mount Hope Mine Project
Attachment A to 3M - Monitoring Plan

1) This Monitoring Plan has been developed by Eureka Moly, LLC (EMLLC) to provide the monitoring component of the 3M (Monitoring, Management and Mitigation) Plan prepared and submitted to the Nevada State Engineer (NSE). Preparation of the 3M and acceptance by NSE is required by Ruling #6127 dated July 15, 2011.

2) The purpose of this Monitoring component of the Mt Hope 3M Plan is to identify and characterize changes to the hydrologic environment that could be caused by groundwater withdrawals for the Mt Hope Mine. It is recognized that impacts to water resources may occur from natural processes, non-project related water resource development, and land management practices, as well as from the Mt Hope mining operation.

3) Specific objectives of this WRMOP are to:
   - Confirm or improve the understanding of the hydro-geologic system.
   - Measure changes to surface water flows and groundwater levels caused by the groundwater withdrawals for the project.
   - Characterize impacts to streams, seeps and springs caused by the project.
   - Evaluate impacts to vegetation and/or wildlife habitat caused by the project.
   - Support periodic updates to the hydrologic model to improve the predictive quality of the model.
   - Provide an early warning capability to detect adverse impacts before they become unmanageable.

4) Monitoring locations, parameters, and frequencies have been selected to facilitate identification and assessment of impacts. Thus, an overview of the predicted aquifer response is warranted:
   - Significant ground water consumption in Kobeh Valley is expected to remove water from storage and lower groundwater elevations in portions of Kobeh Valley.
   - Reduction of spring or surface water flows in portions of Kobeh Valley is possible as a result of the lowered groundwater levels.
   - Groundwater drawdown in the extreme western portion of Diamond Valley, in the vicinity of Tyrone Gap, is predicted to occur as the open pit extends below the water table.
   - Predicted affects to the groundwater aquifer in Diamond Valley are minimal. Current data suggests that the hydrologic interconnection between Kobeh Valley and Diamond Valley is limited. Historical data document a significant reduction in water levels in Diamond Valley due to extensive agricultural uses of groundwater.
   - As the cone of groundwater depression propagates to the north from the well field or to the north and northwest from the pit area, it could encroach upon the southernmost or south-easternmost portions of the Roberts Mountains. The regional aquifer is not thought to be connected to the shallow aquifer; however, lowering of the shallow aquifer level in this area could result in reduction of spring or surface water flows or lowering of shallow groundwater tables that support wet meadow complexes and associated wildlife habitat in these areas.

- Ground subsidence and development of fissures at the ground surface could occur due to removal of interstitial water from a substantial volume of alluvial sediments in Kobeh Valley.
- In general, the potential for affects increases both with proximity of a given resource to the proposed well field and with increased duration of pumping.
- Figures 1 and 2 depict the area that is predicted to experience groundwater drawdown in excess of ten feet at 44 years following project start-up. Figures 1 and 2 also show monitoring locations selected for this 3M

5) EMLLC will monitor flows in:
   - Steiner Creek in southeast Grass Valley, west of Kobeh Valley
   - Pine Creek in southern Monitor Valley, south of Kobeh Valley; and
   - Allison Creek in Antelope Valley, south of Kobeh Valley.

   These regional streams will serve as analogs to provide improved understanding of seasonal or regional conditions that may be impacting the flows in perennial streams. Stage- flow relationships will be established at these locations and the streams will then be equipped with pressure transducers to allow continuous measurement.

6) EMLLC will implement documented quality assurance and quality control procedures. Monitoring data will be recorded using a standardized (NDEP-compliant) protocol and format for each monitoring event. It is anticipated that protocols will be based on those described by Rantz and others (1982) for surface water flow monitoring, Lapham and others (1995) for groundwater level monitoring, and Wilde (2005) for water sampling. Laboratory analyses will be conducted by Nevada-certified laboratories using standard laboratory quality control procedures.

7) Tables 1 and 2, provided at the end of this document, lists the proposed monitoring site locations, type of monitoring, monitoring frequency and a brief rationale for selecting each location, Wells identified in Table 1 include both existing wells and wells that EMLLC proposes to construct upon project approval. Some wells are located within pit limits that would be mined out as the project advances, and these locations would be dropped from the monitoring plan at that time. Site locations are shown on the attached figures. The monitoring sites in Tables 1 and 2 are organized by locations corresponding to those shown on the attached figures.

REFERENCES

Lapham, W.W., Wilde, F.D., and Koterba, M.T., 1995, *Ground-water data collection protocols and procedures for the National Water-Quality Assessment Program: Selection, installation, and documentation of wells, and collection of related data:* U.S. Geological Survey Open-File Report 95-398, 70 p.

Rantz, S.E., et al., 1982. *Measurement and computation of streamflow,* U.S. Geological Survey Water Supply Paper 2175, Volumes 1 and 2, 631 p.

Wilde, F.D., 2005, *National field manual for the collection of water-quality data:* Book 9, Handbooks for Water-Resources Investigations, U.S. Department of the Interior and the U.S. Geological Survey.

Table 1 – Hydrologic Monitoring

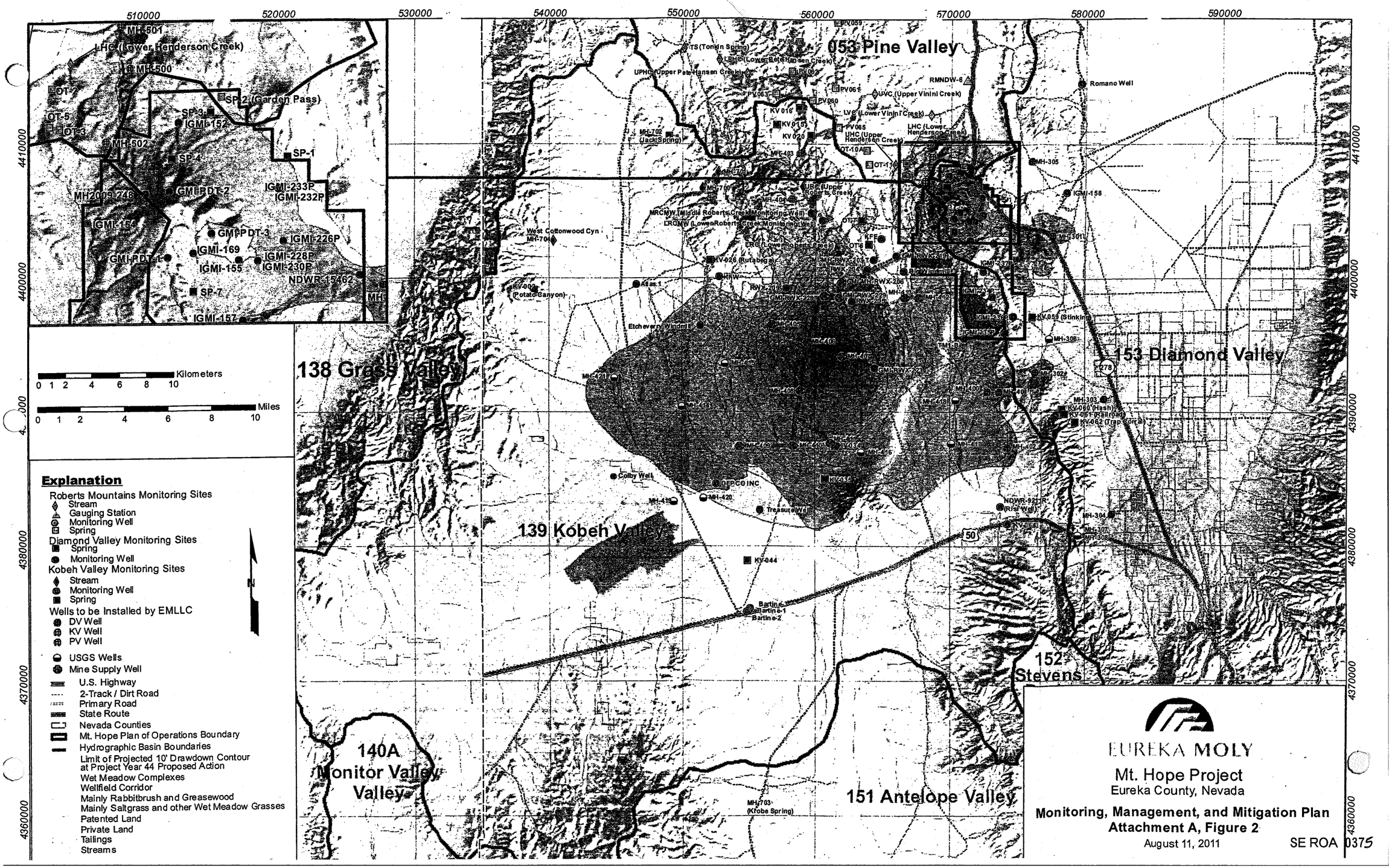
Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
Diamond Valley Groundwater	GMI-PDT-1	Depth to Water	Continuous	Vinini hornfels	Pit area groundwater drawdown monitoring
	GMI-PDT-2	Depth to Water	Continuous	Vinini and hornfels	Pit area groundwater drawdown monitoring
	GMI-PDT-3B	Depth to Water	Continuous	Vinini Hornfels	Pit area groundwater drawdown monitoring
	IGMI-152	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-155	Depth to Water	Continuous	Qtz Porphyry	Pit area groundwater drawdown monitoring
	IGMI-156	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-157	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGM-169	Depth to Water	Continuous	Vinini Hornfels	Pit area groundwater drawdown monitoring
	IGMI-226P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-228P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-230P	Depth to Water	Continuous	Tuff	Pit area groundwater drawdown monitoring
	IGMI-232P	Depth to Water	Continuous	Vinini Fm	Pit area groundwater drawdown monitoring
	IGMI-233P	Depth to Water	Continuous	Tuff	Pit area groundwater drawdown monitoring
	IGMI-MH-248	Depth to Water	Continuous	Bedrock	Pit area groundwater drawdown monitoring
	NDWR-15462	Depth to Water	Continuous	Alluvium	Pit area groundwater drawdown monitoring
	MH-300	Depth to Water	Continuous	Alluvium	Monitoring groundwater gradient changes in Tyrone Gap with MH –

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
					301
Diamond Valley Groundwater	MH-301	Depth to Water	Continuous	Alluvium	Monitoring groundwater gradient changes in Tyrone Gap with MH – 300
	MH-302	Depth to Water	Continuous	Alluvium	Monitor influence of potential increased transmissivity zone through Whistler Range.
	MH-303	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH-304	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH-305	Depth to Water	Continuous	Alluvium	Monitor drawdown east of pit.
	IGMI-158	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	IGMI - 236P	Depth to Water	Continuous	Vinini Fm	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	Romano Well	Depth to Water	Continuous	Vinini Fm	Monitor groundwater elevation trend on west side of Diamond Valley; Sentinel well.
	MH – 306 (153 N21 E52 10AAAC1)	Depth to Water	Continuous		Monitor groundwater elevation trend on west side of Diamond Valley
	MH – 307 (153 N20 E52 26AABC1)	Depth to Water	Continuous		Monitor groundwater elevation changes in Devil's Gate.
	MH – 308 (153 N20 E52 26AABC2)	Depth to Water	Continuous		Monitor groundwater elevation changes in Devil's Gate.
Diamond Valley Springs	KV-059 (Stinking)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-060 (Hash)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	KV-061 (Railroad)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	KV-062 (Trap Corral)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	DV -065 (Shipley)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-1 (McBride)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-2 (Garden pass)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-3 (unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-4 (Mt Hope)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
	SP-7 (unnamed)	Flow, Photograph	Quarterly		Monitor potential indirect spring impacts
Kobeh Valley Groundwater	All production wells	Flow and Depth to Water	Continuous	Alluvium and carbonate	Measure well field production, individual well response to pumping stress, and drawdown progression in wellfield
	GMI-RWX-228T	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	GMI-RWX-229	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	RWX -205	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH-400	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in alluvium on west side of Whistlers paired w/ MH-401 to assess connection between alluvium and bedrock aquifers; assess effect of inferred structure located to the east.
	MH-401	Depth to Water	Continuous	Bedrock	Monitor groundwater elevation

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
Kobeh Valley Groundwater					change in bedrock on west side of Whistlers paired w/ MH-400 to assess connection between alluvium and bedrock aquifers; assess effect of inferred structure located to the west.
	MH-402	Depth to Water	Continuous	Alluvium	Monitor drawdown at east edge of Kobeh Valley.
	MH-403	Depth to Water	Continuous	Alluvium	Monitor potential drawdown in upper Roberts Creek; Sentinel.
	MH-404	Depth to Water	Continuous	Bedrock	Monitor potential drawdown in western part of Robert's Creek watershed; Sentinel.
	MH – 405	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 406	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 407	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 408	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 409	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 410	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 411	Depth to Water	Continuous	Alluvium	Measure drawdown progression in wellfield
	MH – 412	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area
	MH- 413	Depth to Water	Continuous	Alluvium	Monitor groundwater elevation change in transition zone between wellfield and pit area

