FACT SHEET
(Pursuant to Nevada Administrative Code [NAC] 445A.401)

Permittee Name: **Nevada Copper, Inc.**

Project Name: **Pumpkin Hollow Project**

Permit Number: **NEV2008103 (Major Mod 2013)**

A. Location and General Description

Location: The facility is located on public (presently) and private land in Lyon County, in Sections 32-35, Township 13 North, Range 26 East, and Sections 2-5 and 8-11, T 12 N, R 26 E, Mount Diablo Baseline and Meridian, approximately 8 miles southeast of Yerington, Nevada.

General Description: The project was initially permitted as an underground exploration shaft with mine rock storage areas, as well as a dewatering well which discharges excess water to Rapid Infiltration Basins (RIBs) associated with the Pumpkin Hollow Infiltration, Water Pollution Control Permit (WPCP) NEV2008109. In July 2012, the Permittee submitted a Major Modification to allow full-scale mining and processing at the facility. This was to be done in two phases:

Phase I: Private Land Underground Mine (PLUM) – underground mining centered on the exploration shaft developed under the initial Permit. The facility will include the mine, underground mine rock storage facility (Underground MRSF), flotation recovery process building with capacity for processing approximately 7,500 tons of ore per day, dry stack tailings facility (DSTF), paste batch plant and backfill facility, and ancillary support structures. Under this phase, the mining and processing will all take place on what is presently private land. Estimated mine life for this operation (alone) is approximately 14 years.

Phase II: Integrated Operations (IO) – expansion of the PLUM operations. Mining will be both underground and open pit, additional mine rock storage areas will be added, a larger flotation recovery process building with capacity for processing approximately 67,500 tons of ore per day will be constructed, the DSTF will be enlarged, along with the ancillary support structures. The IO phase would expand onto what is presently public land administered by the Bureau of Land Management. However, the Permittee intends to wait for resolution of pending legislation which

proposes to transfer these areas to private land before implementing the IO phase. Estimated mine life for this operation is approximately 18 years.

The collar of the mine shaft is located in the northeast corner of the property, with the shaft advancing to reach a final depth of approximately 2,200 feet below ground surface (bgs). Ore from underground mining via longhole stopes would be crushed underground and hoisted up the shaft to the surface. Ore from open pit mining would be transported to the process facility in haul trucks. Waste rock removed will be deposited in designated surface repositories, and bulk samples may be transported off-site for processing.

The facility is designed to withstand effects from the 100-year, 24-hour storm event and to contain and control the direct precipitation resulting from the 25-year, 24-hour storm event. There are no existing habitable buildings within a one-mile-radius of the facility location. The only downgradient water well within 5 miles of the facility is owned by the Permittee.

B. Synopsis

General: Nevada Copper, Inc. (Permittee) has carried out exploration activities in the area southeast of the town of Yerington, resulting in the identification of a zone of potentially economic copper mineralization. Open pit and underground mining will require dewatering and infiltration of dewatering water in RIBs, permitted separately under WPCP NEV2008109.

Geology: The Mason Valley Basin is bounded by two block faulted mountain ranges typical to the Great Basin physiography; the Singatse Range forming the western boundary and the Wassuk Range forming the eastern boundary. The Pumpkin Hollow property is located along the west flank of the Wassuk Range. The basin and range faulting consists of normal high angle faults dipping to the east, having a listric component with net displacement up to 2.5 miles and more than l00% extension. As faulting and tilting progressed, the older faults were rotated to gentle east dips and became inactive as movement continued along younger high angle faults. There are also west dipping high angle normal faults on the west side of Luhr Hill and the west side of the Wassuk Range.

The project area is covered with a thin veneer of Quaternary alluvium that thickens to the north and northeast. Tertiary older alluvium (Wassuk Group) volcaniclastic rocks make up the bulk of the outcrops in the central portion of the project area. To the south and southwest, older Jurassic rocks are exposed below a Basin and Range Tertiary fault that dips gently east. This fault is informally known as the Flat Fault, which appears to be a fault zone comprised of gently dipping normal faults generally separating the Tertiary volcanic rocks from the underlying Mesozoic rocks.

