

Phase I Environmental Site Assessment North Star Water Treatment Project



**North Star
Nevada County, California
December 30, 2014**

**Prepared For:
Newmont USA, Limited**

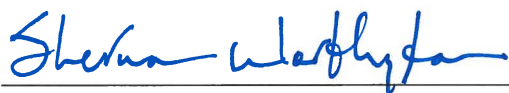
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PROFESSIONAL CERTIFICATION

This report was prepared for Newmont USA Limited by Worthington Miller Environmental, LLC (WME) to present the results of a Phase I Site Assessment for the North Star Water Treatment Project Area (Project Area) in Nevada County, California. The Project Area is defined in this report. This Phase I Environmental Site Assessment was conducted under the professional supervision of Sherman J. Worthington of WME within the scope and limitations of ASTM E Practice 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Any exceptions to or deletions from, this practice are described in this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Project Area except for historical surface and underground mining activities that altered the topography and resulted in drainage from underground mine workings to the surface at three mine features (Drew Tunnel, Adit, and Pipe Culvert) and waste rock piles to be deposited on the ground surface at specific locations of the Project Area. The objective of the Project is to collect, convey, and treat groundwater currently draining from the three mine features and an adjacent spring according to the requirements of a Cleanup and Abatement Order issued by the California Central Valley Regional Water Quality Control Board. None of the waste rock piles identified within the Project Area are located within areas that will be disturbed or occupied by the proposed Project facilities. Minimal areas of scattered waste rock may be disturbed by the proposed Project facilities; however, this disturbance is considered to represent a *de minimis* condition as defined by ASTM E Practice 1527-13.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined §312.10 of 40 CFR Part 312 and I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject Project Area. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Sherman J. Worthington
Principal

December 30, 2014

Date

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Purpose and Scope of Phase I ESA.....	2
1.2	Limitations of Phase I ESA.....	2
2.0	DESCRIPTION OF PROJECT AREA AND ADJOINING PROPERTY	4
2.1	General Description	4
2.2	Project Area Physical Setting and Vicinity Characteristics	5
2.3	Current and Past Uses of the Project Area and Adjoining Properties.....	7
3.0	PROJECT AREA OWNERSHIP	9
4.0	ENVIRONMENTAL RECORDS REVIEW	11
4.1	Mine Features	11
4.2	PEA Waste Rock Characterization	13
4.3	EDR Environmental Report Information.....	14
4.4	Other Records	17
5.0	RESULTS OF SITE RECONNAISSANCE.....	18
5.1	Current Project Area Features.....	18
5.2	Adjoining Properties	21
6.0	RESULTS OF INTERVIEWS.....	23
7.0	FINDINGS.....	25
8.0	REFERENCES	27

FIGURES

Figure 1	North Star Water Treatment Project Area
Figure 2	North Star Water Treatment Project Area (Northern Portion)
Figure 3	North Star Water Treatment Project Area (Southern Portion)
Figure 4	Geologic Map of North Star Project Area and Surrounding Area

APPENDICES

Appendix A	Environmental Data Resources, Inc. Reports
Appendix B	Representative Site Photographs
Appendix C	Resume of Sherman J. Worthington

1.0 INTRODUCTION

This report has been prepared by Worthington Miller Environmental, LLC (WME) for Newmont USA Limited (Newmont) to present the results of a Phase I Environmental Site Assessment (ESA) of the North Star Water Treatment Project Area (Project Area) in Nevada County, California. This Phase I ESA has been prepared to support the Nevada County Land Use Permit Application for the proposed North Star Water Treatment Project (Project). The Project Description (WME 2014) describes the Project components, which consist of proposed facilities to collect, convey, and treat groundwater currently draining from three mine features and a spring. For this Phase I ESA, the Project Area boundary is shown on Figure 1.

The Project Area comprises approximately 70 acres consisting of portions of Nevada County Assessor's Parcel Numbers (APN) 29-350-03, 29-350-16, 22-120-28, 22-160-27, 29-350-04, and 22-120-35. These parcels are owned by New Verde Mines, LLC, an entity of Newmont, and are part of additional landholdings that comprise the larger North Star Property. Parcels 29-350-03 and 29-350-16 are subject to a conservation easement managed by the Bear Yuba Land Trust (BYLT). In addition, Newmont will purchase a sufficient area of parcel 29-290-26 from the City of Grass Valley (City) at its Waste Water Treatment Plant (WWTP) property necessary to collect and convey water draining from the Drew Tunnel pursuant to an agreement with the City for the Project. This Phase I ESA addresses only those portions of the parcel areas that will be occupied by the proposed Project facilities. Adjacent areas, including portions of parcels not occupied by the proposed Project facilities, other parcels of the North Star Property, and properties owned by other parties are considered adjoining properties in this Phase I ESA.

The purpose of this Phase I ESA is to evaluate the potential for recognized environmental conditions to exist within the Project Area, as defined by ASTM E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2013). Recognized environmental conditions are defined for the purpose of this Phase I ESA as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a future release to the environment. The term recognized environmental conditions is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The terms historical recognized environmental condition and controlled recognized environmental condition are also considered for the purposes of this Phase I ESA. As defined by ASTM Practice E 1527-13, an historical recognized environmental condition represents a past release of any hazardous

substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the property to any required controls, such as use or activity restrictions. A controlled recognized environmental condition is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with substances allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, institutional controls, or engineering controls.)

1.1 Purpose and Scope of Phase I ESA

The purpose of this Phase I ESA is to evaluate the potential for recognized environmental conditions to exist within the Project Area (Figure 1) to support the Nevada County Land Use Permit Application for the proposed Project components. This Phase I ESA was conducted in accordance with ASTM E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2013). Principal components of this Phase I ESA consisted of reviewing available records and information, interviewing personnel, and performing a site reconnaissance.

This Phase I ESA relies specifically on information available to and reviewed by WME. It is based on information derived from publicly available records and obtained from Newmont, reports available from others, and interviews with individuals familiar with the Project Area. A site reconnaissance was conducted by WME according to the ASTM E 1527-13 requirements for the Phase I ESA on December 9, 2014. However, WME has obtained and reviewed reference information and has observed conditions within the Project Area since 2005 in the course of evaluating historical surface and subsurface mine features and in developing Project plans.

Information resulting from the above activities is described in the following sections of this Phase I ESA. The description of the Project Area and adjoining properties, including past and current land uses, is provided in Section 2.0 of this Phase I ESA. A condensed summary of prior and present ownership is provided in Section 3.0. Section 4.0 presents pertinent information resulting from the review of available records and information. Information resulting from the site reconnaissance performed by WME on December 9, 2014 is discussed in Section 5.0. Section 6.0 summarizes the interviews. The findings of this Phase I ESA are presented in Section 7.0.