Area	Site Name(s)	Parameters	Frequency	Formation	Rationale
	MH - 414 (139 N21 E49 25BBDA)	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	MH - 415 (139 N21 E50 17BACC)	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	MH - 416 (139 N20 E51 05CBCC)	Depth to Water	Continuous	Alluvium	Monitoring of south side of KV wellfield drawdown
	MH - 417 (139 N21 E51 36DCDB1)	Depth to Water	Continuous	Alluvium	Monitoring of southeast side of KV wellfield drawdown
	MH -418 (139 N21 E51 24DDDB1)	Depth to Water	Continuous	Alluvium	Monitoring of southeast side of KV wellfield drawdown
	MH – 419 (139 N20 E49 23ACCB1)	Depth to Water	Continuous	Alluvium	Monitoring of drawdown between wellfield and Bean Flat phreatophytes
	MH – 420 (139 N20 E49 24ACAB)	Depth to Water	Continuous	Alluvium	Monitoring of drawdown between wellfield and Bean Flat phreatophytes
	MH – 421	Depth to Water	Continuous	Alluvium	Monitoring of west side of KV wellfield drawdown
	RWX - 209 shallow and deep	Depth to Water	Continuous	Alluvium /Vinini	Monitoring of northwest side of KV wellfield drawdown
	MRCMW	Depth to Water	Continuous	Alluvium	Monitoring of potential drawdown in Roberts Creek watershed
	LRCMW	Depth to Water	Continuous	Alluvium	Monitoring of potential drawdown in Roberts Creek watershed
	IGM-154,	Depth to Water	Continuous	Alluvium	Pit area groundwater monitoring
	IGMI-234P	DTW and Chemistry	Continuous	Alluvium	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	IGMI-235P	DTW and Chemistry	Continuous	Vinini Fm	Monitor groundwater elevation change in Whistler Range; Sentinel well.
	IGMI-237P	DTW and	Continuous	Vinini Fm	Monitor groundwater elevation



Explanation

Roberts Mountains Monitoring Sites
- Stream
- Gauging Station
- Monitoring Well
- Spring

Diamond Valley Monitoring Sites
- Spring
- Monitoring Well

Kobeh Valley Monitoring Sites
- Stream
- Monitoring Well
- Spring

Wells to be Installed by EMLLC
- DV Well
- KV Well
- PV Well

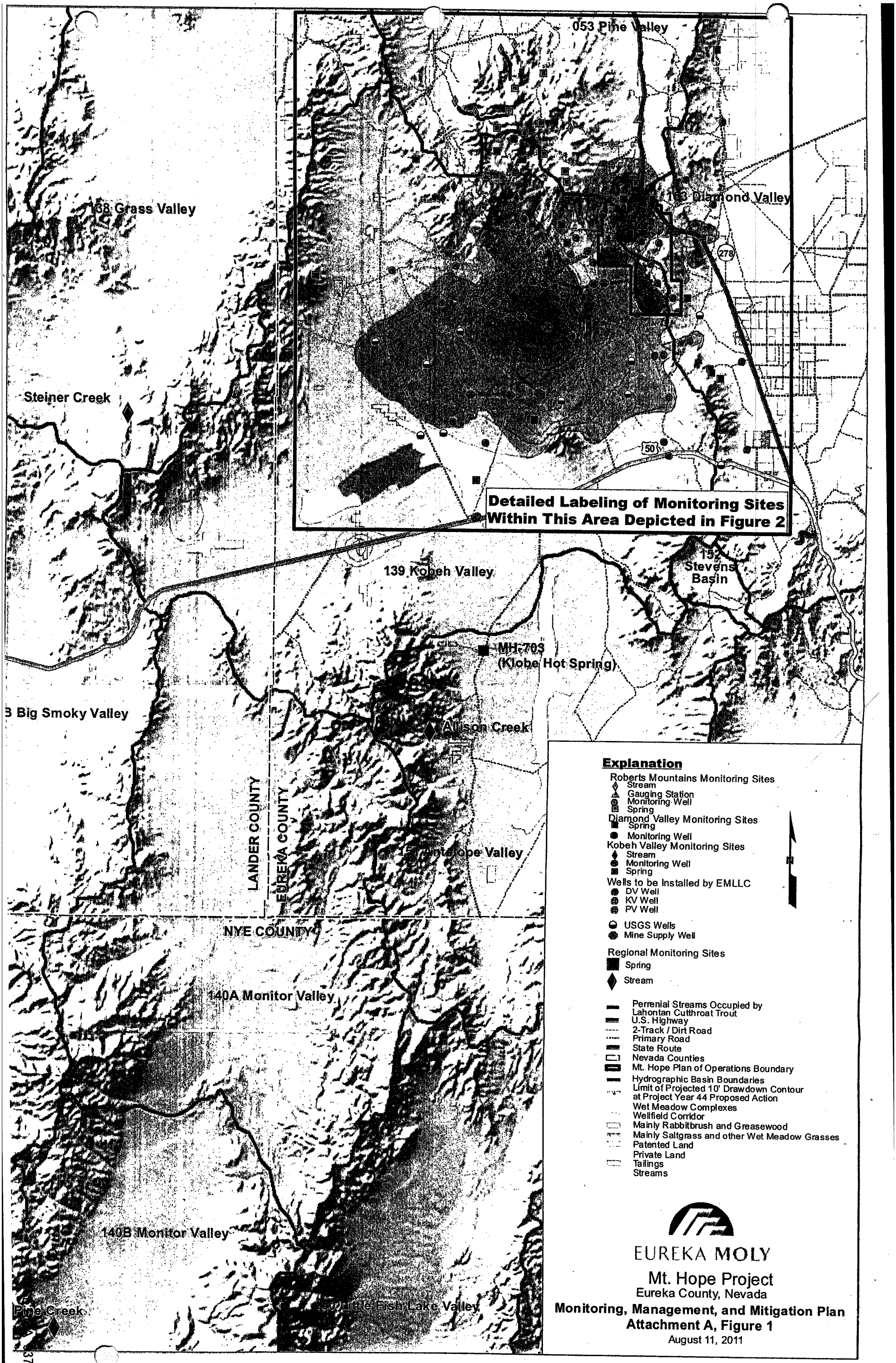
- USGS Wells
- Mine Supply Well
- U.S. Highway
- 2-Track / Dirt Road
- Primary Road
- State Route
- Nevada Counties
- Mt. Hope Plan of Operations Boundary
- Hydrographic Basin Boundaries
- Limit of Projected 10' Drawdown Contour at Project Year 44 Proposed Action
- Wet Meadow Complexes
- Wellfield Corridor
- Mainly Rabbitbrush and Greasewood
- Mainly Saltgrass and other Wet Meadow Grasses
- Patented Land
- Private Land
- Tailings
- Streams

EUREKA MOLY

Mt. Hope Project
Eureka County, Nevada

Monitoring, Management, and Mitigation Plan
Attachment A, Figure 2
August 11, 2011

SE ROA 0375


053 Pine Valley
153 Diamond Valley
278
138 Grass Valley
Steiner Creek
50
Detailed Labeling of Monitoring Sites
Within This Area Depicted in Figure 2
152
Stevens
Basin
139 Kobeh Valley
MH-703
(Klobe Hot Spring)
3 Big Smoky Valley
Allison Creek
LANDER COUNTY
EUREKA COUNTY
Antelope Valley
NYE COUNTY
140A Monitor Valley
140B Monitor Valley
Pine Creek
Little Fish Lake Valley
Explanation
Roberts Mountains Monitoring Sites
Stream
Gauging Station
Monitoring Well
Spring
Diamond Valley Monitoring Sites
Spring
Monitoring Well
Kobeh Valley Monitoring Sites
Stream
Monitoring Well
Spring
Wells to be Installed by EMLLC
DV Well
KV Well
PV Well
USGS Wells
Mine Supply Well
Regional Monitoring Sites
Spring
Stream
Perrenial Streams Occupied by Lahontan Cutthroat Trout
U.S. Highway
2-Track / Dirt Road
Primary Road
State Route
Nevada Counties
Mt. Hope Plan of Operations Boundary
Hydrographic Basin Boundaries
Limit of Projected 10' Drawdown Contour at Project Year 44 Proposed Action
Wet Meadow Complexes
Wellfield Corridor
Mainly Rabbitbrush and Greasewood
Mainly Saltgrass and other Wet Meadow Grasses
Patented Land
Private Land
Tailings
Streams
N
EUREKA MOLY
Mt. Hope Project
Eureka County, Nevada
Monitoring, Management, and Mitigation Plan
Attachment A, Figure 1
August 11, 2011

PROOF OF SERVICE

Pursuant to NRAP 25(d), I hereby certify that on the 26th day of July, 2013, I caused a copy of the foregoing ***JOINT APPENDIX VOLUMES 1 THROUGH 8*** to be served on the following parties as outlined below:

VIA COURT'S EFLEX ELECTRONIC FILING SYSTEM:

Francis Wikstrom
Jessica Prunty
Cassandra Joseph
Dana Walsh
Gary Kvistad
Bradford Jerbic
Daniel Polsenberg
Bradley Herrema
Michael Pagni
Jeffrey Barr
Debbie Leonard
Josh Reid
Theodore Beutel
Karen Peterson
John Zimmerman
Francis Flaherty
Paul Taggart
Michael Rowe
Gregory Walch
James Erbeck
Jennifer Mahe
Dawn Ellerbrock
Neil Rombardo
Ross de Lipkau

/ / /

/ / /

VIA US MAIL, POSTAGE PRE-PAID
ADDRESSED AS FOLLOWS:

William E. Nork, Settlement Judge
825 W. 12th Street
Reno, NV 89503

Dated this 26th day of July, 2013.

/s/ Therese A. Ure

THERESE A. URE, NSB# 10255
Schroeder Law Offices, P.C.
440 Marsh Avenue
Reno, NV 89509
PHONE (775) 786-8800;
FAX (877) 600-4971
counsel@water-law.com
Attorneys for Appellants Michel and Margaret Ann Etcheverry Family, LP, Diamond Cattle Company LLC, and Kenneth F. Benson

SCHROEDER LAW OFFICES, P.C.
Laura A. Schroeder, NSB #3595
Therese A. Ure, NSB #10255
440 Marsh Ave.; Reno, Nevada 89509-1515
PHONE: (775) 786-8800; FAX: (877) 600-4971
counsel@water-law.com
Attorneys for Appellants

Electronically Filed
Jul 29 2013 09:46 a.m.
Tracie K. Lindeman
Clerk of Supreme Court

IN THE SUPREME COURT
OF THE STATE OF NEVADA

EUREKA COUNTY, a political subdivision of the State of Nevada; KENNETH F. BENSON, individually; DIAMOND CATTLE COMPANY, LLC, a Nevada limited liability company; and, MICHEL AND MARGARET ANN ETCHEVERRY FAMILY, LP, a Nevada registered foreign limited partnership, Appellants, v. THE STATE OF NEVADA STATE ENGINEER; THE STATE OF NEVADA DIVISION OF WATER RESOURCES; and KOBEH VALLEY RANCH, LLC, a Nevada limited liability company, Respondents.	**Case No. 61324**
MICHEL AND MARGARET ANN ETCHEVERRY FAMILY, LP, a Nevada registered foreign limited partnership; DIAMOND CATTLE COMPANY, LLC, a Nevada limited liability company; and, KENNETH F. BENSON, individually, Appellants, v. STATE ENGINEER, OF NEVADA, OFFICE OF THE STATE ENGINEER, DPEARTMENT OF CONSERVATION AND NATURAL RESOURCE; and KOBEH VALLEY RANCH, LLC, a Nevada limited liability company, Respondents.	**Case No. 63258** ***(Consolidated with Case No. 61324)*** **JOINT APPENDIX** **VOLUME 5**

APPENDIX SUMMARY

Chronological Order by Filing Date

Document	Filing Date	Vol.	3MJA Page Nos.
Letter from State Engineer Approving 3M Plan	June 6, 2012	I	1
Petition for Judicial Review	July 5, 2012	I	2-35
Lisa Morlan's Affidavit of Service of Notice of Petition for Judicial Review and Petition for Judicial Review	July 18, 2012	I	36-38
State Engineer's Record on Appeal Vol. 1	August 3, 2012	I	39
Vol. 1 - SE ROA Summary SE ROA 39-42		I	39-42
Vol. 1 – SE ROA Conti. SE ROA 43-52		I	42-95
Vol. 1 – SE ROA Conti. SE ROA 53-132		II	96-175
Vol. 1 – SE ROA Conti. SE ROA 133-218		III	176-261
Vol. 1 – SE ROA Conti. SE ROA 219-249		IV	262-292
Vol. 1 – SE ROA Conti. SE ROA 250-251		V	293-294
State Engineer's Record on Appeal Vol. 2	August 3, 2012	V	295
Vol. 2 – SE ROA Summary SE ROA 295		V	295