Granodiorite to diorite rocks belonging to the Jurassic Yerington batholith intrude the limestone of the Triassic Mason Valley Formation and calcareous argillites and siliceous shale beds, siltstones and limestone of the Gardnerville Formation. Associated with this intrusive episode is the development of large areas of skarn with associated copper and magnetite mineralization with or without accompanying gold and silver mineralization. Skarn formation occurs primarily in the middle to lower portion of the Gardnerville Formation and the upper part of the Mason Valley Formation, as well as within the intrusive granitoid itself.

Pumpkin Hollow geology is structurally complex with significant normal faulting and rotation of the geologic section. Proffett (1976) and later Barnett and Davis (2004) describe over sixty definable units. Recently French and Ohlin simplified the stratigraphy for modeling purposes, and simplified the geologic section to 11 units. These units are described in hydrologic terms for assessment of developing the hydrologic model.

Facility Design – PLUM Phase: The shaft currently under construction will provide access for development and mining in the underground mine. The shaft itself will measure approximately 24 feet in diameter and advance to a depth of approximately 2,200 feet bgs. Areas of the underground workings that pass through zones with high groundwater flowrates will be grouted to minimize entry of groundwater, thereby reducing dewatering requirements. Once fully developed, the shaft will provide access for lateral drifts and underground workings. Primary crushing of ore will occur prior to transportation to the surface.

Waste rock from the underground mine will be transported to the surface and deposited in the Underground MRSF. The design of the Underground MRSF has been developed to provide a perimeter and cover of Non-Potentially Acid Generating (Non-PAG) material, within which cells of Potentially Acid Generating (PAG) material will be placed as required, as described in the Waste Rock Management Plan (WRMP). Approximately 200,000 tons of material will be placed in the Underground MRSF.

The perimeter of the Underground MRSF will consist of material which has been shown by characterization to be Non-PAG and will be graded and bermed to prevent run-on of meteoric water and to impound direct precipitation within the Underground MRSF perimeter, allowing any accumulations to evaporate.

The majority of lithologies encountered in the course of the surface drilling program have been shown to be net acid neutralizing, and analysis of leachate from Meteoric Water Mobility Procedure (MWMP) testing of most samples has shown concentrations of Profile I constituents below the reference values. The exception has been the endoskarn which reported elevated arsenic (0.16 mg/L) and variability in the Acid Base Accounting (ABA) results. As a result, all

endoskarn waste rock, and any other rock types which exhibit acid generating potential based on quarterly characterization, will be treated as PAG and disposed of within the PAG cells, encapsulated by Non-PAG material, according to the WRMP. Quarterly characterization of all waste rock using MWMP-Profile I and ABA analyses is required by the Permit and results will be used to classify and dispose of the material in the proper location within the Underground MRSF.

Crushed ore from the underground mine will be brought up the shaft to the surface and transported to the PLUM process area. Ore will be fed to the semi-autogenous grinding (SAG) mill, from which it will be passed to a ball mill for further size reduction. Ore from the ball mill will then be processed in the rougher flotation circuit from which the underflow is diverted to the tailings thickener, and the concentrate sent to the regrind circuit. After regrinding, the ore will be sent to the cleaner flotation circuit from which the final concentrate is removed, dewatered by a thickener and a filter press, and placed on the concentrate stockpile. The concentrate will consist of approximately 25% copper and will be shipped off-site for refining.

The process building consists of a concrete slab and stemwall system upon which metal enclosures will be placed to shelter the equipment from the weather. The concrete base serves as secondary containment for any fluids that escape the process components. The overall dimensions of the base will be approximately 760 feet by 170 feet, with stemwall height of eight (8) inches. This provides a secondary containment volume which exceeds 110% of the volume of the largest vessel in the system. Each main section of the building floor will be sloped to a sump from which escaping fluid can be evacuated and returned to the process. All concrete joints which provide containment of process fluids contain waterstops to prevent seepage.