1.2 Limitations of Phase I ESA

The findings presented in this report are derived from the review and interpretation of records and information available from Newmont and other sources described in this report, visual observations

during a site reconnaissance, and interviews with Newmont personnel and others familiar with the Project Area as described in this report. Opinions and conclusions contained in this report apply to the conditions existing when the Phase I ESA was performed and are based on the scope of work defined by ASTM E 1527-13. The scope of work allows a reasonable and appropriate level of inquiry to ascertain the potential for recognized environmental conditions to exist within the Project Area, but does not guarantee that all potential environmental conditions are identified.

Environmental conditions within the Project Area pertaining to biological resources, including wetlands, historical cultural resources, and geologic hazards are described in separate reports to support the Nevada County Land Use Permit Application. Information from these companion reports has been incorporated to the extent relevant in this Phase I ESA report to describe environmental conditions within the Project Area.

As described above, the scope of this report addresses environmental conditions within the Project Area defined by the Project facilities to support the Nevada County Land Use Permit Application for the proposed Project components. Newmont is not considering other development of the Project Area, development of adjoining areas of the North Star Property, or property transfer at this time. As such, the findings of this Phase I ESA do not constitute appropriate inquiry, as defined by ASTM E 1527-13, for purposes other than implementation of the proposed Project.

2.0 DESCRIPTION OF PROJECT AREA AND ADJOINING PROPERTY

2.1 General Description

The Project Area (Figure 1) comprises approximately 70 acres consisting of portions of Nevada County Assessor's Parcel Numbers (APN) 29-350-03, 29-350-16, 22-120-28, 22-160-27, 29-350-04, and 22-120-35 owned by New Verde Mines, LLC, an entity of Newmont. In addition, under an agreement with the City, Newmont will purchase a sufficient area of APN 29-290-26 from the City necessary to collect and convey the water draining from the Drew Tunnel.

The Project consists of proposed facilities to collect, convey, and treat water currently draining from three mine features and an adjacent spring, as required by the California Central Valley Regional Water Quality Control Board (Regional Board), Cleanup and Abatement Order (CAO) R5-2014-0706 (Regional Board 2014b). The mine drainage features are associated with former gold mines that operated from the mid-1800's to the mid-1900's. Following closure of the mines, groundwater levels (elevations) within the underground mine workings recovered and currently drain by gravity from the mine features.

The Drew Tunnel is a drainage tunnel from the historical Massachusetts Hill Mine, with the tunnel portal located on APN 29-290-26 at the City's WWTP. Water draining from the Drew Tunnel is currently collected and being treated by Newmont pursuant to a Limited Threat General Waste Discharge Requirement Order National Pollutant Discharge Elimination System (NPDES) permit issued to Newmont by the Regional Board (Regional Board 2014a). The two other mine drainage features, referred to as the Adit and Pipe Culvert, are associated with the historical North Star Mine. The two mine drainage features are located on APN 29-350-16 east of Allison Ranch Road and west of Wolf Creek. Water from the two mine features currently drains to Wolf Creek. The adjacent spring (Spring 2) is located on APN 22-120-28 and has similar water quality characteristics as the drainages from the Adit and Pipe Culvert.

The Project Area consists of the area encompassed by the proposed facilities that will be constructed to collect, convey, and treat the water from the drainage features, as depicted on Figures 2 and 3. A pump station will be constructed adjacent to the Drew Tunnel below Allison Ranch Road to collect the water. A pump station will also be constructed for the North Star drainage features to facilitate hydraulic containment of the water currently draining from the features. A passive water treatment system will be constructed on APN 22-160-27. Water from the pump stations will be conveyed by piping to the treatment facility. A pipeline from the Drew Tunnel collection system will extend south along Allison Ranch Road and the Allison Ranch bypass road, east on an existing access road east of Allison Ranch Road, and then south along an existing access road to the treatment facility. The pipeline from the North

Star pumping system will extend to the south along an existing historical road or ditch alignment east of Allison Ranch Road and will merge with the Drew Tunnel pipeline. The passive treatment system consists of three primary components: sedimentation pond, wetland pond, and oxic limestone beds. Constituents in the water from the drainage features requiring treatment are naturally occurring iron and manganese derived from the underground mine workings.

This Phase I ESA addresses only those portions of the parcel areas that will be occupied by the proposed Project facilities. Adjacent areas, including portions of parcels not occupied by the proposed Project facilities, other parcels of the North Star Property, and properties owned by other parties are considered adjoining properties in this Phase I ESA.

2.2 Project Area Physical Setting and Vicinity Characteristics

Current features and past land uses of the parcels comprising the Project Area are based on review of existing information and observations during the site reconnaissance performed for this Phase I ESA. Information obtained and observations from site visits performed during the course of other investigations have also been used to provide additional background information for this Phase I ESA. Environmental conditions within the Project Area pertaining to geology, soils, biological resources, wetlands, and historical cultural resources are described in the following companion reports to support the Nevada County Land Use Permit Application:

- Geologic Hazards Evaluation for the Proposed North Star Water Conveyance and Treatment Area (MWH 2014)
- Biological Resource Inventory of the Proposed North Star Project (EcoSynthesis 2014)
- Class I Archaeological Survey, Northstar Mine Water Treatment Project (Genesis Society 2013).

The Project Area is currently undeveloped. Except for the area of APN 29-290-26 that will be purchased from the City, the remaining parcels comprising the Property area are located within the North Star Special Development Area (SDA) and are zoned Interim Development Reserve (IDR) by Nevada County. An agreement with BYLT will be necessary to construct improvements for the collection and conveyance of waters from the North Star pump station on the conservation easement within APN 29-350-16. While also presently undeveloped, the area of parcel APN 29-290-26 at the City's WWTP that will be transferred to Newmont is currently incorporated within the City limits.

Allison Ranch Road and the Allison Ranch bypass road form the western boundary of the Project Area. Nevada County constructed the gravel-surfaced bypass road on the North Star Property in 2006 as a temporary measure to allow vehicle traffic when a segment of Allison Ranch Road was damaged due to a

landslide in April 2006 (MWH 2014). Vehicle traffic was diverted along the bypass road until the damaged segment of Allison Ranch Road was repaired. In April 2010, similar circumstances occurred that damaged the same segment of Allison Ranch Road, with traffic diverted onto the bypass road until the road segment was repaired.

Mote Lane, a paved and gravel-surfaced road, provides access from Allison Ranch Road across the southern portion of the Project Area to two residences located to the east of the Project Area. Several gated or chained roadways provide access to the Property Area from Allison Ranch Road. A barb-wire fence exists along portions of the North Star Property adjacent to Allison Ranch Road and posted with no-trespassing signs.