Document	Filing Date	Vol.	3MJA Page Nos.
Vol. 2 – SE ROA Conti. SE ROA 252-376	August 3, 2012	V	296-420
Vol. 2 – SE ROA Conti. SE ROA 377-448		VI	421-492
State Engineer's Supplemental Record on Appeal	August 15, 2012	VI	493
Supplemental Record Summary SUP SE ROA		VI	493-495
Supplemental Record SUP SE ROA 1-29		VI	495-525
Kobeh Valley Ranch, LLC's Answer to Petition for Judicial Review	August 17, 2012	VI	526-531
Petitioners' Opening Brief	November 5, 2012	VI	532-576
Kobeh Valley Ranch's Answering Brief	Dec. 20, 2012	VI	577-610
State Engineer's Answering Brief	Dec. 20, 2012	VII	611-629
Petitioner's Reply Brief	February 1, 2013	VII	630-646
Transcript of Oral Argument	April 15, 2013	VII	647-719
Findings of Fact, Conclusions of Law, and Judgment	May 17, 2013	VIII	720-736
Petitioners' Notice of Appeal	May 21, 2013	VIII	737-739
Notice of Entry of Findings of Fact, Conclusions of Law, and Judgment	May 23, 2013	VIII	740-761

Document	Filing Date	Vol.	3MJA Page Nos.
Proof of Service of Notice of Entry of Findings of Fact, Conclusions of Law, and Judgment	May 23, 2013	VIII	742

APPENDIX SUMMARY

Alphabetical Order

Document	Filing Date	Vol.	3MJA Page Nos.
Findings of Fact, Conclusions of Law, and Judgment	May 17, 2013	VIII	720-736
Kobeh Valley Ranch, LLC's Answer to Petition for Judicial Review	August 17, 2012	VI	526-531
Kobeh Valley Ranch's Answering Brief	Dec. 20, 2012	VI	577-610
Letter from State Engineer Approving 3M Plan	June 6, 2012	I	1
Lisa Morlan's Affidavit of Service of Notice of Petition for Judicial Review and Petition for Judicial Review	July 18, 2012	I	36-38
Notice of Entry of Findings of Fact, Conclusions of Law, and Judgment	May 23, 2013	VIII	740-761
Petition for Judicial Review	July 5, 2012	I	2-35
Petitioners' Notice of Appeal	May 21, 2013	VIII	737-739
Petitioners' Opening Brief	November 5, 2012	VI	532-576
Petitioners' Reply Brief	February 1, 2013	VII	630-646
Proof of Service of Notice of Entry of Findings of Fact, Conclusions of Law, and Judgment	May 23, 2013	VIII	742
State Engineer's Answering Brief	Dec. 20, 2012	VII	611-629

Document	Filing Date	Vol.	3MJA Page Nos.
State Engineer's Record on Appeal Vol. 1	August 3, 2012	I	39
Vol. 1 - SE ROA Summary SE ROA 39-42		I	39-42
Vol. 1 – SE ROA Conti. SE ROA 43-52		I	42-95
Vol. 1 – SE ROA Conti. SE ROA 53-132		II	96-175
Vol. 1 – SE ROA Conti. SE ROA 133-218		III	176-261
Vol. 1 – SE ROA Conti. SE ROA 219-249		IV	262-292
Vol. 1 – SE ROA Conti. SE ROA 250-251		V	293-294
State Engineer's Record on Appeal Vol. 2	August 3, 2012	V	295
Vol. 2 – SE ROA Summary SE ROA 295		V	295
Vol. 2 – SE ROA Conti. SE ROA 252-376	August 3, 2012	V	296-420
Vol. 2 – SE ROA Conti. SE ROA 377-448		VI	421-492
State Engineer's Supplemental Record on Appeal	August 15, 2012	VI	493

Document	Filing Date	Vol.	3MJA Page Nos.
Supplemental Record Summary SUP SE ROA	August 15, 2012	VI	493-495
Supplemental Record SUP SE ROA 1-29		VI	495-525
Transcript of Oral Argument	April 15, 2013	VII	647-719

5

To Whom it may concern:

We, John West Colby II and Paula Mae Colby, residents of Kobeh Valley have entered into a mitigation agreement with Eureka Moly, LLC and we are satisfied with the mitigation and terms of the mitigation.

Paula Mae Colby
Paula Mae Colby
Date: _____

John West Colby II
John West Colby II
Date: _____

STATE OFNEVADA)
) ss.
County of Eureka)

On this 7 day of September, 2011, before me, the undersigned, a Notary Public in and for the state aforesaid, personally appeared John West Colby II and Paula Mae Colby, husband and wife, known or identified to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial seal the day and year in this certificate first above written.

CARRI WRIGHT
Notary Public, State of Nevada
Appointment No. 09-11022-8
My Appt. Expires Oct 6, 2013

C Wright
Notary Public in and for the State of Nevada,
Residing at: 70 Railroad St., Eureka NV
My Commission expires: Oct. 6, 2013

COPY

NO._____

FILED

AUG 03 2012

Eureka County Clerk

BY _____

CATHERINE CORTEZ MASTO
Attorney General
BRYAN L. STOCKTON
Nevada State Bar # 4764
Senior Deputy Attorney General
100 N. Carson Street
Carson City, Nevada 89701
(775) 684-1228
Attorneys for Respondents

IN THE SEVENTH JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR THE COUNTY OF EUREKA

MICHEL AND MARGARET ANN ETCHEVERRY FAMIL, LP, a Nevada Registered Foreign Limited Partnership, DIAMOND CATTLE COMPANY, LLC, a Nevada Limited Liability Company, and KENNETH F. BENSON, an individual,

Petitioners,

vs.

STATE ENINGEER OF NEVADA, OFFICE OF THE STATE ENGINEER, DIVISION OF WATER RESOUCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES,

Respondents.

Case No.: CV 1207-178

Dept. No.: II

VOLUME II

Bates stamped pages

SE ROA 0252-0448

Nevada Office of the Attorney General
100 North Carson Street
Carson City, NV 89701-4717

Replaced 6-1-12 JH

6

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction rates of up to 11,300 acre-feet per year (af/yr) from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling #6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County. The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater would be extracted by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The operator of the Project is EMLLC. The groundwater would be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater extraction would include open pit dewatering at rates that are predicted to reach 742 af/yr. The distribution of this extraction from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights and the customary uses of local water dependent public resources (e.g., wildlife, grazing forage, recreation).

B. The 3M outlines a process by which adverse impacts may be identified and ultimately mitigated, should they occur. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water and water dependent resources.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

Deleted:

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under Nevada State Law that obligate County officials, both elected and appointed, to actively

participate in the planning and management of resources within Eureka County. Therefore, Eureka County, and representatives from locally affected farming and ranching interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under **MANAGEMENT and in accordance with this 3M**.

Deleted: entities

Deleted: have a vested interest in water resources and this 3M

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input.

D. This 3M is separate from the requirements placed upon EMLLC by other agencies including Bureau of Land Management (BLM) or Nevada Department of Wildlife (NDOW).

Deleted: The BLM has claimed Federal Public Water Reserves (PWR 107) within the area of concern. The BLM and EMLLC have entered into a stipulated settlement agreement as a condition of the BLM withdrawal of protests of EMLLC's water right applications and NDOW is included as a party to the settlement agreement.

E. All of the participants in this 3M are hereinafter referred to as "Parties".

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy and Operating Guidelines under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

B. **Water Advisory Committee:**

a. A WAC will be established with one member from each Party. Initially, EMLLC, NSE, and Eureka County representatives will convene no later than 30 days after NSE approval of this 3M. Procedures will be established at this time for invitation and inclusion of the other Parties into the WAC, with the exception of the USGS, which participates only in the TAC. The WAC may also invite other potentially

affected water rights holders to participate. The WAC will have no more than seven (7) members and at least five (5) members must be present to constitute a quorum in order to take action. A representative of the NSE will be invited to participate as the chair of the WAC. If the NSE representative declines this invitation, the WAC will elect the chairman.

Deleted: and those with vested interests

b. After the full WAC has been convened it will establish policy, define additional roles and responsibilities of the WAC and TAC, and develop Operating Guidelines (OG) such as scheduling of meetings, agenda setting, publication of minutes, public participation, and any other necessary components. These policies and OG will be consistent with Nevada Law, including Nevada Open Meeting Law, the requirements and conditions of the NSE, and the terms and provisions of this 3M.

Comment [r1]: These are not public meetings and therefore are not subject to this statute. Why encumber the process with this bureaucracy?

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M and through the first year of Project groundwater extraction. Meeting frequency may be adjusted as decided by the WAC, but will be no less than once annually.

d. Purposes and Functions of the WAC will be to:

i. Provide a public forum for Parties to discuss relevant data and analyses.
ii. Share information regarding modeling efforts and model results.
iii. Make recommendations for modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, as recommended by the TAC.
iv. Provide status reports and recommendations to the Parties.
v. Form recommendations for groundwater management or mitigation actions based on reports from the TAC.
vi. Review financial assurance periodically and make adjustment to amount as appropriate and recommend release of funds for mitigation.
vii. Recommend values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the Parties and could require mitigation or management actions.
viii. Make recommendations on what constitutes an adverse impact on a case-by-case basis.
ix. Provide the NSE, Parties, and the local stakeholders with results of any analyses or technical evaluations, along with recommendations for specific mitigation or management actions.

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each Party represented on the WAC will be able to appoint and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding

Deleted: create

Deleted: one

Deleted:

for the USGS's participation in the 3M will be borne by EMLLC either through new or financial contribution to existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. The WAC will develop criteria for membership in the TAC under its OG. Other TAC members may be appointed by the WAC in addition to the individual TAC members representing each Party.

b. The TAC will meet within 30 days after WAC appointment to review EMLLC's proposed monitoring provided as Attachment A to this 3M. Upon completing this review, the TAC will make recommendations for changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

Deleted: (if any)

c. Purposes and Functions of the TAC will be to:

i. Review the proposed monitoring and recommend implementation, including any changes to the specific monitoring elements, as appropriate.
ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.
iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.
v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria for management or mitigation based upon available data and analyses.
vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations regarding the numerical groundwater flow model, including appropriate times for model updates and the most useful modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first six months of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as recommended under the provisions of the 3M.

Deleted: if

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts.

E. **Dewatering:**

a. Water pumped for mine dewatering will be isolated from processing facilities. Therefore, water extracted from Diamond Valley will have no connection, piped or other, into the processing facilities which return water to the tailings dam in Kobeh Valley. No water from dewatering will be used outside of Diamond Valley and the pit complex. The pit complex includes the pit and the contiguous waste rock disposal facilities. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the basin using some acceptable method under the provisions of this 3M.

b. The volume of water derived from pit dewatering and consumed will be documented and reported to verify that all water extracted from Diamond Valley was consumed in Diamond Valley.

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed to provide early warning of potential adverse impacts to local water dependent public resources, water uses, and water rights arising from water pumping by the Project.

b. Recommendations to the WAC for action criteria will be made by the TAC based on data analyses. Action criteria adopted by the WAC will be presented to the NSE for consideration as management or mitigation triggers.

c. When any action criteria that has been approved by the NSE and adopted as part of this 3M is reached, the following management actions will be triggered:

i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is a result of groundwater extraction by the Project and present their findings to the WAC.

ii. If the WAC determines that any action criterion exceedance is attributable to groundwater extraction by the Project, the WAC will direct the TAC to expeditiously develop mitigation or management actions. The TAC will

analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.

iii. The WAC will determine whether or not to recommend implementation of the mitigation or management actions to the NSE.

iv. The effectiveness of any implemented measure will be evaluated by the TAC. Results and recommendations will be reported to the WAC.

v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC, and accompanied by data and scientific analyses to support the proposed change. If the supporting analyses are found to be technically sound by the TAC, then the WAC may recommend to the NSE that the action criterion be adjusted.

vi. Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made in consideration of the evaluation and recommendations of the TAC.

b. The WAC shall make decisions by unanimous vote. If unanimity is not achieved the Parties may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not successful, the Parties may refer the issue to the NSE.

Deleted: , if possible

c. Decisions made by the WAC regarding changes to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be provided to the NSE as recommendations. The NSE will then consider the WAC recommendations and determine whether to require implementation of such management and/or mitigation actions.

d. Nothing herein limits or changes the NSE authority, and any Party can petition the NSE to consider any issue.

H. **Modification of the 3M**

a. The WAC may modify this 3M under the provisions contained herein.

b. The Parties may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the other Parties. Prior to the NSE decision, all Parties will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided as Attachment A to this 3M. It was developed to describe the monitoring that will be conducted to meet BLM monitoring requirements, and is incorporated into the Mt Hope Project Plan of Operations. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring frequencies. Upon acceptance by the NSE, EMLLC will implement these monitoring requirements.

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the Parties, as agreed upon by the Parties, that interfere with data collection.

D. Groundwater

a. Groundwater extraction amounts will be measured by flowmeters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in wells installed in the Project network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond and Antelope valleys; between the wellfield and the headwaters of Henderson and Roberts Creek; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

Deleted: may

Deleted: Valley
Deleted: and
Deleted: Valley
Deleted: ,
Deleted: and
Deleted: , Roberts Creek
Deleted: ,
Deleted: and
Deleted: Consideration will be given to completing n

d. Test wells constructed at each production well site will be maintained as monitoring wells as is feasible and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request permission or seek other means to collect data from these wells. If permission cannot be obtained, the WAC will seek an evaluation by the TAC for replacement.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and proportioned between the two basins through hydrogeological analysis by the TAC. Water truck loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley for mine environmental dust suppression. The amount of water used in Diamond Valley for other ancillary uses (e.g., truck wash) will be metered and/or estimated and recorded in the database.