Tailings material from each stage of the process (rougher and cleaner) will be dewatered, using a thickener and filter presses, to approximately 15 to 18 percent moisture by weight. The thickener and filter systems will be located on separate containment south of the process building, just north of the PLUM DSTF. The secondary containment will consist of concrete slab and stemwall construction, open to the environment. The thickener containment will measure approximately 125 feet by 136 feet with a stemwall height of eight (8) inches, and floors sloping to a sump at the southwest corner of the containment area. The filter secondary containment is similar in construction but will measure approximately 146 feet by 218 feet, with the collection sump in the southeast corner. In each case, small leaks will flow to the sump for evacuation and return to the process, while larger leaks will overflow into the adjacent secondary containment trench.

The secondary containment trench will be constructed with a trapezoidal cross-section, approximately 10 feet across at the crest and four feet across at the base. The trench will be lined with 60-mil high density polyethylene (HDPE)

geomembrane laid over a prepared subbase. The trench will collect overflow from adjacent facility containment and direct the fluid to the SC-2 Basin for storage until the cause of the upset can be corrected and all fluid returned to the process.

The SC-2 Basin will measure approximately 100 feet by 100 feet at the crest, with a depth of 6.5 feet, and side slopes of 3:1 horizontal to vertical (h:v). Native soil will be graded, moisture conditioned, and compacted, in two (2) six (6)-inch lifts, to a minimum of 90% of maximum dry density per ASTM D1557. Over this compacted subbase, a single layer of 60-mil HDPE geomembrane will be installed and anchored around the perimeter. The basin will provide approximately 190,000 gallons (gal) of storage at two (2) feet of freeboard. Impoundment of process material in the SC-2 Basin is limited by the Permit to 20 days.

After dewatering, the majority of tailings material will be placed in the DSTF. The PLUM DSTF will measure approximately 2,200 feet wide by 2,700 feet long with an approximately oval footprint. The initial construction will consist of the central section (Cell 1) with sufficient area to accept the estimated tails production for the first year. This cell will be constructed with a compacted base equivalent to one (1) foot of material with measured permeability not to exceed $1x10^{-6}$ centimeters per second (cm/s). Within the soil below the compacted base, moisture sensors and suction lysimeters will be placed, 10 of each distributed over the footprint, for monitoring of any infiltration from the tails material into native soil. A network of six (6)-inch diameter HDPE perforated pipe will be placed over the compacted base to facilitate drainage of seepage from the tailings mass.

In addition to Cell 1, a test cell measuring approximately 315 feet by 465 feet by 30 feet high will be constructed. The base of the test cell will be 18 inches of compacted tails with a maximum permeability of $4x10^{-4}$ cm/s. The test cell will also include moisture sensors and lysimeters in native soil below the compacted base, as well as seepage collection pipes above. The purpose of the test cell is to evaluate the performance of the compacted tails base design against the Cell 1 design and for comparison to model predictions. An evaluation of data gathered from seepage flowrate and chemistry, soil moisture sensors, and lysimeters during the first year of operation will be used by the Division to determine whether the remainder of the DSTF can be constructed with the $4x10^{-4}$ cm/s compacted tails base, as in the test cell, or if the $1x10^{-6}$ cm/s compacted base must be used.

Two basins will be constructed adjacent to the DSTF. The larger basin, MSW-3, is designed to collect surface runoff from the facility up to and including the precipitation resulting from the 100-year, 24-hour storm event. The smaller basin, SP-1, is designed to collect fluid from the seepage collection system. Both basins are triangular in shape, with the MSW-3 measuring approximately 280 feet by approximately 580 feet, and having a depth of approximately 25 feet, and the SP-1 measuring approximately 150 feet by approximately 240 feet, and having a

depth of approximately 20 feet The liner system for both basins consists of (from bottom to top) a prepared subgrade, a 60-mil HDPE secondary liner, a geonet, and a 60-mil HDPE primary liner. A sump will be constructed at the downgradient corner between the primary and secondary liners. Each sump will be filled with free-draining gravel and will include a six (6)-inch diameter polyvinyl chloride (PVC) pipe, perforated at the bottom and daylighting at the basin crest for inspection and evacuation of the sump. The net volumetric capacity of each sump is approximately 1,800 gal.