Overhead electrical and telephone lines exist along Allison Ranch Road. In addition, an overhead PG&E electrical transmission line traverses north to south across the southern portion of the Project Area, as depicted on Figure 3. The right of way for the power line was granted to PG&E in August 1916.

Wolf Creek, a perennial tributary to the Upper Bear River watershed, is located adjacent to the eastern boundary of the northern portion of the Project Area. In the northern portion of the Project Area, surface water drainage flows directly to Wolf Creek. An intermittent unnamed tributary in the southern portion of the Project Area conveys surface water drainage to Wolf Creek. The Nevada Irrigation District (NID) conveys water in a natural drainage to the lower portion of the unnamed tributary near the confluence with Wolf Creek. More detailed information regarding surface water features within the Project Area, including ponds and wetlands, are described in the Biological Inventory (EcoSynthesis 2014).

The geologic setting within the Project Area is described in the Geologic Hazards Evaluation (MWH 2014). As depicted on the geologic map of the Project Area shown on Figure 4, bedrock underlying the northern portion of the Project Area is primarily comprised of massive diabase, with several mapped intrusions of quartz porphyry. The southern extent of the Project Area is underlain by granodiorite. Soils within the Project Area are characterized in the Geologic Hazards Evaluation (MWH 2014) and the Biological Inventory (EcoSynthesis 2014). The USDA Natural Resources Conservation Services (NRCS) Soil Survey describes the soils within the Project Area as Sites loams and Hoda sandy loams. The Sites series consists of soils derived from metabasic and metasedimentary rocks. The Sites loams are described as red to brown, fine-grained, slightly hard, and slightly to medium plastic. The Hoda series consists of soils derived from granodiorite and other igneous rocks. The Hoda series is described as brown to yellowish-red, medium grained, and slightly hard soils. Vegetation within the Project Area is generally characterized by mixed conifer forest dominated by ponderosa pine and incense cedar (EcoSynthesis 2014).

Surface elevations within the Project Area vary from approximately 2,200 to 2,400 feet. Topography varies, with terrain generally sloping towards the east and Wolf Creek in the northern Project Area. Steep slopes exceed 30 percent in some areas, particularly in the northern portion of the Project Area (MWH 2014). Slopes in the proposed passive treatment area are milder and slope to the east and west towards the unnamed tributary near the center of the southern Project Area.

2.3 Current and Past Uses of the Project Area and Adjoining Properties

Current and past land uses of the Project Area are based on observations during a site reconnaissance and review of information by WME as part of this Phase I ESA. Information obtained by WME during the course of other investigations for the project facilities has also been used to provide additional background information for this Phase I ESA. A site reconnaissance of the Project Area was performed by Mr. Sherman Worthington of WME on December 9, 2014 to assess current site conditions within the Project Area and on adjoining property. The results of the reconnaissance are described in Section 5.0.

The Project Area is currently undeveloped. Underground mining occurred within the Grass Valley mining district, including the Project Area and adjoining properties areas from about the 1850's through the 1950's. Historical mining use represented the most significant past land use of the Project Area. Past mining activities are evidenced by old roads, ditches, altered topography, depressions from collapsed or backfilled mine shafts and exploration excavations, waste rock piles, areas of scattered waste rock, and foundations at certain areas within the Project Area. Information indicates that much of the waste rock within the regional area, including the Project Area, was salvaged for use as aggregate from the 1960's through the mid-1980's. However, a few relatively small waste rock piles remain within the Project Area.

For purposes of this Phase I ESA, adjoining property is defined by ASTM E 1527-05 as property, the border of which is contiguous or partially contiguous with the subject property, or would be so but for a street, road, or other public thoroughfare separating them. Current and historical land uses in the area surrounding and adjoining the Project Area are described only to the extent that the information enhances and provides a more complete understanding of the Project Area.

Current land uses on adjoining properties represent a combination of residential, commercial/industrial, agricultural, and undeveloped land uses. The City's WWTP borders the north and northeast boundary of the Project Area. Single family residential parcels of the Carriage House Subdivision are located east of Wolf Creek and to the east of the central portion of the Project Area. The undeveloped North Star Property adjoins the western boundary of the central portion of the Project Area. Past uses of the North Star Property included mining and timber logging. Single family residential parcels currently exist to the east and west of

the southern portion of the Project Area. Agricultural (grazing) land on the west side of Allison Ranch Road adjoins the southwest boundary of the Project Area.

3.0 PROJECT AREA OWNERSHIP

A number of hard rock underground mining operations occupied the Project Area and adjoining areas on mine claims established beginning in the 1850's under various ownership. Ownership of the various mine claims and mine operations changed over time. Most of the mines closed in the early 1900's. The complex history of mine operations and ownership of the various mine claims is beyond the scope of this Phase I ESA.

In 1929, Empire-Star Mines Company purchased certain assets of mine claims comprising the North Star Mines Company and merged the claims with the consolidated Empire Mine claims. A Newmont entity, Newmont Empire Mine Company, owned stock in the Empire-Star Mines Company. Mining and milling operations focused at the Empire Mine and the nearby North Star Mine. In 1930-31, the North Star mill was closed and an aerial tramway was constructed to transport ore from the North Star Mine to the Empire mill for processing. The North Star and the Empire mines closed in 1956.

Past ownership provided by title records and historical information was reviewed to provide information regarding past uses of the Project Area. As described above, parcels comprising the Project Area are part of the larger landholdings comprising the North Star Property. From review of title records available from the Nevada County Assessor and the Clerk-Recorder, the following provides a condensed record of the chain of title for the North Star Property, including the Project Area, since 1958:

- 1958 - New Verde Mines Company, an entity of Newmont, conveyed the property to Boyce Thompson Institute for Plant Research, Inc.
- 1977 - The Boyce Thompson Institute for Plant Research, Inc. conveyed the property to Lawrence & Julia Amaral and Robinson Enterprises, Inc.
- 1978 - Lawrence & Julia Amaral and Robinson Enterprises, Inc. conveyed title to Terra Alta Development Company and Robinson Enterprises, Inc.
- 2003 - Terra Alta Development Company and Robinson Enterprises, Inc. conveyed title to Sanderson Company, Inc.
- 2003 - Sanderson Company, Inc. conveyed property title to North Star/Grass Valley, LLC.
- 2005 - North Star/Grass Valley, LLC conveyed title for APN 29-350-16 and APN 29-350-03 to Gold Country, LLC.