F. **Surface Water**

a. As a minimum, the monitoring of stream flow will be conducted as follows:

Deleted: T

Deleted: flow of streams

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.
ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and other vegetation communities will be conducted. These locations will be expanded to include additional sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

Deleted: to have

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and recommended by the WAC.

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular and timely basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be

fully and cooperatively shared among the Parties. Verified data within the 3M database will become available to the public, upon request.

b. In addition to updating the 3M database on a regular basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the Parties for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

6. MITIGATION MEASURES

A. EMLLC will mitigate adverse impacts as agreed upon by the Parties under the provisions of this 3M. The WAC will take necessary steps to ensure that mitigation actions are feasible, reasonable, and timely.

B. Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s).

C. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will provide financial assurance necessary to complete any future monitoring and subsequent mitigation work based on predicted impacts under the provisions of this 3M. A mutually agreeable Trustee will be selected to administer the account and release funds upon approval under the provisions of this 3M.

D. Initial funding will be placed into an interest bearing account under this 3M. This funding will occur in a manner as follows:

a. Funding will occur no later than GMI Board of Directors approval to construct the Project.
b. Funding will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).
c. Funding will occur each year thereafter during the first five years of operations.
d. Funding will be adjusted periodically under the provisions of this 3M to ensure that sufficient funding is in place to mitigate predicted adverse impacts, including operating and maintenance and long-term replacement costs, and adjusted for inflation. This financial assurance will also fund post-mining monitoring under the provisions of this 3M.

e. The initial funding contribution is $500,000
The minimum six month funding contribution is $500,000
The minimum year one funding contribution is $1,000,000
The minimum year two funding contribution is $1,000,000
The minimum year three funding contribution is $1,000,000

Deleted: or other funding mechanism (e.g., insurance)
Formatted: List Paragraph, Left, No bullets or numbering
Formatted: Bullets and Numbering
Formatted
Deleted: Additional f
Deleted: t
Deleted: and
Deleted: After five years, This account will be reviewed under the provisions of this 3M upon the first FM update. Tthis account will be
Deleted: (e.g. each three years) adjusted
Deleted: e
Formatted: Default, Indent: Left: 0.85"
Formatted: Bullets and Numbering
Deleted: amount
Deleted: .
Deleted: augmented
Formatted: Indent: Left: 0.85", No bullets or numbering

The minimum year four funding contribution is $1,000,000
The minimum year five funding contribution is $1,000,000

f. At the end of five years of operation, the account shall have a minimum of $6,000,000[1].

g. In addition to any changes in mitigation funding due to revisions to the FM and data analysis under this 3M, this amount will be adjusted to account for inflation (3% per year) and O&M (1% per year). For example, inflation and O&M adjustments by themselves would require the following fund balances:

Year 10 - $7.4 M
Year 15 - $8.7 M
Year 20 – $10.5 M
Year 25 - $13.4 M
Year 30 - $16.3 M
Year 35 - $19.8 M
Year 40 - $24.1 M
Year 45 - $29.3 M

E. Modeling and analyses conducted by EMLLC and submitted to the NSE predicts declining water levels due to Project pumping in Kobeh, Pine and Diamond valleys. This 3M does not outline which specific mitigation measures would address these impacts, but outlines the procedures to validate occurrence of predicted impacts and implement mitigation prior to or at occurrence.

F. To ensure wildlife have continued access to customary use, adversely impacted surface water sources will be mitigated through such measures, including but not limited to, installation and maintenance of replacement water sources (e.g., guzzlers).

G. Mitigation measures will be developed on a case-by-case basis under provisions of this 3M. These mitigation measures will be implemented as directed by the NSE.

H. Potential mitigation measures could include the following:

a. Supply water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

Deleted: <#>¶
Formatted: Bullets and Numbering
Deleted: 5,230,000
Deleted: For reference, if the cost to mitigate in current dollars has inflation and O&M applied, the
Formatted: Indent: Left: 1.2"
Deleted: The analysis predicts impacts will occur to existing water rights and customary water uses in Kobeh Valley.
Deleted: as required under NRS 533.367,

[1] A total of 34 springs, 2 streams, and 12 wells fall within the maximum extent of the predicted 5-foot drawdown contour calculated by the current version of the FM. The level of funding is based on best estimates of the cost in today's dollars to replace each spring with a well/solar pump, the cost to mitigate the loss of each stream water source, and the cost to replace each existing well. Also included is the cost for NEPA analysis needed to perform mitigation on public land and post-mining monitoring.

c. Restoration, modification, or replacement of existing habitat or forage using a variety of means (e.g., seeding and planting, thinning or other vegetative treatments).

d. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank accessible to both livestock and wildlife). If livestock water sources are impacted, it will be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

e. Any impact to individual water rights attributable to the Project could be compensated financially.

f. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins, are attributable to the Project, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

Deleted: w

g. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

h. Water-dependent recreation such as fishing, swimming, and camping may be mitigated by replacement, enhancement or augmentation of recreation opportunities in the vicinity of the impacted resource.

i. Other measures as agreed to by the Parties and/or required by the NSE.

Deleted: ¶

Deleted: ¶
¶
¶
¶
¶

Deleted: ¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶

Deleted: ¶
¶
¶
¶

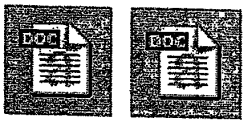
7

YAHOO! MAIL Classic

FW: 3M

Friday, September 16, 2011 3:06 PM

2 Files (265KB)



3M Draft ... 3M Draft ...

From: Jake Tibbitts [mailto:natresmgr@eurekanv.org]
Sent: Friday, September 16, 2011 2:39 PM
To: Pat Rogers; Robert Pennington; Elise Brachtl
Cc: 'Dale Bugenig'
Subject: RE: 3M

Attached is the most recent draft 3M plan that incorporates changes discussed at the commissioners meetings and personally with all three of the commissioners. I hope I have also addressed the comments that Bob provided at the meetings as well. There is a clean copy attached and also a copy with all of the redlines to see every change that has occurred since the version from the first week of August.

This will be the 3M version to be discussed at the meeting on Monday. Let me know if you have any questions. I still suggest that it may be beneficial to get together on Monday after the meeting to work on it together.

Have a great weekend.

Regards,

Jake

From: Pat Rogers [mailto:progers@generalmoly.com]
Sent: Wednesday, September 14, 2011 5:38 PM
To: Jake Tibbitts
Cc: Dale Bugenig; Elise Brachtl; Robert Pennington
Subject: RE: 3M

Jake,
Sorry for the delay in responding - I've been sick and just now starting to feel better. I'll plan to attend the commission meeting 9/19 and based on what is decided, we can determine how best to go forward. I don't think Bob can make it, but hopefully Elise can.

Thanks
Pat

Sent from my Windows Phone

From: Jake Tibbitts
Sent: Tuesday, September 13, 2011 2:28 PM
To: Pat Rogers
Cc: Dale Bugenig
Subject: 3M

Pat,

I also left you a voice message. I have been out of town for a week and just got back to the office today. Dale's daughter is getting married this week and he stayed in Reno to help prepare for the festivities which are being held at his home. Monday the 19th is the Commissioners meeting where the 3M will be discussed again with changes incorporated from the last meeting and more discussion. Perhaps it would make sense to get together after the meeting on Monday to work on incorporating all changes and coming to final consensus. Would you and your team be available on Monday afternoon to meet?

Jake Tibbitts
Natural Resources Manager
Eureka County Department of Natural Resources
PO Box 682
Eureka, NV 89316

Phone: 775-237-6010
Fax: 775-237-6012

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

Formatted

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction rates of up to 11,300 acre-feet per year (af/yr) from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling #6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County. The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater would be extracted by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The operator of the Project is EMLLC. The groundwater would be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater extraction would include open pit dewatering at rates that are predicted to reach 742 af/yr. The distribution of this extraction from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights and the customary uses of local water dependent public resources (e.g., wildlife, grazing forage, recreation).

B. The 3M outlines a process by which adverse impacts will be identified and ultimately mitigated. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water and water dependent resources.

Deleted: may

Deleted: , should they occur.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under Nevada State Law that obligate County officials, both elected and appointed, to actively

participate in the planning and management of resources within Eureka County. Eureka County, and representatives from locally affected farming, ranching, and domestic interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under MANAGEMENT and in accordance with this 3M.

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input.

D. This 3M is separate from the requirements placed upon EMLLC by other agencies including Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW).

E. All of the participants in this 3M are hereinafter referred to as "Parties".

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy and Operating Guidelines under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

B. **Water Advisory Committee:**

a. The WAC will have one member from each Party, with the exception of the USGS, which participates only in the TAC. Within 30 days after NSE approval of this 3M, EMLLC, NSE, and Eureka County representatives will convene. Upon convening, the Diamond Natural Resources Protection and Conservation Association (DNRPCA) and the Eureka Producers Cooperative (EPC) (representing the bulk of

Deleted: Therefore,
Deleted: and
Deleted: entities who have a vested interest in
Deleted: resources and this 3M
Formatted: Font: Not Bold
Deleted: or
Deleted: The BLM has claimed Federal Public Water Reserves (PWR 107) within the area of concern. The BLM and EMLLC have entered into a stipulated settlement agreement as a condition of the BLM withdrawal of protests of EMLLC's water right applications and NDOW is included as a party to the settlement agreement.
Deleted: A
Deleted: be established with
Deleted: . Initially
Deleted: no later than 30 days after NSE approval of this 3M. Procedures

water rights holders in the Diamond Valley Flow System) will each be invited to bring forward one representative nominated from their respective membership for inclusion into the WAC. Letters of interest will also be accepted from affected ranching interests (i.e., Kobeh Valley rancher) for inclusion into the WAC. Eureka County, NSE, EMLLC, DNRPCA, and EPC will make the determination on the affected ranching interest to be included on the WAC based on letters of interest received. If any of these initial Parties cease to exist, the remaining WAC members will develop a process for inclusion of replacement ranching and farming interests on the WAC. The WAC may also invite other potentially affected water rights holders to participate. The WAC will have no more than seven (7) members. A representative of the NSE will be invited to participate as the chair of the WAC. If the NSE representative declines this invitation, the WAC will elect the chairman. Each Party, at its sole discretion, may invite such additional staff or consultants to attend WAC meetings as each deems necessary.

Deleted: be established at this time

Deleted: invitation and

Deleted: of the other Parties

Deleted: , with the exception of the USGS, which participates only in the TAC.

Deleted: and interests

b. After the full WAC has been convened it will establish policy, define additional roles and responsibilities of the WAC and TAC, and develop Operating Guidelines (OG) such as scheduling of meetings, agenda setting, publication of minutes, public participation, and any other necessary components. These policies and OG will be consistent with Nevada Law, the requirements and conditions of the NSE, and the terms and provisions of this 3M.

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M and through the five years of Project groundwater extraction. Meeting frequency may then be adjusted as decided by the WAC, but will be no less than once annually.

Deleted: first year

d. Purposes and Functions of the WAC will be to:

i. Provide a public forum for Parties to discuss relevant data and analyses.
ii. Share information regarding modeling efforts and model results.
iii. Make modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, based on recommendations from the TAC.
iv. Provide status reports and recommendations to the Parties.
v. Recommend values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the Parties and could require mitigation or management actions.
vi. Make recommendations on what constitutes an adverse impact on a case-by-case basis.
vii. Form and ensure implementation of groundwater management or mitigation measures based on reports from the TAC.
viii. Review financial assurance periodically and make adjustment to amount as appropriate and release fund for mitigation and/or management measures.

Deleted: recommendations for

Deleted: as recommended by

Deleted: <#>Form recommendations for groundwater management or mitigation actions based on reports from the TAC.¶
<#>Review financial assurance periodically and make adjustment to amount as appropriate and recommend release of funds for mitigation.¶

ix. Provide the NSE, Parties, and the local stakeholders with data and results of any analyses or technical evaluations, along with reports of specific implemented mitigation or management actions.

Deleted: recommendations for

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each Party represented on the WAC will be able to appoint and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding for the USGS's participation in the 3M will be borne by EMLLC either through new or financial contribution to existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. The WAC will develop criteria for membership in the TAC under its OG. Other TAC members may be appointed by the WAC in addition to the individual TAC members representing each Party. Each Party, at its sole discretion, may invite such additional staff or consultants to attend TAC meetings as each deems necessary.

Deleted: create

Deleted: one

b. The TAC will meet within 30 days after WAC appointment to review the proposed monitoring provided as Attachment A to this 3M. Upon completing this review, the TAC will make recommendations to the WAC for changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

Deleted: EMLLC's

Deleted: (if any)

c. At a minimum, purposes and functions of the TAC will be to:

Deleted: Purposes

Deleted: Functions

i. Review the proposed monitoring and recommend to the WAC implementation, including any changes to the specific monitoring elements, as appropriate.
ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.
iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.
v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria to the WAC for management or mitigation measures based upon available data and analyses.

vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations to the WAC regarding the numerical groundwater flow model, including appropriate times for model updates and the most useful modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first six months of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as recommended under the provisions of the 3M.

Deleted: if

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts and to help frame action criteria.