A portion of the tails material will be used for cemented paste backfill of underground stopes. In this case, process tails will be transported to the paste batch facility just north of the shaft entrance area where it will be mixed with an approved proportion of fly ash and cement binders and water. The prepared paste will be pumped through a dedicated piping system to the stopes designated for backfill. The piping will extend through a bulkhead sealing the stope entrance and be pumped into the void until the paste level reaches the invert of the pipe. After flushing of the delivery pipe, the bulkhead will be sealed.

As part of the major modification of July 2012, the Permittee prepared a test plan for characterization of tails paste to insure that the backfilling of the stopes will not result in degradation of waters of the State after dewatering ceases. A series of paste cylinders will be prepared using various ratios of tailings material and binder (fly ash and ordinary Portland cement). The cylinders will be subjected to diffusion testing based on the method of ASTM 1308, data from which will be used to evaluate the mode of release of each Profile I constituent (mass based, diffusion controlled, or pH controlled). For those constituents which show diffusion as the controlling mechanism, the data will be used to calculate long-term release rates, allowing modeling of the post-dewatering aquifer to determine which paste mixtures will not result in degradation of waters of the State. For any constituents of concern that are not diffusion controlled, additional testing may be required. The Permit requires that all testing and evaluation of results be completed and approved by the Division before paste operations commence.

On the east side, the Underground MRSF and shaft work area will be protected from stormwater run-on by a perimeter stormwater channel and berm system. The 25-year, 24-hour event is defined as 1.54 inches of precipitation, and the 100-year, 24-hour event as 1.91 inches. The channel and berm geometry has been designed to protect the PLUM facilities and operations area from each event. The channel will be approximately four (4) feet deep with a 6:1 (H:V) slope on the side adjacent to the watershed, and a 3:1 slope on the side adjacent to the facility. The 3:1 slope continues up to a height of one (1) foot above original ground surface, forming the berm on the side adjacent to the Underground MRSF on the north end. The Underground MRSF is not directly downslope of any historic ephemeral washes or slopes so the velocity of meteoric runoff as it reaches the channel is expected to be low.

The eastern and northern sides of the PLUM DSTF will be protected from meteoric run-on by a separate stormwater diversion channel designed to intercept surface flow originating from between the shaft work area/process building area and the tailings facility. The channel will consist of a v-ditch with a depth of approximately four (4) feet. The section wrapping around the north end of the tailings facility will release stormwater into a natural drainage to the northwest. The section running along the east side of the tailings facility will release stormwater into a natural drainage to the south.

The shaft work area will be graded to convey direct precipitation into stormwater management basin MSW-1, immediately to the south. This unlined basin has overall dimensions of approximately 130 feet by 270 feet, with a depth of approximately 6.5 feet. Water reporting to MSW-1 will be allowed to evaporate or infiltrate.

The process building area will be graded to convey direct precipitation into stormwater management basin MSW-2, immediately to the west. This unlined basin has overall dimensions of approximately 270 feet by 290 feet, with a depth of approximately eight (8) feet. Water reporting to MSW-2 will be allowed to evaporate or infiltrate.

Facility Design – IO Phase: The IO facility will incorporate the following components already described above for the PLUM facility:

- Underground mine/shaft work area
- Underground MRSF and east stormwater diversion channel
- Paste plant
- MSW-1 basin

The IO facility will modify or expand the following PLUM components:

- DSTF
- DSTF stormwater diversion channel

The following components from the PLUM facility will be eliminated by construction of the IO facility:

- Process building area
- MSW-2 basin
- MSW-3 basin
- SC-2 basin
- SP-1 basin

The following components will be added as part of the IO facility:

- West MRSF
- North Pit
- South Pit
- IO process facility
- IO tailings thickener facility
- Tailings surface water collection basin MSW-4
- Tailings seepage collection basin SP-2
- Stormwater management basins MSW-5, MSW-6, MSW-7, MSW-8, MSW-9, SW-1, SW-2, SW-3, E-6, and N-5
- Secondary containment overflow basins SC-3, SC-4, and SC-5

The IO operation, in addition to the underground mining described previously, will include two open pits directly west of the DSTF. The north pit will be oval shaped and will measure approximately 5,000 feet east to west and 3,500 feet north to south, with a maximum depth of approximately 1,400 feet below native ground surface. The south pit will be roughly circular with a diameter of approximately 3,500 feet, with a maximum depth of approximately 1,300 feet below native ground surface.