- 2005 - North Star/Grass Valley, LLC and Gold Country, LLC conveyed a Grant Deed of Conservation Easement for APN 29-350-16 and APN 29-350-03 to Nevada County Land Trust (presently BYLT).
- 2011 – North Star/Grass Valley, LLC and Gold Country, LLC defaulted to Citizens Bank of Nevada County.
- 2011 – Citizens Bank of Nevada County conveyed title to New Verde Mines, LLC, a Newmont entity.

Ownership of the Project Area supports the past land uses described in Section 2. Historical mining represented the most significant past land use of the Project Area. Much of the waste rock that previously existed on the surface near the mine workings is no longer present. Waste rock was salvaged and crushed and screened for use as aggregate. A few relatively small waste rock piles and areas of scattered waste rock remain within the Project Area. A relatively flat-lying area adjacent to Wolf Creek on APN 22-120-28, shown as an area of scattered waste rock on Figure 3, may have been used to process waste rock for aggregate. While not known with certainty, portions of the Project Area may also have been logged in the past for fire prevention.

During its period of ownership, North Star/Grass Valley, LLC proposed development of the approximate 714-acre North Star Property, including portions of the Project Area. The proposed development included residential, commercial, community services (e.g. community centers, fire stations), recreational, and public open space. North Star/Grass Valley, LLC also conveyed a conservation easement for APN 29-350-03 and APN 29-350-16 to the Nevada County Land Trust (presently BYLT). Prior to developing the North Star Property, North Star/Grass Valley, LLC filed for relief under Chapter 11 of the U.S. Bankruptcy Code in November 2008, with the property defaulting to Citizens Bank of Nevada County. In 2011, Newmont reacquired the North Star Property for the purpose of implementing the North Star Water Treatment Project.

4.0 ENVIRONMENTAL RECORDS REVIEW

The purpose of the records review is to obtain and review reasonably ascertainable records that help identify recognized environmental conditions in connection with the Project Area or adjoining and surrounding properties. Principal sources of information reviewed for this Phase I ESA included:

1. *The Gold Quartz Veins of Grass Valley, California* (Johnston 1940). This U.S. Geological Survey Professional Paper describes the regional geology and historical mining activities in the Grass Valley area.
2. *Preliminary Endangerment Assessment of North Star Property* (H&K 2006). This Preliminary Endangerment Assessment (PEA) report was prepared for the previous owner (North Star/Grass Valley, LLC) to support the previously proposed residential and commercial development of the North Star Property according to a Voluntary Cleanup Agreement (VCA) between the Department of Toxic Substances Control (DTSC) and North Star/Grass Valley, LLC. North Star/Grass Valley, LLC declared bankruptcy prior to developing the North Star Property. The PEA report presents the identification, characterization and assessment of historical mine features. Portions of the PEA study area included part of the Project Area. The PEA report was used as a resource to identify mapped locations of mine shafts and waste rock, many of which were identified during the site reconnaissance for the Project Area described in Section 5 below.
3. *Notice of Applicability (NOA); Limited Threat General Waste Discharge Requirements Order R5-2013-0073-01-037; Drew Tunnel Groundwater Treatment System, Nevada County*. (Regional Board 2014a). The NOA issued to Newmont prescribes the requirements for discharging effluent to Wolf Creek from the interim Green Sand/Multi-media water treatment system (GSWTS) installed and being operated by Newmont at the City's WWTP property for interim treatment of the drainage from the Drew Tunnel.
4. *Cleanup and Abatement Order No. R5-2014-0706*. (Regional Board 2014b). The Cleanup and Abatement Order (CAO) issued by the Regional Board to Newmont specifies timeframes for Newmont to perform additional predesign investigations and engineering, obtain necessary permits, and to construct facilities to collect, convey and treat water from the North Star drainage features and the Drew Tunnel. The CAO also summarizes background information concerning investigations and studies completed for the mine drainage features since 2008.
5. *Environmental Data Records, Inc. (EDR) Reports* (EDR 2014). At the request of WME, EDR performed a search of available federal and state environmental records for the Project Area and adjoining properties according to the requirements of ASTM E 1527-13. Two searches were conducted due to the length of the Project Area, one centered on the Drew Tunnel portal and the second centered on the proposed passive treatment system. The records were reviewed to identify compliance issues, permits, inspections, complaints, or notices associated with the Project Area or adjoining properties. The EDR reports are provided in Appendix A.

4.1 Mine Features

The Project consists of proposed facilities to collect, convey, and treat water currently draining from the Drew Tunnel and the North Star mine features (Adit and Pipe Culvert) and an adjacent spring (Spring 2). While not considered hazardous substances, iron and manganese concentrations of water from the

drainage features have the potential to impact beneficial uses in Wolf Creek for municipal water supply. In addition, the drainages from the Adit and Pipe Culvert periodically contain arsenic at concentrations that exceed the arsenic Primary Maximum Contaminant Level (MCL); although the average arsenic concentration is approximately equal to the MCL (Regional Board 2014b).

The Drew Tunnel drains the historical Massachusetts Hill Mine. The portal of the Drew Tunnel is located within the Project Area at the City's WWTP property (APN 29-290-26). Water draining from the Drew Tunnel is currently being treated by Newmont (Regional Board 2014a). Newmont will purchase a sufficient area of APN 29-290-26 from the City necessary to collect and convey the Drew Tunnel water to the treatment system, which upon purchase will be included in the Project Area. The Massachusetts Hill Mine is located on the northern portion of the North Star Property outside of the Project Area, west of Allison Ranch Road. The Massachusetts Hill Mine was intermittently operated by various entities from approximately 1850 to 1901. Dewatering of the mine workings was required to allow underground mining and the workings were dewatered by pumping water to the Drew Tunnel. No further development is known to have occurred at the Massachusetts Hill Mine since 1901. Following mine closure, groundwater recovered within the underground mine workings and currently drains by gravity from the Drew Tunnel.

As required by the Regional Board (Regional Board 2007), investigations have been conducted to evaluate the physical setting, surface hydrologic features, and hydrogeologic conditions of the Massachusetts Hill Mine and Drew Tunnel (MFG 2008). Water quality and continuous flow monitoring of the Drew Tunnel drainage has been ongoing since January 2005.

The Adit and Pipe Culvert are associated with the historical mine workings of the Snyder Shaft and other underground workings of the North Star Mine. Water from the two mine features currently drains to Wolf Creek. As summarized in the CAO (Regional Board 2014b), investigations have been performed to evaluate the physical setting, surface hydrologic features, and hydrogeologic conditions of the Adit and Pipe Culvert and their relationship to historical mine workings. Monitoring has occurred since October 2008 to characterize the quality and flow of the drainage features. The location and alignment of the Adit and Pipe Culvert are consistent with mine mapping (Johnston 1940) that depicts historical mine workings connected to the upper levels of the Snyder Shaft. A drainage tunnel extends from the underground North Star mine workings to the Snyder Shaft. The Pipe Culvert and Adit appear to be part of a larger mine drainage system for the New York Hill Mine, Chevanne Shaft, Rocky Bar and North Star underground mine workings (Regional Board 2014b). The collective historical workings of the New York Hill Mine,

Chevanne Shaft, Rocky Bar and North Star Mine are located outside of the Project Area on the North Star Property.