E. **Dewatering:**

a. Water pumped for mine dewatering will be isolated from processing facilities. Therefore, water extracted from Diamond Valley will have no connection, piped or other, into the processing facilities which return water to the tailings dam in Kobeh Valley. No water from dewatering will be used outside of Diamond Valley and the pit complex. The pit complex includes the pit and the contiguous waste rock disposal facilities. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the basin using some acceptable method under the provisions of this 3M.

b. The volume of water derived from pit dewatering and consumed will be documented and reported to verify that all water extracted from Diamond Valley was consumed in Diamond Valley.

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed by the WAC with recommendations from the TAC. These criteria will be developed to provide early warning of potential adverse impacts to water rights, local water dependent public

resources, and other locally important water uses arising from groundwater pumping by the Project.

b. In addition to action criteria that will be developed as described above, any water level decline in Diamond Valley or any other basin attributable to Project groundwater pumping will serve as an action criterion to require EMLLC to purchase and permanently retire an equal or greater volume of active and current water rights (water currently pumped) within Diamond Valley or the affected basin.

c. When any action criterion that has been adopted as part of this 3M is reached, the following management actions will be triggered:

i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is a result of groundwater extraction by the Project and present their findings to the WAC.

ii. If the WAC determines that any action criterion exceedance is attributable to groundwater extraction by the Project, the TAC will expeditiously develop mitigation or management measures for the WAC to consider. The TAC will analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.

iii. The WAC will determine whether or not to require implementation of the mitigation or management measures and will also have access to funds described in **MITIGATION MEASURES** to ensure that any required measure is implemented.

iv. The effectiveness of any implemented measure will be evaluated by the TAC to ensure the measure met or exceeded the intended result. Results and recommendations for any additional measures will be reported to the WAC.

v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC and accompanied by analyses to support the proposed change. If the supporting analyses are found to be technically sound by the TAC, then the WAC may adjust the action criterion.

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made in consideration of the evaluation and recommendations of the TAC.

b. The WAC shall make decisions under this 3M by unanimous vote with at least 5 members present and all Parties must be afforded the opportunity to attend meetings where decisions will be made. If unanimity is not achieved the Parties may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not successful, the

Deleted: , and water rights

Deleted: water

Formatted: Indent: Left: 0"

Deleted: <#>Recommendations to the WAC for action criteria will be made by the TAC based on data analyses. Action criteria adopted by the WAC will be presented to the NSE for consideration as management or mitigation triggers. ¶ ¶

Deleted: criteria

Deleted: approved by the NSE and

Deleted: WAC

Deleted: direct the TAC to

Deleted: actions.

Deleted: recommend

Deleted: actions

Deleted: the NSE

Deleted: .

Deleted: ,

Deleted: data and scientific

Deleted: recommend to the NSE that

Deleted: be adjusted

Deleted: <#>Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.¶ ¶

Deleted: by unanimous vote.

Deleted: , if possible.

Parties may refer the issue, accompanied with their respective opinion, to the NSE for final determination.

c. Decisions made by the WAC regarding changes to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be under the jurisdiction and authority of the NSE.

d. Nothing herein limits or changes the NSE authority, and any Party can petition the NSE to consider any issue.

e. Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.

H. **Modification of the 3M**

a. The WAC may modify this 3M under the provisions contained herein.

b. The Parties may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the other Parties. Prior to the NSE decision, all Parties will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided as Attachment A to this 3M. It was developed to describe the monitoring that will be conducted to meet BLM monitoring requirements, and is incorporated into the Mt Hope Project Plan of Operations. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations to the WAC regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations to the WAC for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring

Deleted: provided to the NSE as recommendations. The NSE will then consider the WAC recommendations and determine whether to require implementation of such management and/or mitigation actions.

Formatted: List Paragraph, Left

Formatted: Outline numbered + Level: 3 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.85"

Formatted: Indent: Left: 0.85"

Deleted: may

frequencies. Upon acceptance under the terms of this 3M, EMLLC will implement these monitoring requirements.

Deleted: by

Deleted: NSE

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the Parties, as agreed upon by the Parties, that interfere with data collection.

D. Groundwater

a. Groundwater extraction amounts will be measured by flowmeters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in wells installed in the Project network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond, Pine and Antelope valleys; between the wellfield and the headwaters of Henderson and Roberts Creek; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

Deleted: Valley and

Deleted: Valley,

Deleted: Creek,

Deleted: ,

Deleted: Consideration will be given to completing nested

d. Test wells constructed at each production well site will be maintained as monitoring wells, as is feasible, and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request permission or seek other means to collect data from these wells. If permission cannot be obtained, the WAC will seek an evaluation by the TAC for replacement.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and proportioned between the two basins through hydrogeological analysis by the TAC. Water truck loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley

for mine environmental dust suppression. The amount of water used in Diamond Valley for other ancillary uses (e.g., truck wash) will be metered or estimated and recorded in the database.

Deleted: and/

F. **Surface Water**

a. At a minimum, the monitoring of stream flow will be conducted as follows:

Deleted: The flow of streams

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.
ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and other vegetation communities will be conducted. These locations will be expanded to include additional sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

Deleted: have

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and determined by the WAC in consideration of TAC recommendation.

Deleted: recommended

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular, timely, and continual basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be fully and cooperatively shared among the Parties. Verified data within the 3M database will become available to the public, upon request.

Deleted: and

b. In addition to updating the 3M database on a regular and continual basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the Parties for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

6. MITIGATION MEASURES

A. EMLLC will mitigate adverse impacts as agreed upon under the provisions of this 3M. The WAC will take necessary steps and will have access to funding described below to ensure that mitigation actions are feasible, reasonable, timely, and effective.

Deleted: by the Parties

Deleted: and

B. Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s).

C. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will provide financial assurance necessary to complete any future monitoring and subsequent mitigation work based on predicted impacts under the provisions of this 3M. A mutually agreeable Trustee will be selected by the WAC to administer the account and release funds upon approval by the WAC under the provisions of this 3M.

D. Initial funding will be placed into an interest bearing account under this 3M. This funding will occur in a manner as follows:

a. Funding will occur no later than GMI Board of Directors approval to construct the Project.
b. Funding will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).
c. Funding will occur each year thereafter during the first five years of operations.
d. Funding will be adjusted periodically under the provisions of this 3M to ensure that sufficient funding is in place to mitigate all predicted adverse impacts, including operating and maintenance and long-term replacement costs, and adjusted for inflation (at least 3% per year based on the 20 year average reported by the U.S. Bureau of Labor Statistics). This financial assurance will also fund 20 years of post-mining monitoring under the provisions of this 3M.
e. The initial funding contribution is $1,000,000
The minimum six month funding contribution is $1,000,000
The minimum year one funding contribution is $4,000,000
The minimum year two funding contribution is $4,000,000
The minimum year three funding contribution is $4,000,000
The minimum year four funding contribution is $4,000,000
The minimum year five funding contribution is $4,000,000
f. At the end of five years of operation, the account shall have a minimum of $22,000,000.
g. A total of 34 springs, 2 streams, and 12 wells fall within the maximum extent of the predicted 5-foot drawdown contour calculated by the current version of the FM. The level of funding is based on best estimates of the cost in today's (2011) dollars to replace each spring with a well/solar pump, the cost to mitigate the loss of each stream water source, and the cost to replace each existing well. Also included is the cost for post-mining monitoring and the cost for NEPA analysis needed to perform mitigation on public land. Additionally, this funding covers impacts that could arise that are not currently predicted or if the mine ceases operations earlier than planned when no revenue would be present to adjust the fund if needed.

E. Upon continuation of this 3M after cessation of mining and groundwater pumping by EMLLC, if the WAC determines that there is no longer a potential for future impacts attributable to the Project, any excess funds remaining in the account will be returned to EMLLC.

Deleted: or other funding mechanism (e.g., insurance)
Deleted: Additional funding
Deleted: not
Deleted: This account
Formatted
Deleted: reviewed
Deleted: upon the first FM update. This account will be periodically (e.g. each three years) adjusted under the provisions of the 3M
Deleted: .
Deleted: ¶
Deleted: amount
Deleted: 500
Deleted: .
Deleted: augmented
Deleted: 500
Formatted
Formatted: Indent: Left: 0.55"

F. Modeling and analyses conducted by EMLLC and submitted to the NSE predicts declining water levels due to Project pumping in Kobeh, Pine and Diamond valleys. This 3M does not outline which specific mitigation measures would address these impacts, but outlines the procedures to validate occurrence of predicted impacts, to identify occurrence of impacts not predicted, and implement mitigation prior to or at occurrence.

Deleted: The analysis predicts impacts will occur to existing water rights and customary water uses in Kobeh Valley.

G. To ensure wildlife have continued access to customary use, adversely impacted surface water sources will be mitigated through such measures, including but not limited to, installation and maintenance of replacement of water sources of equal or greater volume (e.g., guzzlers) in the same area as the impacted water source.

Deleted: as required under NRS 533.367

Deleted:).

H. Mitigation measures will be developed and implemented on a case-by-case basis under provisions of this 3M.

Deleted: These mitigation measures will be implemented as directed by the NSE.

I. Potential mitigation measures could include the following:

Deleted:

a. Supply water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

c. Restoration, modification, or replacement of existing habitat or forage using a variety of means (e.g., seeding and planting, thinning or other vegetative treatments).

d. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank accessible to both livestock and wildlife). If livestock water sources are impacted, it will be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

e. Any impact to individual water rights attributable to the Project could be compensated financially or property (i.e., land and water rights) could be purchased for replacement or the individuals livelihood in another location outside of the impacted area.

f. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins, are attributable to the Project, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

g. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

h. Water-dependent recreation such as fishing, swimming, and camping may be mitigated by replacement, enhancement or augmentation of recreation opportunities in the vicinity of the impacted resource.

i. Other measures as agreed to by the Parties and/or required by the NSE.

Deleted: ¶

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction rates of up to 11,300 acre-feet per year (af/yr) from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling #6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County. The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater would be extracted by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The operator of the Project is EMLLC. The groundwater would be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater extraction would include open pit dewatering at rates that are predicted to reach 742 af/yr. The distribution of this extraction from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights and the customary uses of local water dependent public resources (e.g., wildlife, grazing forage, recreation).

B. The 3M outlines a process by which adverse impacts will be identified and ultimately mitigated. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water and water dependent resources.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under Nevada State Law that obligate County officials, both elected and appointed, to actively

participate in the planning and management of resources within Eureka County. Eureka County, and representatives from locally affected farming, ranching, and domestic interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under MANAGEMENT and in accordance with this 3M.

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input.

D. This 3M is separate from the requirements placed upon EMLLC by other agencies including Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW).

E. All of the participants in this 3M are hereinafter referred to as "Parties".

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy and Operating Guidelines under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

B. **Water Advisory Committee:**

a. The WAC will have one member from each Party, with the exception of the USGS, which participates only in the TAC. Within 30 days after NSE approval of this 3M, EMLLC, NSE, and Eureka County representatives will convene. Upon convening, the Diamond Natural Resources Protection and Conservation Association (DNRPCA) and the Eureka Producers Cooperative (EPC) (representing the bulk of

water rights holders in the Diamond Valley Flow System) will each be invited to bring forward one representative nominated from their respective membership for inclusion into the WAC. Letters of interest will also be accepted from affected ranching interests (i.e., Kobeh Valley rancher) for inclusion into the WAC. Eureka County, NSE, EMLLC, DNRPCA, and EPC will make the determination on the affected ranching interest to be included on the WAC based on letters of interest received. If any of these initial Parties cease to exist, the remaining WAC members will develop a process for inclusion of replacement ranching and farming interests on the WAC. The WAC may also invite other potentially affected water rights holders to participate. The WAC will have no more than seven (7) members. A representative of the NSE will be invited to participate as the chair of the WAC. If the NSE representative declines this invitation, the WAC will elect the chairman. Each Party, at its sole discretion, may invite such additional staff or consultants to attend WAC meetings as each deems necessary.

b. After the full WAC has been convened it will establish policy, define additional roles and responsibilities of the WAC and TAC, and develop Operating Guidelines (OG) such as scheduling of meetings, agenda setting, publication of minutes, public participation, and any other necessary components. These policies and OG will be consistent with Nevada Law, the requirements and conditions of the NSE, and the terms and provisions of this 3M.

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M and through the five years of Project groundwater extraction. Meeting frequency may then be adjusted as decided by the WAC, but will be no less than once annually.

d. Purposes and Functions of the WAC will be to:

   i. Provide a public forum for Parties to discuss relevant data and analyses.
   ii. Share information regarding modeling efforts and model results.
   iii. Make modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, based on recommendations from the TAC.
   iv. Provide status reports and recommendations to the Parties.
   v. Recommend values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the Parties and could require mitigation or management actions.
   vi. Make recommendations on what constitutes an adverse impact on a case-by-case basis.
   vii. Form and ensure implementation of groundwater management or mitigation measures based on reports from the TAC.
   viii. Review financial assurance periodically and make adjustment to amount as appropriate and release fund for mitigation and/or management measures.

ix. Provide the NSE, Parties, and the local stakeholders with data and results of any analyses or technical evaluations, along with reports of specific implemented mitigation or management actions.