Due to the depth of the two pits, pit lakes are expected to form after mining and dewatering cease. The Permittee conducted analysis and modeling of the pits in order to predict long-term pit lake chemistry and water balance. The results showed that the pit lakes will be hydrological sinks with evaporation exceeding net inflow. Modeling of pit lake water chemistry predicted that the lakes will be neutral pH (6.8 to 7.4 standard units), with arsenic (0.021 milligrams per liter [mg/L]) the only constituent exceeding the Profile I reference value. Based on this result, risk assessments of the pit lakes were conducted, concluding that the pit lakes will not have the potential to harm avian, terrestrial or human life.

The West MRSF will be located immediately to the west of the north and south pits and IO process facility. The West MRSF will have capacity for approximately 1.29 billion tons of waste rock. The waste rock will be placed in 40 foot lifts with 66-foot setbacks to provide for a final slope after reclamation of 3:1 (h:v). The perimeter of the West MRSF will consist of material which has been shown by characterization to be Non-PAG and will be graded and bermed to prevent run-on of meteoric water and to impound direct precipitation within the West MRSF perimeter, allowing any accumulations to evaporate.

As with the Underground MRSF, all endoskarn waste rock, and any other rock types which exhibit acid generating potential based on quarterly characterization, will be treated as PAG and disposed of within PAG cells, encapsulated by Non-PAG material, according to the WRMP. Quarterly characterization of all waste rock using MWMP-Profile I and ABA analyses is required by the Permit and

results will be used to classify and dispose of the material in the proper location within the West MRSF.

Crushed ore from the underground mine and open pits will be transported to the IO process area. Ore will be fed to the SAG mill, from which it will be passed to one of two ball mills for further size reduction. Ore from the ball mills will then be processed in the rougher flotation circuit from which the underflow is diverted to the tailings thickener, and the concentrate sent to the regrind circuit. After regrinding, the ore will be sent to the cleaner flotation circuit from which the final concentrate is removed, dewatered by a thickener and a filter press, and placed on the concentrate stockpile. Tailings will be sent to the tailings thickener. The concentrate will consist of approximately 25% copper and will be shipped off-site for refining.

The process building consists of a concrete slab and stemwall system upon which metal enclosures will be placed to shelter the equipment from the weather. The concrete base serves as secondary containment for any fluids that escape the process components. The overall dimensions of the base will be approximately 775 feet by 170 feet, with stemwall height of eight (8) inches. This provides a secondary containment volume which exceeds 110% of the volume of the largest vessel in the system. Each main section of the building floor will be sloped to a sump from which escaping fluid can be evacuated and returned to the process.

Tailings material from each stage of the process (rougher and cleaner) will be conveyed in the tailings slurry pipeline to be dewatered, using a thickener and filter presses, to approximately 15 to 18 percent moisture by weight. The thickener and filter systems will be located on separate containment northwest of the IO DSTF. The secondary containment will consist of concrete slab and stem wall construction, open to the environment. The thickener containment will measure approximately 300 feet by 300 feet with a stemwall height of eight (8) inches, and floors sloping to a sump at the southwest corner of the containment area. The filter secondary containment is similar in construction but will measure approximately 390 feet by 147 feet, with the collection sump in the southeast corner. In each case, small leaks will flow to the sump for evacuation and return to the process, while larger leaks will overflow into the adjacent secondary containment trench.

The secondary containment trench will be constructed with a trapezoidal cross-section, approximately 20 feet across at the crest and five (5) feet across at the base. The trench will be lined with 60-mil high density polyethylene (HDPE) geomembrane laid over a prepared subbase. The trench will collect overflow from adjacent facility containment and direct the fluid to overflow basins SC-3 (east), SC-4 (west), and SC-5 (central) for storage until the cause of the upset can be corrected and all fluid returned to the process. The tailings slurry pipeline will also be placed in the trench.