Other historical underground mines are known to have existed in the southern portion of the Project Area. As depicted on Figure 4, the inclined shafts of the Omaha Mine, Lone Jack Mine, Wisconsin Mine, New Homeward Bound Mine and the Old Homeward Bound Mine are located in the southern portion of the Project Area. The locations of these shafts as determined from historical mapping evaluated in the PEA (H&K 2006) are shown on Figure 3. These mines closed in 1906 (H&K 2006). None of the historical mine shafts are currently open and were either backfilled following mining or collapsed in the past. However, depressions or surface subsidence features exist near the mapped locations of the shafts at the Lone Jack Mine and the New Homeward Bound Mine, as observed during the site reconnaissance, and may be indicative of the shaft locations.

During mining operations, waste rock removed from the underground workings was commonly stockpiled adjacent to the shaft headframe. While most of the waste rock was apparently previously salvaged, a few intact waste rock piles and areas of scattered waste rock remain near the former mines within the southern portion of the Project Area. Figure 3 shows the locations of the waste rock piles and areas of scattered waste rock observed during the site reconnaissance. The waste rock varies from slightly to highly weathered granitic, diabase, and/or undifferentiated rock. The presence of waste rock observed during the site reconnaissance was consistent with the waste rock previously identified and characterized in the PEA (H&K 2006). Results of the waste rock characterization provided in the PEA are summarized in the following section.

4.2 PEA Waste Rock Characterization

The PEA (H&K 2006) identified the locations of waste rock piles and areas of scattered waste rock within the southern portion of the Project Area (defined as Zone 11 in the PEA). PEA Zone 11 included the total areas of APNs 22-120-28 and 22-160-27. Eight waste rock areas were defined in PEA Zone 11 having a total estimated volume of 5,100 cubic yards, with the remnant waste rock stockpile in the flat-lying area of APN 22-120-28 comprising the majority of the volume. The PEA described the waste rock varying from slightly to highly weathered granitic, diabase, and/or undifferentiated rock. Waste rock samples from each of the eight areas were collected during the PEA to characterize the metal concentrations of the waste rock. Waste rock samples were obtained at various depths by excavating trenches through the waste rock into native soil underlying the piles and areas of scattered waste rock. Waste rock and underlying native soil samples were typically analyzed for total arsenic, lead and mercury, with selected samples analyzed for Title 22 CAM-17 total metals, soluble arsenic, lead and mercury by the waste

extraction test (WET), acid-base accounting (ABA) and pH. The analytical results are presented in the PEA (H&K 2006).

In the PEA, the total metal concentrations of the waste rock were compared to the California Human Health Screening Levels (CHHSLs) for residential and commercial/industrial use and to the total threshold limit concentrations (TTLC), whereas the soluble metal concentrations were compared to the soluble threshold limit concentrations (STLC). Because the Project is not proposing residential use of the Project Area, comparing total metal concentration of the waste rock to the residential CHHSLs is not applicable. Mean arsenic, lead and mercury concentrations from the eight waste rock areas were below both the TTLC and STLC; and therefore, the waste rock would be classified as non-hazardous (H&K 2006). The PEA concluded that arsenic was the primary constituent of concern based on the analytical results of the waste rock samples. Waste rock at the North Star Property, when considered as a whole, was classified as Group C mine waste (California Code of Regulations Title 27, Subdivision 1, Chapter 7 pertaining to management of mining waste) in the PEA. Overall, the waste rock is acid neutralizing with a low acid generating potential and the solubility of arsenic, lead, and mercury in waste rock is insoluble to low.

The PEA also addressed metal concentrations of surface water, sediment, and native soil from samples collected at locations upstream, downstream, and within the North Star Property. Several of these sampling locations were within the current boundary of the Project Area. Evaluation of the analytical results for these samples is presented in the PEA (H&K 2006). As reported in the PEA, concentrations of mercury and methylmercury were detected in sediment samples collected from two ponds located in APN 22-160-27 and APN 22-120-28. The ponds are located along the intermittent unnamed tributary in the southern portion of the Project Area. The pond in APN 22-160-27 is located adjacent to the east side of Allison Ranch Road. The pond in APN 22-120-28 is located above the confluence with Wolf Creek. Dissolved mercury concentrations were below detection in surface water samples collected from the unnamed tributary. While the results of the PEA indicated that the two pond areas are suitable for unrestricted land use, the PEA recommended that further evaluation of methylmercury concentrations in the pond sediments may need to be addressed prior to the previously proposed residential and commercial development of the North Star Property.

4.3 EDR Environmental Report Information

Available federal and state environmental records for the Project Area and adjoining properties are documented in the two EDR reports according to the requirements of ASTM E 1527-13. To encompass

the Project Area, environmental record searches were conducted separately for the area of the Drew Tunnel (North Star DT report) and the area of the passive treatment system (North Star PTS report). A copy of the two EDR reports is included in Appendix A. The reports identify the databases searched and the radius of the search limits. The EDR reports also provide aerial photographic images, USGS topographic maps, and city directories over time to assess past uses of the Project Area and adjoining properties.

As documented in the EDR reports for the North Star PTS and the North Star DT, the only environmental record listed for the Project Area consisted of the 2005 Voluntary Cleanup Agreement (VCA) between North Star/Grass Valley, LLC (the past owner of the North Star Property) and DTSC. At that time, the previous owner North Star/Grass Valley, LLC was proposing residential and commercial development of the North Star Property. The southern portion of the Project Area (APNs 22-120-28 and 22-160-27) were included as part of the previously proposed residential and commercial development and were included in the VCA. The PEA (H&K 2006) was conducted pursuant to the VCA to support the past residential and commercial development plans. The Draft Final PEA was approved by DTSC in December 2006 (DTSC 2006). North Star/Grass Valley, LLC declared bankruptcy prior to initiating development of the North Star Property.

Newmont had no involvement in the prior VCA entered into by the previous property owner. In addition, Newmont is not considering residential or commercial development or open space use of the Project Area or adjoining areas of the North Star Property as part of the Project. As such, the requirements of the VCA are not applicable to the Project. No other listed sites were disclosed within the Project Area by the environmental records search documented in the EDR reports.