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each Party represented on the WAC will be able to appoint and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding for the USGS's participation in the 3M will be borne by EMLLC either through new or financial contribution to existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. The WAC will develop criteria for membership in the TAC under its OG. Other TAC members may be appointed by the WAC in addition to the individual TAC members representing each Party. Each Party, at its sole discretion, may invite such additional staff or consultants to attend TAC meetings as each deems necessary.

b. The TAC will meet within 30 days after WAC appointment to review the proposed monitoring provided as Attachment A to this 3M. Upon completing this review, the TAC will make recommendations to the WAC for changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

c. At a minimum, purposes and functions of the TAC will be to:

i. Review the proposed monitoring and recommend to the WAC implementation, including any changes to the specific monitoring elements, as appropriate.
ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.
iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.
v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria to the WAC for management or mitigation measures based upon available data and analyses.

vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations to the WAC regarding the numerical groundwater flow model, including appropriate times for model updates and the most useful modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first six months of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as recommended under the provisions of the 3M.

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts and to help frame action criteria.

E. **Dewatering:**

a. Water pumped for mine dewatering will be isolated from processing facilities. Therefore, water extracted from Diamond Valley will have no connection, piped or other, into the processing facilities which return water to the tailings dam in Kobeh Valley. No water from dewatering will be used outside of Diamond Valley and the pit complex. The pit complex includes the pit and the contiguous waste rock disposal facilities. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the basin using some acceptable method under the provisions of this 3M.

b. The volume of water derived from pit dewatering and consumed will be documented and reported to verify that all water extracted from Diamond Valley was consumed in Diamond Valley.

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed by the WAC with recommendations from the TAC. These criteria will be developed to provide early warning of potential adverse impacts to water rights, local water dependent public

resources, and other locally important water uses arising from groundwater pumping by the Project.

b. In addition to action criteria that will be developed as described above, any water level decline in Diamond Valley or any other basin attributable to Project groundwater pumping will serve as an action criterion to require EMLLC to purchase and permanently retire an equal or greater volume of active and current water rights (water currently pumped) within Diamond Valley or the affected basin.

c. When any action criterion that has been adopted as part of this 3M is reached, the following management actions will be triggered:

   i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is a result of groundwater extraction by the Project and present their findings to the WAC.
   ii. If the WAC determines that any action criterion exceedance is attributable to groundwater extraction by the Project, the TAC will expeditiously develop mitigation or management measures for the WAC to consider. The TAC will analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.
   iii. The WAC will determine whether or not to require implementation of the mitigation or management measures and will also have access to funds described in **MITIGATION MEASURES** to ensure that any required measure is implemented.
   iv. The effectiveness of any implemented measure will be evaluated by the TAC to ensure the measure met or exceeded the intended result. Results and recommendations for any additional measures will be reported to the WAC.
   v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC and accompanied by analyses to support the proposed change. If the supporting analyses are found to be technically sound by the TAC, then the WAC may adjust the action criterion.

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made in consideration of the evaluation and recommendations of the TAC.

b. The WAC shall make decisions under this 3M by unanimous vote with at least 5 members present and all Parties must be afforded the opportunity to attend meetings where decisions will be made. If unanimity is not achieved the Parties may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not successful, the

Parties may refer the issue, accompanied with their respective opinion, to the NSE for final determination.

c. Decisions made by the WAC regarding changes to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be under the jurisdiction and authority of the NSE.

d. Nothing herein limits or changes the NSE authority, and any Party can petition the NSE to consider any issue.

e. Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.

H. **Modification of the 3M**

a. The WAC may modify this 3M under the provisions contained herein.

b. The Parties may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the other Parties. Prior to the NSE decision, all Parties will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided as Attachment A to this 3M. It was developed to describe the monitoring that will be conducted to meet BLM monitoring requirements, and is incorporated into the Mt Hope Project Plan of Operations. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations to the WAC regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations to the WAC for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring

frequencies. Upon acceptance under the terms of this 3M, EMLLC will implement these monitoring requirements.

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the Parties, as agreed upon by the Parties, that interfere with data collection.

D. Groundwater

a. Groundwater extraction amounts will be measured by flowmeters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in wells installed in the Project network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond, Pine and Antelope valleys; between the wellfield and the headwaters of Henderson and Roberts Creek; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

d. Test wells constructed at each production well site will be maintained as monitoring wells, as is feasible, and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request permission or seek other means to collect data from these wells. If permission cannot be obtained, the WAC will seek an evaluation by the TAC for replacement.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and proportioned between the two basins through hydrogeological analysis by the TAC. Water truck loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley

for mine environmental dust suppression. The amount of water used in Diamond Valley for other ancillary uses (e.g., truck wash) will be metered or estimated and recorded in the database.

F. **Surface Water**

a. At a minimum, the monitoring of stream flow will be conducted as follows:

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.
ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and other vegetation communities will be conducted. These locations will be expanded to include additional sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and determined by the WAC in consideration of TAC recommendation.

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular, timely, and continual basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be fully and cooperatively shared among the Parties. Verified data within the 3M database will become available to the public, upon request.

b. In addition to updating the 3M database on a regular and continual basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the Parties for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

6. MITIGATION MEASURES

A. EMLLC will mitigate adverse impacts as agreed upon under the provisions of this 3M. The WAC will take necessary steps and will have access to funding described below to ensure that mitigation actions are feasible, reasonable, timely, and effective.

B. Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s).

C. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will provide financial assurance necessary to complete any future monitoring and subsequent mitigation work based on predicted impacts under the provisions of this 3M. A mutually agreeable Trustee will be selected by the WAC to administer the account and release funds upon approval by the WAC under the provisions of this 3M.

D. Initial funding will be placed into an interest bearing account under this 3M. This funding will occur in a manner as follows:

a. Funding will occur no later than GMI Board of Directors approval to construct the Project.
b. Funding will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).
c. Funding will occur each year thereafter during the first five years of operations.
d. Funding will be adjusted periodically under the provisions of this 3M to ensure that sufficient funding is in place to mitigate all predicted adverse impacts, including operating and maintenance and long-term replacement costs, and adjusted for inflation (at least 3% per year based on the 20 year average reported by the U.S. Bureau of Labor Statistics). This financial assurance will also fund 20 years of post-mining monitoring under the provisions of this 3M.
e. The initial funding contribution is $1,000,000
The minimum six month funding contribution is $1,000,000
The minimum year one funding contribution is $4,000,000
The minimum year two funding contribution is $4,000,000
The minimum year three funding contribution is $4,000,000
The minimum year four funding contribution is $4,000,000
The minimum year five funding contribution is $4,000,000
f. At the end of five years of operation, the account shall have a minimum of $22,000,000.
g. A total of 34 springs, 2 streams, and 12 wells fall within the maximum extent of the predicted 5-foot drawdown contour calculated by the current version of the FM. The level of funding is based on best estimates of the cost in today's (2011) dollars to replace each spring with a well/solar pump, the cost to mitigate the loss of each stream water source, and the cost to replace each existing well. Also included is the cost for post-mining monitoring and the cost for NEPA analysis needed to perform mitigation on public land. Additionally, this funding covers impacts that could arise that are not currently predicted or if the mine ceases operations earlier than planned when no revenue would be present to adjust the fund if needed.

E. Upon continuation of this 3M after cessation of mining and groundwater pumping by EMLLC, if the WAC determines that there is no longer a potential for future impacts attributable to the Project, any excess funds remaining in the account will be returned to EMLLC.

F. Modeling and analyses conducted by EMLLC and submitted to the NSE predicts declining water levels due to Project pumping in Kobeh, Pine and Diamond valleys. This 3M does not outline which specific mitigation measures would address these impacts, but outlines the procedures to validate occurrence of predicted impacts, to identify occurrence of impacts not predicted, and implement mitigation prior to or at occurrence.

G. To ensure wildlife have continued access to customary use, adversely impacted surface water sources will be mitigated through such measures, including but not limited to, installation and maintenance of replacement of water sources of equal or greater volume (e.g., guzzlers) in the same area as the impacted water source.

H. Mitigation measures will be developed and implemented on a case-by-case basis under provisions of this 3M.

I. Potential mitigation measures could include the following:

a. Supply water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

c. Restoration, modification, or replacement of existing habitat or forage using a variety of means (e.g., seeding and planting, thinning or other vegetative treatments).

d. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank accessible to both livestock and wildlife). If livestock water sources are impacted, it will be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

e. Any impact to individual water rights attributable to the Project could be compensated financially or property (i.e., land and water rights) could be purchased for replacement or the individuals livelihood in another location outside of the impacted area.

f. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins, are attributable to the Project, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

g. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

h. Water-dependent recreation such as fishing, swimming, and camping may be mitigated by replacement, enhancement or augmentation of recreation opportunities in the vicinity of the impacted resource.

i. Other measures as agreed to by the Parties and/or required by the NSE.

Replaced 6-1-12 CH

8

EUREKA MOLY

2215 North 5th Street
Elko, NV 89801
Phone: 775-748-6000
Fax: 775-753-7722
Email: progers@generalmoly.com
Website: www.generalmoly.com

October 7, 2011

Mr. Richard A. Felling
Chief, Hydrology Section
Division of Water Resources
State Engineer's Office
901 S Stewart St. Suite 2002
Carson City, NV 89701

RE: Monitoring Management and Mitigation Plan – Mt. Hope Project

Dear Mr. Felling:

This letter transmits Eureka Moly, LLC's (EMLLC) proposed Monitoring, Management and Mitigation Plan (3M) for the Mt Hope Project. This 3M is being provided in accordance with Nevada State Engineer (NSE) Ruling 6127.

As required by Ruling 6127, EMLLC has sought input and collaborated and cooperated with Eureka County (EC) on the development of this 3M. Numerous meetings between EC and EMLLC regarding the 3M have taken place, starting prior to issuance of the Ruling, in an attempt to reach consensus. As part of this effort, EMLLC met for three days (August 2, 3 and 4, 2011) with EC staff and generated a mutually agreeable 3M version. As you know, this version was provided to the EC Board of Commissioners for review and acceptance. The EC Commissioners subsequently sought public comment at their August 19, 2011 meeting. Modifications based on public comment and commissioners' comments resulted in a version provided by EC staff to EMLLC on September 16, 2011.

Overall, agreement was reached on numerous significant components of this 3M. Specifically, EMLLC agreed to use a 3M provided by EC as the starting point for development of the Mt Hope 3M. Thus, the use of a two committee oversight system for the Management component is being proposed. In addition, the proposed Monitoring component is the Water Resources Monitoring Plan (WRMoP) that was developed with substantial agreement and input by EC, and is included as an attachment in the proposed 3M.

However, consensus has not been reached on all aspects of this 3M. As an aid to identifying these areas where consensus was not reached, a "compare versions" document is attached that shows the differences between the EC version of September 16, 2011 and EMLLC's proposed 3M. The

following is a discussion and explanation of the substantive changes made by EMLLC to the EC version of September 16, 2011:

- Reference to mitigation of "customary uses" was removed. This term first appeared in Section 2.A of EC's September 16 version, and also appeared in Sections 5.F.a and 6.G. This has been removed because EMLLC understands that mitigation of customary uses implies uses that do not have a water right, and a requirement to mitigate unpermitted water sources is outside of the scope of Ruling 6127. Similarly, reference to mitigation for water dependent resources (Section 2.B of EC's September 16 version), wildlife uses (Section 7.G of EC's September 16 version) and water dependent recreation (Section 7.I.h of EC's September 16 version) have been removed. EMLLC is committed to mitigating all adversely impacted water sources, should they occur, including those without water rights. However, as this 3M is proposed for compliance with Ruling 6127, reference to these uses that are not supported by a water permit have been removed. Text has been inserted at Section 3.D. to comply with Ruling 6127 regarding access for wildlife that customarily use water sources.

- Additional text mentioning BLM's claims to Public Water Reserves and the stipulated agreement between BLM and EMLLC was added to section 3.D. This language had been included in the version provided by EC Commissioners for public comment, but was removed from EC's September 16 version.

- The term "Parties" was removed. This term first appeared in Section 3.E of EC's September 16 version. This was removed because it was used inconsistently and somewhat interchangeably with the TAC and WAC. In the proposed 3M, reference is made to the TAC and WAC instead of to "Parties".

- Numerous editorial changes were made to the description of the WAC (Section 5.B). These changes provide more clarity on the WAC roles and process for convening the WAC. The changes do not alter the concepts of how the WAC is to function, as agreed to with EC staff.

- Section 5.E of EC's September 16 version was modified to remove the requirement to physically isolate water derived from pit dewatering from processing facilities. During discussions in Eureka on September 19, it was clarified that determination of inter-basin transfer would be based on the net amount of water pumped and used in Diamond Valley. Some water used in the process will be used in Diamond Valley. Thus, as long as the amount of water obtained from Diamond Valley does not exceed the amount of water used in Diamond Valley, no inter-basin transfer will occur. EMLLC understands its obligations on this point as set forth under the Ruling. This section of EC's September 16 version was also modified to remove the portion pertaining to monitoring. This change was made simply because Section 5 of the 3M comprises the Management component. Monitoring to demonstrate compliance with the prohibition on inter-basin water transfer from Diamond Valley is included in Section 6 of the proposed 3M. Accordingly, the title of this subsection was changed from "Dewatering" to "Prevention of Interbasin Transfer from Diamond Valley".