The SC-3 basin will measure approximately 300 feet by 250 feet at the crest, with a depth of 5.5 feet, and side slopes of 3:1 h:v (2,639,400 gal capacity at two [2]-foot freeboard). The SC-4 basin will measure approximately 290 feet by 160 feet at the crest, with a depth of 5.5 feet, and side slopes of 3:1 h:v (1,466,300 gal capacity at two [2]-foot freeboard). The SC-5 basin will measure approximately 180 feet by 120 feet at the crest, with a depth of five (5) feet, and side slopes of 3:1 h:v (570,200 gal capacity at two [2]-foot freeboard). For each pond, native soil will be graded, moisture conditions, and compacted, in two (2) six (6)-inch lifts, to a minimum of 90% of maximum dry density per ASTM D1557. Over this compacted subbase, a single layer of 60-mil HDPE geomembrane will be installed and anchored around the perimeter.

The IO DSTF will be constructed in the same way as described above for the PLUM facility, but at a much larger scale. Capacity of the IO DSTF will be approximately 405 million tons (solids only). As with the PLUM facility, the subbase design will be based on the results of evaluations of the test cell and first cell seepage collection data and will be either a compacted base achieving maximum permeability of $1x10^{-6}$ cm/s, or a compacted tails base achieving a maximum permeability of $4x10^{-4}$ cm/s. Which design is required will be determined by the Division after review of test cell data.

Two basins will be constructed adjacent to the DSTF. The larger basin, MSW-4, is designed to collect surface runoff from the facility up to and including the precipitation resulting from the 100-year, 24-hour storm event. The smaller pond, SP-2, is designed to collect seepage from the seepage collection system. Both basins are triangular in shape, with the MSW-4 measuring approximately 720 feet by approximately 1,100 feet, and having a depth of approximately 14.5 feet, and the SP-2 measuring approximately 350 feet by approximately 260 feet, and having a depth of approximately 13 feet The liner system for both basins consists of (from bottom to top) a prepared subgrade, a 60-mil HDPE secondary liner, a geonet, and a 60-mil HDPE primary liner. A sump will be constructed at the downgradient corner between the primary and secondary liners. Each sump will be filled with free-draining gravel and will include a six (6)-inch diameter polyvinyl chloride (PVC) pipe, perforated at the bottom and daylighting at the pond crest for inspection and evacuation of the sump. The net volumetric capacity of each sump is approximately 1,800 gal.

Stormwater diversions for the IO facilities have been designed to protect the components from damage due to surface runoff. The middle diversion channel will run along the southeast portion of the IO DSTF, wrap around the south end, and continue north between the tailings facility and the North Pit until it reaches the N-5 stormwater basin. The north diversion channel will run along the northeast portion of the IO DSTF, wrapping around the north end, then continue west to the N-5 stormwater basin. A third stormwater channel will run around the

northwest area of the West MRSF, diverting stormwater from the adjacent hillside into natural drainages to the north and south.

Unlined stormwater basins are also located at various locations adjacent to the IO DSTF and the West MRSF. These basins are designed to contain stormwater flows off of the DSTF and MRSF to prevent erosion from channelized flow, dissipate energy from those flows, and to capture any sediments that would come off of those facilities. Included are the SW-1 basin (northeast edge of DSTF), SW-2 basin (northeast edge of DSTF), SW-3 basin (northeast edge of West MRSF), MSW-5 basin (northeast edge of West MRSF), MSW-6 basin (east edge of West MRSF), MSW-7 basin (south edge of West MRSF), MSW-8 basin (southwest edge of West MRSF), MSW-9 basin (west edge of West MRSF), E-6 basin (southwest edge of DSTF), and N-5 basin (northeast of West MRSF).

The stormwater basins are unlined excavations designed to contain the 100-year 24-hour storm event. Basins MSW-5 and MSW-6 are designed to fully contain the Probable Maximum Flood. Intermediate channels will be periodically installed to convey runoff during mining operations, and transport the runoff to the stormwater basins. In the case of the E-6 and N-5 basins, stormwater diversion channels empty into the basins, reducing the capacity requirements of the channels. All collected stormwater will evaporate or infiltrate. In cases of heavy accumulations, stormwater would flow out of a designed outlet from the basin into the adjacent natural drainages. The storage of process solution in the unlined stormwater basins in prohibited by the Permit.