Several sites are listed in the EDR reports on properties adjoining the Project Area or on surrounding properties. The EDR North Star DT report lists several environmental records pertaining to the City's WWTP located to the northeast of the Project Area. Treated wastewater effluent from the City's WWTP is discharged to Wolf Creek pursuant to Waste Discharge Requirement Order No. R5-2009-0067 (NPDES No. CA0079898) issued by the Regional Board.

In 2000, the portal of the Drew Tunnel was exposed on the City's WWTP property (APN 29-290-26) during expansion of the WWTP. The drainage from the Drew Tunnel was previously routed into the WWTP for treatment prior to discharge pursuant to the City's NPDES permit. According to a prior 2009 Settlement Agreement with the City, Newmont is required to remove the Drew Tunnel water from the City's WWTP and treat the water at a separate facility. In 2014, Newmont and the City entered into an

Agreement Regarding Installation of Temporary and Permanent Drew Tunnel Treatment Systems and General Release (Agreement). The Agreement required that Newmont set-up, permit and operate a temporary green sand water treatment system (GSWTS) on the City's WWTP property to treat the Drew Tunnel water. Beginning in September 2014, water draining from the Drew Tunnel has been collected and treated by Newmont at the GSWTS with the treated effluent conveyed to Wolf Creek, pursuant to a Limited Threat NPDES permit issued by the Regional Board (Regional Board 2014a). The Agreement also requires that Newmont construct a permanent treatment system for the Drew Tunnel drainage that is not located on the City's property and provides for Newmont to purchase a portion of the City's WWTP property for the installation of a pump station and piping to collect and convey the Drew Tunnel drainage to the permanent treatment system. Newmont will purchase a sufficient area of APN 29-290-26 from the City necessary to construct and operate the Drew Tunnel pump station and conveyance piping.

As listed in the EDR report for the North Star DT, the City entered into a VCA and Land Covenant Agreement (LCA) with DTSC in 1995 to restrict the use of the City's WWTP property (APN 29-290-26) due to the discovery of mercury and lead contaminated soil during expansion of the WWTP. The City's WWTP property adjoins the northeast boundary of the Project Area. A PEA was conducted pursuant to the VCA. The VCA resulted in the encapsulation of approximately 105-135 cubic yards of mercury contaminated soil in the southwest area at the City's property. The LCA restricts the City's WWTP property to industrial and commercial uses, prohibits excavation at and/or removal of any soil from the mercury soil encapsulated area without prior approval of DTSC, and requires O&M of the encapsulated mercury area. In addition, the LCA requires DTSC approval prior to excavation of soil from the property and for excavated soil to be disposed or used offsite.

The prior VCA and the current LCA on the adjoining City property are considered to represent controlled recognized environmental conditions for the purposes of this Phase I ESA. As previously described, Newmont will purchase a sufficient area of APN 29-290-26 from the City necessary to collect and convey the Drew Tunnel water to the permanent treatment system. The area to be purchased is located in the northwest portion of the City's WWTP property, is outside the limits of the encapsulated mercury soil area, and is not known to have elevated lead or mercury concentrations in soil.

Several other sites are listed in the EDR reports on properties adjoining the Project Area or on surrounding properties. Based on mapped known locations, the sites are located at considerable distances or downgradient from the Project Area. As such, these sites are not considered an environmental concern to the Project Area.

In the late 19th century, the Sanborn Company began preparing maps typically in mining or business districts for use by fire insurance companies. These maps indicate structures and significant features at properties and construction materials of the structures. These maps were periodically updated and expanded geographically periodically through the 20th century. As part of the EDR records search, a search for Sanborn fire insurance maps was conducted for the Project Area. No Sanborn maps were identified by the EDR records search for the Project Area.

4.4 Other Records

As listed above, other records provide information pertinent to the Project Area and were reviewed as part of this Phase I ESA. The NOA for the Limited Threat Permit for the Drew Tunnel Groundwater Treatment System (Regional Board 2014a) prescribes the requirements for discharging effluent to Wolf Creek from the interim GSWTS. Treatment and discharge of the Drew Tunnel water has been performed according to the requirements of the NOA since initiation of the interim GSWTS in September 2014; and therefore, is considered to represent a controlled recognized environmental condition for the purposes of this Phase I ESA. The CAO (Regional Board 2014b) specifies timeframes for Newmont to perform additional predesign investigations and engineering, obtain necessary permits, and to construct facilities to collect, convey and treat water from the North Star drainage features and the Drew Tunnel. The CAO summarizes background information concerning investigations and studies completed for the mine drainage features since 2008. Information provided by other reports prepared to support the Nevada County Land Use Permit Application for the Project, including the Geologic Hazards Evaluation (MWH 2014), the Biological Resource Inventory (EcoSynthesis 2014), and the Class I Archaeological Survey (Genesis Society 2013), has been incorporated in this Phase I ESA, to the extent relevant in defining environmental conditions within the Project Area.

5.0 RESULTS OF SITE RECONNAISSANCE

For the purpose of this Phase I ESA, Sherman Worthington of WME performed a site reconnaissance of the Project Area on December 9, 2014. The site reconnaissance included visual observations of surface features made during foot traverses within the Project Area. Surface features of adjoining properties were also observed from the Project Area or from public roadways. Representative photographs of notable features were taken, as provided in Appendix B. The objective of the site reconnaissance was to obtain visual information indicating the likelihood of identifying recognized environmental conditions in connection with the Project Area. The current features and environmental conditions of the Project Area and adjoining areas are described in the following sections.

5.1 Current Project Area Features

Current features within the Project Area are shown on Figures 2 and 3. The Project Area is currently undeveloped except for roadways and utilities. Allison Ranch Road, an approximate 20-foot wide, two-lane, asphalt-paved surface maintained by Nevada County traverses generally from north to south along the western boundary of the Project Area. The shoulder width is relatively narrow along both sides of Allison Ranch Road allowing only foot traffic adjacent to the paved surface along most of the road length within the Project Area. The eastern fill-slope of Allison Ranch Road is relatively steep exceeding 30 percent in some areas. The Allison Ranch bypass road is about 20-feet wide and is surfaced with gravel. Gates restrict access to the bypass road. Mote Lane, a paved and gravel-surfaced road, provides access from Allison Ranch Road across the southern portion of the Project Area to two residences located to the east of the Project Area. Several gated or chained roadways provide access to the Project Area from Allison Ranch Road.

Overhead pole-mounted power lines extend from the north along the eastern side of Allison Ranch Road to provide electrical service to the City's WWTP. A waterline buried beneath the surface of Allison Ranch Road extends from the north to a point near the intersection of the North Star Mine Road. Overhead pole-mounted telephone lines extend along the length of Allison Ranch Road on either the west or east sides of the road. An overhead PG&E electrical transmission line traverses north to south across the southern portion of the Project Area, as depicted on Figure 3.