- Section 5.F.b of EC's September 16 version was deleted. This section established an Action Criteria consisting of "any water level decline in Diamond Valley or any other basin attributable to Project groundwater pumping" and established a mitigation requirement for such impact. There is no indication by modeling or otherwise that any adverse impact will occur in Diamond Valley as a result of EMLLC's pumping. EMLLC will monitor Diamond Valley and EMLLC will mitigate any adverse impacts, should any occur, that are caused by its pumping. EMLLC's 3M provisions comply with Ruling 6127.

- Section 5.F.c.iii and Section 7.A of EC's September 16 version were changed so that WAC "recommends" instead of "requires". This change was made to be consistent with the fact that the NSE, not the WAC, has authority to require actions under this 3M.

- Section 7.B of EC's September 16 version was deleted. This deletion was made simply because the text ("Effectiveness of implemented mitigation measures will be evaluated under the provisions of this 3M. Additional measures will be implemented if a previous mitigation measure does not meet its intended purpose(s)") is redundant to that in Section 5.F.b.iv, and is more appropriately located in the Management section rather than the Mitigation section.

- EC's September 16 version (Section 7.D) called for financial assurance (FA) that would be a minimum of $22,000,000 after the first five years of operation, whereas the proposed 3M calls for financial assurance of $1,000,000 that would be funded at the end of six months of wellfield pumping for mineral processing. The proposed 3M further calls for supplemental funding, if necessary, to be placed one year thereafter (about year 1.5 following initial mineral processing). The amount of FA funding in the proposed 3M is based on the cost to monitor and to mitigate potential impacts should they occur from the first five years of project pumping. The assumptions and calculations to estimate this amount are included in an attachment to the proposed 3M.

- A description of specific methods that are anticipated to be used to mitigate, should potential adverse impacts occur to permitted water rights in the alluvial basin of Kobeh Valley, has been added (Section 7.E of the proposed 3M).

As you know, Ruling #6127 requires that EMLLC demonstrate financial capability to complete any mitigation, including mitigation after the cessation of active mining. EMLLC proposes to demonstrate this financial capability by establishing a trust account that will be accessible to perform mitigation. Mitigation could be performed by a third party, if EMLLC was unavailable or incapable of performing or funding mitigation. The amount to be placed in this fund will be based on anticipated and estimated costs of monitoring and mitigation, should any adverse impacts occur, and this amount will be reviewed periodically by the WAC, and increased if needed. Section 7C and Attachment B of this 3M provide the amount and basis for the initial funding. EMLLC proposes that this FA fund be placed in a trust account in a national bank conducting business in the state of Nevada. The funds will be managed and released under the direction and authority of a designated trustee, for the purposes described by the 3M and authorized by the NSE. With the concurrence of the NSE, such a trust mechanism can be organized and set up through the WAC's Operating Guidelines.

Should you have any questions, please feel free to contact me at (775) 748-6008.

Sincerely,

Patrick C. Rogers
Director, Environmental and Permitting

Enclosures

cc: Dave Berger, U.S. Geological Survey, with enclosures
Jake Tibbitts, Eureka County Natural Resources Department, with enclosures

NEVADA DIVISION OF WATER RESOURCES MONITORING, MANAGEMENT, AND MITIGATION PLAN FOR THE MT. HOPE PROJECT

1. BACKGROUND

A. This Monitoring, Management, and Mitigation Plan (3M) applies to proposed groundwater extraction rates of up to 11,300 acre-feet per year (af/yr) from Kobeh Valley and Diamond Valley for mining process water as granted in Ruling 6127 of the office of the Nevada State Engineer (NSE) dated July 15, 2011. A condition of this Ruling was that this 3M be prepared with input and cooperation of Eureka County. The groundwater extracted will be consumed in activities related to the Mt. Hope Project (Project), including mineral processing and mine dust control. The groundwater will be developed by Eureka Moly, LLC, (EMLLC) through Kobeh Valley Ranch, LLC (KVR), both of which are subsidiaries of General Moly, Inc. (GMI), with KVR being the water rights holder. The Lessee of the water rights and operator of the Project is EMLLC. The groundwater will be supplied primarily from a wellfield in Kobeh Valley and conveyed via pipelines to the mine and mill site. In addition, groundwater will include water derived from open pit dewatering at rates that are predicted to reach a maximum of 742 af/yr. The distribution of this water from the pit is estimated at 20% from Kobeh Valley Hydrographic Basin and 80% from the Diamond Valley Hydrographic Basin.

2. PURPOSE OF THE 3M

A. The purpose of this 3M is to assist the NSE in managing development of groundwater resources within and near the Project area to avoid adverse impacts to existing water rights.

B. The 3M outlines a process by which adverse impacts will be identified and if they occur will be ultimately mitigated. It is intended to provide the necessary data to assess the response of the aquifer(s) to the stress of water resource exploitation, provide an early warning capability, and provide safeguards for responsible management of water.

3. AUTHORITIES AND PARTICIPANTS

A. The NSE has final authority over the 3M, and EMLLC, including all successors and assigns, will be responsible for implementing and complying with the 3M.

B. In addition to the purpose outlined above, this 3M is intended to provide participation and transparency to the locally affected stakeholders. Eureka County holds water rights for municipal use in Diamond Valley. Additionally, Eureka County has local natural resource, land-use, and water resource policies, plans, and goals developed under Nevada State Law that obligate County officials, both elected and appointed, to actively participate in the planning and management of resources within Eureka County. Eureka County, and representatives from locally potentially affected farming, ranching, and

domestic interests will be invited to participate in this 3M. In the event there are other water rights holders who may be adversely affected by Mt. Hope Project groundwater extraction, these entities could be invited to participate as described under MANAGEMENT and in accordance with this 3M.

C. The USGS will be invited to participate expressly to provide impartial technical and scientific input, as described herein.

D. This 3M is separate from the requirements placed upon EMLLC by other agencies including the United States Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW). The BLM has claimed Federal Public Water Reserves (PWR 107) within the area of concern. The BLM and EMLLC have entered into a stipulated settlement agreement as a condition of the BLM withdrawal of protests of EMLLC's water right applications and NDOW is included as a party to the settlement agreement. The 3M will allow access for wildlife that customarily uses the source and will ensure that any existing water rights are satisfied to the extent of the water right permit.

4. PRINCIPAL COMPONENTS

The 3M consists of three principal components:

A. Management

B. Monitoring

C. Mitigation

The framework of these components is described in the following sections.

5. MANAGEMENT

A. Two committees are established. The Water Advisory Committee (WAC) is to establish and carryout policy and Operating Guidelines under this 3M. The Technical Advisory Committee (TAC) is to provide the technical scientific expertise necessary for collection, evaluation and analysis of data. Separation of the roles and responsibilities of these two bodies is considered crucial to maintaining scientific impartiality of the data collection and analysis program.

B. **Water Advisory Committee:**

a. Within 30 days after NSE approval of this 3M, EMLLC, NSE, and Eureka County representatives will convene as the three (3) founding members of the WAC. Upon the three founding members convening, the Diamond Natural Resources Protection

and Conservation Association (DNRPCA) and the Eureka Producers Cooperative (EPC) (DNRPCA and EPC represent the bulk of water rights holders in the Diamond Valley Flow System) will each be invited to bring forward one representative nominated from their respective membership for inclusion as members of the WAC. Letters of interest will also be accepted from potentially affected ranching interests (i.e., Kobeh Valley rancher) for inclusion as a member of the WAC. Eureka County, NSE, EMLLC, DNRPCA, and EPC will make the determination on the affected ranching interest to be included on the WAC based on letters of interest received. If any of the potentially affected ranching and farming interests cease to exist, the remaining WAC members will develop a process in the WAC Operating Guidelines so that replacement members can be selected to join the WAC. The WAC, through its Operating Guidelines, may also invite other potentially affected water rights holders to participate as members. The member of the WAC representing the NSE will be invited to participate as the chair of the WAC. If the NSE member representative declines this invitation, the WAC will elect the chairman. Each WAC member, at its sole discretion, may invite such additional staff or consultants to attend WAC meetings as it deems necessary.

b. After the full WAC has been convened, the WAC will establish policy, define additional roles and responsibilities of the WAC and TAC, and develop Operating Guidelines (hereinafter "OG") such as scheduling of meetings, agenda setting, publication of minutes, receiving input from the public, and any other necessary components. These policies and OG will be consistent with Nevada Water Law, the requirements and conditions of the NSE, and the terms and provisions of this 3M.

c. The WAC will meet no less than one time in each quarter starting at the execution of this 3M with the primary focus to establish OG and ensure water monitoring is actively in place. Future meeting frequency may then be adjusted as decided by the WAC, but will be no less than once annually.

d. Purposes and Functions of the WAC will be to:

   i. Provide a forum for the WAC to discuss relevant data and analyses, which will allow for the public to attend.
   ii. Share information regarding modeling efforts and model results.
   iii. Make modifications to the Monitoring component of this 3M, including, but not limited to additional data collection and scientific investigations, based on recommendations from the TAC.
   iv. Provide status reports and recommendations to the WAC.
   v. Recommend values for monitored variables (water levels, spring discharges, vegetation responses, etc.) known as "action criteria" which, if exceeded, may be of concern to the WAC and could require mitigation or management actions.
   vi. Make recommendations on what constitutes an adverse impact on a case-by-case basis, but based on Nevada Water Law.

vii. Form and ensure implementation of groundwater management or mitigation measures approved by the WAC based on recommendations of the TAC.

viii. Review financial assurance periodically and make adjustments to amount as appropriate and recommend release of funds for mitigation and/or management measures.

ix. Provide the NSE, WAC, and the local stakeholders with data and results of any analyses or technical evaluations, along with reports of specific implemented mitigation or management actions.

x. Through its OG, develop and implement a procedure to remove and replace WAC and TAC members as it deems necessary, excluding, however, removal of the founding members consisting of the NSE, EC, and EMLCC.

C. **Technical Advisory Committee:**

a. The WAC will appoint a Technical Advisory Committee (TAC) as a subcommittee to the WAC. Each WAC member shall appoint a representative and be responsible for funding the participation of their respective TAC member. In addition, the USGS will be invited to participate as a member of the TAC. Funding for the USGS's participation in the 3M will be borne by EMLLC either through new or through existing joint funding agreements with USGS sponsored by Eureka County to study the Diamond Valley Flow System. TAC members must exhibit a professional level of technical or scientific expertise and a background or experience in land management, natural resources, water resources, or other related field. The WAC will develop criteria for membership in the TAC under its OG. Other TAC members may be appointed by the WAC in addition to the individual TAC members representing each member. Each TAC member at its sole discretion may invite additional staff or consultants to attend TAC meetings.

b. The TAC will meet within 30 days after WAC appointment to review the proposed monitoring provided as Attachment B to this 3M. Upon completing this review, the TAC will make recommendations to the WAC for any changes to the monitoring components of this 3M. Thereafter, the TAC will meet at intervals deemed appropriate by the TAC to review and analyze data, but not less than twice annually or as instructed by the WAC.

c. At a minimum, purposes and functions of the TAC will be to:

i. Review the proposed monitoring and recommend to the WAC implementation, including any changes to the specific monitoring elements, as appropriate.

ii. Review historic groundwater level trends, spring and stream flows to determine historic hydrologic trends. Where possible, identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters.

iii. Review, develop, and refine standards and quality control procedures for data collection, management, and analysis.
iv. Inform the entity or entities that collect data of standard accepted protocols of data collection, recording and analysis (e.g., USGS) that will be used.
v. Evaluate monitoring data, reports, analyses, etc. to determine whether data gaps exist and make appropriate recommendations to the WAC.
vi. Develop and recommend action criteria to the WAC for management or mitigation measures based upon available data and analyses.
vii. Evaluate all monitoring data to determine if any action criterion has been or is predicted to be exceeded, indicating a possible adverse impact and report findings to the WAC.
viii. Recommend mitigation and management measures and related scope of work details to the WAC. This includes individual resources or a comprehensive list of all resources to support WAC evaluation of the adequacy of mitigation funding.
ix. Evaluate the effectiveness of mitigation, if implemented, and report findings to the WAC.
x. Make recommendations to the WAC regarding the numerical groundwater flow model, including appropriate times for any model updates and modes of model output.

D. **Numerical Groundwater Flow Model:**

a. EMLLC has developed the Numerical Groundwater Flow Model (FM) to simulate the groundwater flow system and the FM will be updated to incorporate the data collected under this 3M. EMLLC will update the FM after recovering data from the first six months of wellfield pumping for mineral processing as recommended under the provisions of this 3M. Thereafter, EMLLC will update the FM on a schedule as determined under the provisions of the 3M.

b. The FM will be used as a management tool to evaluate predictions of drawdown and impacts and to help define action criteria.

E. **Prevention of Interbasin Transfer from Diamond Valley Basin:**

a. If excess water is produced within the Diamond Valley Hydrographic Basin which is not consumed in that basin, this water will be returned to the Diamond Valley Hydrographic Basin using some acceptable method, which will be determined according to the provisions of this 3M. As described in Section 6.E., water derived from pit dewatering and consumed will be documented and reported to verify that the volume of water extracted from Diamond Valley is equal to or less than the volume of water consumed in Diamond Valley (e.g. no transfer of water out of Diamond Valley).