Dewatering: One well, WW-01, was installed for providing water for mine use. Samples from the well will be characterized annually by analyzing for Profile I constituents. The estimated pumping rate for the well during dewatering is 720,000 gallons per day.

Ancillary Facilities: The Permittee will maintain an office and basic facilities for mine personnel with a 24-hour presence for security. Some vehicle maintenance will also be carried out on site including refueling and lubricating. The fueling station will be constructed as a double-walled tank mounted on a concrete pad sloping inward to a sump and will be located in the work area near the portal entrance.

C. Receiving Water Characteristics

The Pumpkin Hollow Project facility is located in the Walker Basin hydrographic area. Groundwater elevation in the project area ranges from 4,370 ft amsl to 4,423 ft amsl, corresponding to a depth bgs of between 294 and 400 ft bgs. While the groundwater gradient is generally southeast to northwest across the project area, fault and fracture systems within the basin make the direction of flow in some areas unpredictable. It is expected that data from the monitoring wells

installed under this Permit and for the Pumpkin Hollow Infiltration (NEV2008109) will produce a more precise characterization of the groundwater gradient in the area.

Hydrogeology of the area has been characterized as high permeability alluvium of the Wassuk Formation overlaying lower permeability layers of Tertiary tuffs, ashflows, volcanic flows, hornfels, and mineralized skarn. Within the lower permeability zones is a unique structural feature, with a major influence on the hydrogeology in the area, known as the Flat Fault. The Flat Fault is a normal fault that dips gently east and acts as a semi-confined aquifer. The extent of fracturing appears to extend beyond the fault boundary, upwards of 100 feet, in brittle components of vitrophyre and/or hornfels. The sympathetic fracturing creates a measurably thick conductive zone with relatively high permeability.

Open pit and underground mining will penetrate the Flat Fault and other aquifers. During the PLUM phase of operations, the walls of the underground workings will be grouted in these zones to minimize inflow of groundwater, thereby reducing dewatering requirements, and to prevent contamination from mine equipment entering the groundwater system directly. Any minor groundwater leakage will be pumped to the surface for oil-water separation and clarification in the settling basin and either re-used or discharged in the RIBs (see WPCP NEV2008109).

Sampling and analysis of local groundwater in the mining and receiving areas to date is characterized by occasional exceedances of the Profile I reference values for aluminum (up to 2.5 mg/L), iron (up to 5.4 mg/L), arsenic (up to 0.054 mg/L), antimony (up to 0.012 mg/L), selenium (up to 0.061 mg/L), and mercury (up to 0.0031 mg/L), and occasional high pH (up to 11.75 s.u.). Uranium concentrations were generally not detectable but occasionally measured as high as 0.11 mg/L. Due to historical issues with radionuclides in the Yerington area, uranium, raduim^{226}, radium^{228}, and alpha particles are included in the Profile I suite for this Permit.

Monitoring of water quality at the site will be accomplished by sampling of eight (8) monitoring wells. MW-01 (also known as the Ranch Well) is located in the northeast corner of the property. MW-02 is located at the south-central edge of the property. MW-03 is located at the east-central edge of the property, upgradient of all facility components. MW-04 is located at the west-central edge of the property downgradient of all facility components. MW-06 is located in the northeast corner of the property downgradient of the shaft and Underground MRSF. MW-08 and MW-09 are located in the center of the property. MW-10 is located in the north-central area of the property.

D. Procedures for Public Comment

The Notice of the Division's intent to issue a Permit authorizing the facility to construct, operate and close, subject to the conditions within the Permit, is being sent to the **Mason Valley News** for publication. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed Permit can do so in writing within a period of 30 days following the date of public notice. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected intrastate agency, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406.

E. Proposed Determination

The Division has made the tentative determination to issue the Permit.

F. Proposed Effluent Limitations, Schedule of Compliance, Special Conditions

See Section I of the Permit.

G. Rationale for Permit Requirements

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

The primary method for identification of escaping process solution will be placed on required routine monitoring of leak detection systems as well as routinely sampling downgradient monitoring wells. Specific monitoring requirements can be found in the Water Pollution Control Permit.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S.C. 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 CFR 10, 15 April 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (e.g. by covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of the toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

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