Except as described in this Phase I ESA, no evidence of the following features was visually observed within the Project Area during the site reconnaissance:

- surficial staining of soils;
- hazardous substances or petroleum products;
- above ground or underground storage tanks;

- drums or other unknown containers;
- discarded electrical equipment;
- batteries or other discarded automotive parts;
- solid waste disposal other than waste rock piles associated with historical mining activity.

A minimal amount of trash was observed along Allison Ranch Road that likely has been discarded from passing vehicles; however, the trash was considered to represent a de minimis condition.

Surface features associated with historical underground mining activities exist in specific areas of the Project Area, as shown on Figures 2 and 3. Past mining activities are evidenced by old roads, ditches, altered topography, depressions from collapsed or backfilled mine shafts and exploration excavations, waste rock piles, areas of scattered waste rock, and foundations at certain areas within the Project Area.

The following features are known to exist or have been observed on the surface in the following parcels comprising the Project Area:

APN 29-290-26

As previously described, the portal of the Drew Tunnel is located on the northwestern portion of the parcel at the City's WWTP. A collection system installed at the portal conveys water in a buried pipeline from the Drew Tunnel to the GSWTS. The portal is backfilled. No evidence of the tunnel or portal is observable at the ground surface.

APN 29-350-03

None of the proposed facilities will be constructed on the parcel. However, the buried pipeline from the Drew Tunnel collection system will extend south along Allison Ranch Road along the western boundary of the parcel. Therefore, the parcel is included as part of the Project Area. Several historical roads or water ditches exist on the parcel that may have been associated with past mining activities. The most prominent old road extends from north to south across the parcel approximately midway between Allison Ranch Road and Wolf Creek.

APN 29-350-16

The Adit and Pipe Culvert are located on the parcel as shown on Figure 3. Water from the two mine features currently drains to Wolf Creek. Several small depressions or subsidence features exist on the parcel that may be associated with collapsed underground mine tunnels or workings (MWH 2014). Several springs also exist on the parcel. An old road extends from Allison Ranch Road to the southeast across the

southern portion of the parcel. Anecdotal information indicates that the road may have been used to transport aggregate from crushing of waste rock that occurred on adjacent APN 22-120-28 to the south.

APNs 29-350-04 and 22-120-35

Since the pipeline from the Drew Tunnel collection system will extend south along the Allison Ranch bypass road, which is located on APNs 29-350-04 and 22-120-35, the area of these parcels bounded by Allison Ranch bypass road on the west and Allison Ranch Road on the east is included in the Project Area. As shown on Figure 3, a waste rock pile exists on these parcels west of Allison Ranch Road. The waste rock pile appears to have been regraded in the past. The waste rock pile is consistent with the location of the inclined Snyder Shaft collar identified from review of historical mine information. However, visual evidence of the Snyder Shaft collar is no longer recognizable and may have been backfilled or collapsed in the past.

APN 22-120-28

The major feature observed on the parcel is a relatively flat-lying area of scattered waste rock as shown on Figure 3. Information indicates that the area was used for crushing and sorting of waste rock for use as aggregate beginning in the 1960's. From review of historical mine information, the location of the Omaha Shaft collar is depicted on Figure 3. However, visual evidence of the Omaha Shaft collar is no longer recognizable and may have been backfilled or collapsed in the past. A pond currently exists near the shaft location that receives water from the NID ditch and intermittent surface water from the unnamed tributary to Wolf Creek (EcoSynthesis 2014). Two springs (Spring 2 and Spring 3) also exist within the parcel.

APN 22-160-27

As shown on Figure 3, surface features associated with historical underground mining activities exist at specific areas on the parcel. These features include old roads, altered topography, waste rock piles, areas of scattered waste rock, and depressions or subsidence from collapsed or backfilled mine shafts and mine exploration excavations. The Lone Jack Mine, Wisconsin Mine, New Homeward Bound Mine, and the Old Homeward Bound Mine were identified to exist on the parcel from review of historic mine information. The locations of the inclined shafts for these mines determined from historic mapping are shown on Figure 3. Visual evidence of the shaft collars is no longer recognizable and they may have been backfilled following mining or collapsed in the past.

However, depressions or surface subsidence features exist near the mapped locations of the shafts at the Lone Jack Mine and the New Homeward Bound Mine. An approximate 30-foot diameter circular depression about ten feet in depth exists approximately 150 feet west of the mapped location of the Lone

Jack Mine Shaft. As shown on Figure 3, several areas of scattered waste rock exist to the northwest of the depression and an area of altered topography extends to the south of the depression. The altered topography consists of miscellaneous small piles or mounds, depressions, and scattered waste rock.

A linear subsidence feature, approximately 70-feet long and varying up to five feet in depth, exists at the mapped location of the New Homeward Bound Mine Shaft. Relic foundations constructed of concrete and rock masonry exist at the eastern end of the subsidence feature. A conical-shaped waste rock pile about 30-feet in diameter and 15-feet high exists northeast of the foundations.

An apparent depression or subsidence feature also exists approximately 100 feet south of the mapped location of the Wisconsin Mine Shaft. The depression is about 30-feet long and about five feet deep. An area of altered topography consisting of miscellaneous small mounds, depressions, and scattered waste rock extends to the northwest of the mapped location of the Wisconsin Mine Shaft.

Several intact piles of waste rock exist within the parcel as shown on Figure 3. The waste rock varies from slightly to highly weathered granitic, diabase and/or undifferentiated rock. Dense vegetation exists on and surrounding the piles. The most prominent waste rock pile is located north of Mote Lane near Allison Ranch Road. This pile is about 100 feet long and 20 to 30 feet wide at the base and about 20 feet high. Two smaller waste rock piles are located south of Mote Lane. Based on visual observations, the total volume of these three waste rock piles is estimated to be 500 cubic yards. Several waste rock piles are located farther to the south and are associated with historic mining at the Homeward Bound Mine based on their location. As previously described, a conical-shaped waste rock pile exists northeast of the mapped location of the New Homeward Bound Mine Shaft. None of the intact waste rock piles observed in the parcel are located within the proposed footprint of the passive water treatment system. It is not proposed that the piles be disturbed or waste rock from the piles be used for construction of the Project facilities.