F. **Action Criteria:**

a. Specific quantitative action criteria will be developed by the WAC with recommendations from the TAC. These criteria will be developed to provide early warning of any potential adverse impacts to water rights, determined to be caused by Project groundwater pumping.

b. When any action criterion that has been adopted as part of this 3M is reached, the following management actions will be triggered:

i. The TAC will meet as soon as possible to assess whether the action criterion exceedance is caused by Project groundwater pumping and present their findings to the WAC.

ii. If the WAC determines that any action criterion exceedance is caused by Project groundwater pumping, the TAC will expeditiously develop mitigation or management measures for the WAC to consider. The TAC will analyze the feasibility of the specific measures to assess alternatives, evaluate the potential effectiveness of the measures, and evaluate potential impacts created by implementation of the measures.

iii. The WAC will determine whether or not to recommend implementation of the mitigation or management measures and to also recommend if the funds described in MITIGATION MEASURES will be used to implement such measure.

iv. The effectiveness of any implemented measure will be evaluated by the TAC to ensure the measure met or exceeded the intended result. Results and recommendations for any additional measures will be reported to the WAC.

v. Any member of the WAC may propose an additional action criterion or a change to existing action criteria. Any such change must be presented in writing to the WAC and accompanied by analyses to support the proposed change.

G. **Decision-Making Process:**

a. For technical issues, including, but not limited to monitoring modifications, setting action criteria, and appropriate mitigation, decisions under this 3M will be made after considering the evaluation and recommendations of the TAC.

b. Any decisions made by the WAC under this 3M shall be by unanimous vote with at least 5 WAC members present and all members must be afforded the opportunity to attend meetings where decisions will be made. Additionally, the WAC shall not vote unless EMLLC's WAC member is present. If unanimity is not achieved, the WAC may jointly agree to conduct additional data collection and/or data review and analyses directed at resolving the different interpretations or opinions. If that is not

successful, any WAC member may refer the issue, accompanied with its opinion, to the NSE for final determination.

c. Decisions made by the WAC regarding recommended modifications to the 3M, implementation of mitigation, or other management actions that would be required of EMLLC will be subject to the jurisdiction and authority of the NSE.

d. Nothing herein seeks to limit, alter, modify or change the exclusive authority of the NSE to approve or modify the 3M.

e. Any final action taken or decision made by the NSE shall be subject to the provisions of applicable Nevada Water Law.

H. **Modification of the 3M**

a. The WAC may recommend modifications to this 3M under the provisions of the 3M.

b. Any WAC member(s) may individually or jointly petition the NSE to modify this 3M in the event that mutual agreement cannot be reached. Any such petition shall be concurrently provided to the WAC. Prior to the NSE decision, all WAC members will be provided the opportunity to submit a written response to the NSE no later than 60 calendar days following the date of receipt of the petition by NSE.

6. MONITORING

A. Hydrological related studies for the Project contain data concerning water and related resources in Kobeh Valley, Diamond Valley, Pine Valley, and surrounding areas. These include locations of existing and proposed supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs and streams, water quality, precipitation data, and wetland/riparian conditions. Additional data relevant to the Project available from other local, state, and federal agencies or other reliable sources will be compiled into a database by EMLLC and expanded as new data are collected under the provisions of this 3M.

B. The proposed monitoring is provided in Attachment A to this 3M. It was developed to describe the monitoring that will be conducted to meet BLM monitoring requirements, and is incorporated into the Mt Hope Project Plan of Operations. As described in MANAGEMENT of this 3M, the TAC will review this proposed monitoring and provide recommendations to the WAC regarding changes and/or implementation. In addition to this initial review, the TAC will review the proposed monitoring and make recommendations to the WAC for changes throughout the Project life based on monitoring data and analysis. Such recommended changes may include, but not be limited to, addition or deletion of monitoring sites, addition or deletion of monitoring parameters, changes to monitoring methods, and increases or decreases in monitoring

frequencies. Upon acceptance by the NSE of this 3M, EMLLC will implement the monitoring requirements as set forth in Attachment A.

C. The term "as is feasible" as used in this 3M relates to mechanical failures or other events/reasons outside the control of the WAC members, as agreed upon by the WAC, that interfere with data collection.

D. Groundwater

a. Groundwater pumping will be measured by flow meters installed on each production well, dewatering well and pit dewatering sump.

b. Water levels in wells installed related to the Project network will be measured by recording pressure transducers (data loggers). The measurement frequency will depend on distance to the wellfield and based on TAC recommendations.

c. The Project monitoring network will include "sentinel" wells (i.e., wells strategically located to provide early indication of drawdown propagation towards sensitive or important resources). At a minimum these will be located near the boundary between Kobeh, Diamond, Pine and Antelope valleys; between the wellfield and the headwaters of Henderson and Roberts Creek; between the wellfield and Gravel Pit Spring, Bartine artesian wells, the Antelope Valley Hot Springs (Klobe Hot Springs), and the stock wells at Hay Ranch. Nested wells that monitor individual aquifers at a single location where more than one hydrostratigraphic unit is present or strong vertical gradients may exist will be completed, as is feasible.

d. Test wells constructed at each Project production well site will be maintained as monitoring wells, as is feasible, and equipped with recording pressure transducers.

e. Several USGS monitoring wells are located near the proposed well field and within the projected drawdown area. If the USGS is not funded to monitor these specific wells, EMLLC will request USGS permission or seek other means to collect data from these wells. If permission cannot be obtained, the WAC will seek an evaluation by the TAC for replacement.

E. **Pit Dewatering**

a. Groundwater will be extracted from the Diamond Valley Hydrographic Basin either by wells or pit dewatering sumps. To determine the amount of water from pit dewatering within the Diamond Valley Hydrographic Basin, the total groundwater removed by pit dewatering sumps will be measured by totalizing flow meters and then multiplied by a factor reflecting the portion of the pit area that is located in Diamond Valley Hydrographic Basin. The discharge from dewatering wells will be measured with totalizing flow meters and proportioned between the Kobeh and Diamond Valley basins through hydrogeological analysis by the TAC. Water truck

loads utilized in the pit complex will be counted and recorded to document water used in Diamond Valley for mine environmental dust suppression. The amount of water used in Diamond Valley for other uses will be metered or estimated and recorded in the database.

F. **Surface Water**

a. At a minimum, the monitoring of stream flow will be conducted as follows:

i. Monitoring will include continuous measurements of stream stage at selected control sections for each stream as is feasible.
ii. The geometry of the control sections will be measured at the start of monitoring and re-measured at least annually.
iii. Stage measurements will be collected with recording pressure transducers on a frequency of not less than one hour.
iv. The flow in the streams at the control sections will be gaged monthly, as is feasible, for the first year of record to establish stage-discharge relationship for each gaging station and following any changes in the control section geometry.
v. All control sections in streams will be assessed routinely for any changes in the control section geometry and the stage discharge relationship be re-established accordingly.
vi. Following the first year of gaging, stream-flow measurements will be collected at least quarterly.
vii. Flow data will be recorded at least quarterly and hydrographs updated at least annually.

G. **Water Quality**

a. Water quality samples will be collected from selected production and monitoring wells, surface waters and pit water and analyzed by a laboratory certified by the State of Nevada using standard accepted protocols and a standard water test. Macroinvertebrate monitoring will take place in select streams as an indicator of general stream and/or fishery health.

H. **Biological Resources**

a. Monitoring of vegetation, including phreatophyte vegetation, riparian zones, and other vegetation communities will be conducted. These locations will be expanded to include additional sites in Kobeh Valley, Diamond Valley, Pine Valley, Antelope Valley and some surrounding valleys that may be affected by groundwater extraction. Data will be collected using a variety of techniques and will include on-site measurement of vegetation cover, frequency, and type. Shallow wells will be co-located with vegetation monitoring transects. Remote sensing will be employed to help define and monitor the extent of vegetation communities at a larger spatial scale.

I. **Meteorology**

a. Weather/Climate stations will be installed and maintained to continuously monitor wind speed and direction, precipitation, temperature, barometric pressure, humidity, and solar radiation. Existing precipitation stations will be used where possible. The purpose of collecting weather/climate data is to provide the WAC with a basis for evaluating whether changes in groundwater levels or stream and spring flow are due to changes in weather or climate.

J. **Elevation Control/Subsidence**

a. Monitoring locations for subsidence, groundwater measuring point elevations and ground surface elevations will be established using survey-grade GPS instrumentation. A standard GPS data collection protocol (i.e. common geographic datum) will be used to allow a comparative base for all elevation associated data. Subsidence monitoring will be augmented using remote sensing technologies (e.g. InSAR). Frequency and methodology of remote sensing to monitor subsidence will be reviewed and determined by the WAC in consideration of TAC recommendation.

K. **Data Management**

a. All monitoring data will be entered into the 3M database on a regular, timely, and continual basis as it is collected and verified using WAC approved quality assurance and quality control (QA/QC). Data collected under or as described in this 3M will be fully and cooperatively shared among the WAC members. Verified data within the 3M database will become available to the public, upon request.

b. In addition to updating the 3M database on a regular and continual basis, EMLLC will provide an annual report that summarizes all information and analysis. This report will be prepared based on recommendations and in cooperation with the TAC. These reports will be provided to the WAC for assessment of impacts to water and water dependent resources resulting from groundwater extraction of the Project.

7. MITIGATION MEASURES

A. EMLLC will mitigate adverse impacts, if any, as agreed upon under the provisions of this 3M. The WAC will take necessary steps, including recommending whether funding described below may be used as outlined in this 3M, to ensure that mitigation actions are feasible, reasonable, timely, and effective.

B. To ensure funding exists for any required future mitigation, including monitoring and mitigation after the cessation of active mining, EMLLC will demonstrate its financial

capability to complete any such approved mitigation and monitoring by providing reasonable financial assurances under the provisions of this 3M.

C. EMLLC's financial assurances (FA) funding will be placed into an interest bearing trust account to be established as a part of this 3M. The initial funding will occur in a manner as follows:

   a. Funding will be based on costs to mitigate any potential adverse impacts that could occur as a result of the first five years of pumping, per the milestones provided below.
   b. Initial funding will occur within 60 days of the GMI Board of Directors' approval to commence construction of the Project.
   c. Additional funding will occur no later than the end of month six of wellfield pumping for mineral processing (plant startup).
   d. Supplemental funding, if any, will occur one year thereafter (about year 1.5 following initial mineral processing)
   e. Funding will be adjusted periodically and following the first five years of pumping under the provisions of this 3M to ensure that sufficient funding is in place to mitigate all potential adverse impacts, including funding for operating and maintenance and long-term replacement costs, and adjusted for inflation and interest (inflation is estimated at 3% per year based on the 20 year average reported by the U.S. Bureau of Labor Statistics). This financial assurance will also be used to fund post-mining monitoring under the provisions of this 3M.
   f. The initial funding contribution is $250,000.
      The additional six month funding contribution is $750,000.
   g. Supplemental funding, if any, will be evaluated and estimated by the TAC, subject to approval by the WAC.
   h. The assumptions and components used to develop the FA amount are provided in Attachment C.

D. After cessation of mining and groundwater pumping by EMLLC, if the NSE determines that there is no longer a reasonable potential for future impacts attributable to the Project, any excess funds, including interest, remaining in the account will be returned to EMLLC.

E. In the Kobeh Valley alluvial basin, EMLLC will mitigate permitted water sources should adverse impacts occur. Mitigation could consist of installation of wells and solar-powered pumps. However, it is also recognized that alternative mitigation measures may be considered, recommended and implemented. The FA funding includes estimated costs for any mitigation of Kobeh Valley permitted water rights in the event any adverse impacts occur during the first ten years of pumping.

F. Mitigation measures, if necessary, will be developed and implemented on a case-by-case basis under provisions of this 3M.

G. Potential mitigation measures could include the following:

a. Supply (Project) water will be provided from wells located in Kobeh Valley that are completed in the carbonate and alluvial aquifers. Pumping of these different aquifers will have different impacts to the groundwater and surface water flow systems. Adjustment of carbonate/alluvium groundwater pumping ratio could be employed.

b. Impacts can be greatly influenced by the specific location of groundwater pumping. There could be reduction or cessation of groundwater extraction from one or more wells and/or geographic redistribution of groundwater extraction.

c. Augmentation of water resources with other groundwater. Alternative sources may be provided to enhance or replace existing sources. For example, replacement wells may be drilled if lowering of groundwater adversely impacts an existing groundwater right. Water could be obtained from alternate groundwater sources and used to mitigate specific adverse impacts to surface water flows (e.g., well and tank). If livestock water sources are adversely impacted, it will be ensured that augmented or replacement water sources are coordinated with the grazing permittee's season-of-use.

d. Any impact to individual water rights determined to be caused by Project groundwater pumping could be compensated financially or, if agreed upon, property (i.e., land and water rights) of equal value could be purchased for replacement.

e. If adverse impacts to the Diamond Valley Flow System, or other adjacent basins are determined to be caused by Project groundwater pumping, active and current water rights (water currently pumped) within the affected basin could be purchased and retired.

f. Implement technology to reduce fresh-water consumption of the Project. Pumping rates may be decreased if alternative technology emerges that could reduce water requirements or increase water recycling rates. Water conservation techniques will be proactively employed in order to reduce other mitigation measures (i.e. before any impact is measured).

g. Other measures as agreed to by the WAC and/or required by the NSE.