5.2 Adjoining Properties

Properties adjoining the Project Area were visually examined to make a cursory assessment of the current land use and potential for recognized environmental conditions that may have an impact on the Project Area. No evidence of recognized environmental conditions was observed during the site reconnaissance on adjoining properties that would have an impact on the Project Area. As described in Section 2.3, current land uses on adjoining properties represent a combination of residential, commercial/industrial, agricultural, and undeveloped land uses. The City's WWTP borders the north and northeast boundary of the Project Area. Single family residential parcels of the Carriage House Subdivision are located east of Wolf

Creek and to the east of the central portion of the Project Area. The undeveloped North Star Property adjoins the western boundary of the central portion of the Project Area. Past uses of the North Star Property included mining and timber logging. Single family residential parcels currently exist to the east and west of the southern portion of the Project Area. Agricultural (grazing) land on the west side of Allison Ranch Road adjoins the southwest boundary of the Project Area.

6.0 RESULTS OF INTERVIEWS

Interviews were conducted with Newmont personnel and others familiar with the Project Area to obtain information regarding past and present uses within and adjacent to the Project Area and to assist in evaluating the potential for recognized environmental conditions to exist. An interview was conducted with Mr. William Lyle, a representative of Newmont and New Verde Mines, LLC. Mr. Lyle did not express knowledge of past uses of the Project Area other than historical mining use or was aware of environmental conditions other than those identified in this Phase I ESA. Mr. Lyle stated that he was not aware of any of the following: environmental liens; any activity and use limitations (AUL); any additional uses of the Project Area beyond those stated in this Phase I ESA; any additional reasonably ascertainable information that would identify conditions indicative of releases or threatened release of hazardous substances; and any obvious indicators that point to the presence of contamination within the Project Area other than those described in this Phase I ESA. Mr. Lyle also stated that Newmont is not considering development of the Project Area, development of adjoining areas of the North Star Property, or property transfer at this time.

Mr. Jeff Huggins of the Regional Board was interviewed by telephone. Mr. Huggins is a Water Resources Control Engineer, Title 27 Permitting and Mining Unit of the Central Valley Regional Board, has been involved with evaluation of the mine drainages in the Project Area, and is a long-time resident of Nevada County familiar with the history of past mining activities. Mr. Huggins summarized his general knowledge of historical mining and milling activities on the North Star Property. He confirmed knowledge of the PEA that was prepared to support the previously proposed residential and commercial development of the North Star Property by the previous property owner according to the VCA with DTSC. Although he is familiar with the LCA on the City's WWTP property, he is not aware of any mine waste existing in the area near the Drew Tunnel portal. Based on his knowledge of the North Star Property since the mid-1960's, Mr. Huggins is not aware of any industrial activities that occurred within the Project Area Property that would have resulted in recognized environmental conditions. He stated that crushing and screening of the previously existing waste rock pile on the flat-lying area of APN 22-120-28 had been performed in the 1960's to produce aggregate. In addition, waste rock in other areas of the North Star Property was crushed and screened to produce aggregate in the late 1970's to mid-1980's. The processing of waste rock for aggregate did not involve other industrial or construction-related activities on the North Star Property. Mr. Huggins recalled that a precast concrete operation previously existed in the southern portion of the Project Area east of Allison Ranch Road but did not recall the exact time frame or location.

Mr. Randy Adams of DTSC's Site Cleanup Program was contacted by telephone to discuss his knowledge of the Project Area. Mr. Adams was DTSC's program manager during development of the PEA for the North Star Property in the 2005-2006 time period by the previous owner, North Star/Grass Valley, LLC pursuant to the VCA with DTSC. Mr. Adams stated that the Draft Final PEA was approved by DTSC on December 19, 2006. Since then, he has not been familiar with conditions or activities that may have occurred on the North Star Property but had no reason to expect that environmental conditions had changed from that described in the PEA.

Mr. Lowell Robinson and Mr. Ed Walker of Robinson Enterprises, Inc. were interviewed by telephone to discuss past land uses of the North Star Property. They stated that past uses of the North Star Property by Robinson Enterprises, Inc. and Mr. Amaral consisted of logging and crushing and screening of waste rock for use as aggregate. Mr. Robinson recalled that other parties, including Nevada County, had crushed and screened waste rock from the North Star Property for use as aggregate prior to ownership by Robinson Enterprises, Inc. and Lawrence & Julia Amaral.

7.0 FINDINGS

This Phase I ESA has been performed to evaluate the potential for recognized environmental conditions to exist within the Project Area, as defined herein, owned by New Verde Mines LLC in Nevada County, California to support the Nevada County Land Use Permit Application for the proposed North Star Water Treatment Project (Project). The Project consists of proposed facilities to collect, convey, and treat groundwater currently draining from three mine features (Drew Tunnel, Adit, and Pipe Culvert) and a spring (Spring 2). This Phase I ESA addresses only those portions of the parcel areas that will be occupied by the proposed Project facilities. The Project Area comprises approximately 70 acres consisting of portions of Nevada County Assessor's Parcel Numbers (APN) 29-350-03, 29-350-16, 22-120-28, 22-160-27, 29-350-04, and 22-120-35. In addition, Newmont will purchase a sufficient area of APN 29-290-26 from the City of Grass Valley (City) necessary to collect and convey water draining from the Drew Tunnel pursuant to an agreement with the City for the Project.

The Phase I ESA was performed in general conformance with the scope and limitations of ASTM Practice E 1527-13. The purpose, limitations, and scope of this Phase I ESA are described in Section 1.0. Recognized environmental conditions are defined for the purpose of this Phase I ESA as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a future release to the environment. The term recognized environmental conditions is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The findings presented in this report are derived from the review and interpretation of publicly available information described in this report, and visual observations during the site reconnaissance on December 9, 2014, and interviews with Newmont personnel and others familiar with the property.

Based on information obtained and reviewed in this Phase I ESA, this assessment has revealed no evidence of recognized environmental conditions in connection with the Project Area except for historical surface and underground mining activities that altered the topography and resulted in drainage from underground mine workings to the surface at three mine features (Drew Tunnel, Adit, and Pipe Culvert) and waste rock piles to be deposited on the ground surface at specific locations of the Project Area. The objective of the Project is to collect, convey, and treat groundwater currently draining from the three mine features and an adjacent spring according to the requirements of the CAO (Regional Board 2014b). None of the waste rock piles identified within the Project Area are located within areas that will be occupied by the proposed Project facilities. Minimal areas of scattered waste rock may be disturbed by

the proposed Project facilities; however, this disturbance is considered to represent a *de minimis* condition as defined by ASTM E Practice 1527-13.

8.0 REFERENCES

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- Worthington Miller Environmental, LLC. 2014. North Star Water Treatment Project Description. Prepared for Newmont USA Limited. December.

FIGURES

APPENDIX A

ENVIRONMENTAL DATA RESOURCES, INC. REPORTS

APPENDIX B
REPRESENTATIVE SITE PHOTOGRAPHS

APPENDIX C

RESUME OF SHERMAN J. WORTHINGTON