May 18, 2016

Ms. Amy Ha  
Water Resources Control Engineer  
Title 27 Permitting and Mining Unit  
Regional Water Quality Control Board – Central Valley Region  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, California 95670

Re: Tentative Waste Discharge Requirements  
Royal Mountain King Mine  
Public Hearing Scheduled June 23/24, 2016

Dear Ms. Ha:

Meridian Beartrack Co. ("Meridian"), owner of the Royal Mountain King Mine ("RMKM"), has the following comments on the Tentative Waste Discharge Requirements ("Tentative WDRs") for RMKM issued by the Regional Water Quality Control Board for the Central Valley Region ("Regional Board") on or about April 20, 2016. Our comments consist of this letter and the enclosed annotated Tentative WDRs and annotated Tentative Monitoring and Reporting Program ("Tentative MRP").

This letter will highlight or explain Meridian’s positions, as well as some changes we agreed to with Regional Board Staff, on key issues identified in the annotated versions of the Tentative WDRs and MRP. Meridian is a designated party for the upcoming public hearing. We reserve the right to provide further written or oral comments and to appear and provide evidence, testimony, legal argument and comments as a designated party at the public hearing.

COMMENT ISSUES

1. North Pit Status

We do not believe it is necessary to classify North Pit at this time as a Waste Management Unit ("WMU"). North Pit does not now hold any mining waste and therefore does not meet the Title 27 WMU definition ("a unit at which waste is discharged"). Title 27 C.C.R. ("Title 27") § 20164. North Pit has never been identified as a WMU in any prior Waste Discharge Requirements issued by the Regional Board.

However, after discussion with Regional Board Staff, we understand that the basis for classification is that North Pit is part of a contingency plan that could be implemented in the extraordinary event that Skyrocket Pit Lake liquid needs to be pumped there if Skyrocket Pit Lake risks overtopping the dam. The Regional Board has informed us that, unless and until that contingent event occurs, Meridian would only be required to sample North Pit water once a year through a grab sample and that only one compliance point, located in the downgradient area, would need to be identified and utilized for compliance purposes (we propose GWM-30R). Moreover, Meridian would
not be required to conduct formal “closure” of the unit at a later date unless it had been previously utilized as such a transfer location for Skyrocket Pit wastes. Based on all of these understandings, Meridian will not object to the designation of North Pit as a WMU. We have made appropriate textual modifications in the Tentative WDRs to reflect our understanding regarding this approach.

2. Skyrocket Pit, North Pit and Overburden Disposal Site Status

We agree with the Regional Board that the solid and liquid wastes in the three Overburden Disposal Sites, Skyrocket Pit and North Pit (if it is added as a waste management unit) should be classified as Group C WMUs. This determination is noted appropriately in the first few sentences of paragraphs 28, 29 and 30 in the Tentative WDRs.

However, we believe that the text in each of these paragraphs is not accurate, in its original form, because it: (1) refers improperly to a “spreading” concept that is not consistent with the downgradient impact approach relating to the de-designation and variance zone in the Basin Plan Amendment (“BPA”) formally approved for the Site in 2015; and (2) improperly opens the door to reclassification of the WMUs based on one measurement rather than on the final outcome of the investigative and corrective action process embodied in Title 27 and the Standard Provisions and Reporting Requirements for Waste Discharge Requirements (SPRR”) issued in April 2016.

We discussed these issues with Regional Board Staff. Based on that discussion, the Regional Board sent to us revised text that consolidates paragraphs 28, 29 and 30 into one paragraph and modifies that paragraph to address some of Meridian’s concerns. We put this new text into our annotations to the Tentative WDRs, along with a few revisions in track change format. Although this text does not address all of Meridian’s concerns, Meridian will not object to this new paragraph (as revised) if it replaces the entirety of original paragraphs 28, 29 and 30.

3. Monitoring and Reporting Program Issues

Meridian believes that the monitoring program for the Site reflected in the Tentative WDRs and MRP is unnecessarily broad in the scope of wells utilized and the covered constituents, redundant in several locations, and too aggressive in the frequency of monitoring. This is primarily due to inadequate consideration of 20+ years of monitoring results already recorded in the Site’s intensive monitoring program. Moreover, we are concerned that several monitoring wells are proposed within the BPA de-designation and variance area that appear to be designed for compliance purposes; this is inconsistent with the function and purpose of the de-designation and variance zone.

We have reviewed information and discussed these issues with Regional Board Staff and have agreed to the following modifications to the proposed MRP:

- Upgradient wells GWM-1 and GWM-3 will be removed from the MRP
- The West ODS-1, 3 and 4 sampling points will be removed from the surface water monitoring program
- The Stockpond and SWM-17 will be removed from the surface water monitoring program
- The sampling frequency will be annual for GWM-2, 11, 12, 21 and 26
- All well water level monitoring will be semi-annual
- Chromium, copper, nickel and zinc will be monitored every five years

In addition, Meridian and Regional Board Staff have agreed that any monitoring wells in the MRP located within the de-designation and variance zone (including GWM-16) shall not be
considered compliance points that are part of the compliance monitoring program. Rather they are being monitored for information purposes only and no increase of a constituent in these wells will trigger any further monitoring or corrective action requirements.

We have made appropriate additions and revisions to the text of the Tentative WDRs and MRP to reflect these agreements. Meridian is in agreement with these changes and, if they are made as indicated, there will be no other objections to the program at this time.

4. Financial Assurances

In paragraph 108 of the Findings and Section F of the Order in the Tentative WDRs, the Regional Board requires a financial assurance for a known or reasonably foreseeable release from the mining units. Title 27, Section 22222 is cited to support this requirement. However, for the reasons set forth below, neither this section nor any other provision in Title 27 appears to support this requirement.

Title 27, Section 22510(f) provides that the discharger shall provide adequate funding for closure and post-closure maintenance and states that the assurance of financial responsibility for this purpose shall be made pursuant to Chapter 6. Sections 22207(b) and 22212(b) (both are in Chapter 6) provide that funding shall be for the costs of closure and post-closure maintenance of mining units, but neither section refers to or authorizes an assurance for a known or reasonably foreseeable release. Section 22222 (also in Chapter 6), which the Tentative WDRs cite as authority for this “release” financial assurance, specifically excludes a “release” financial assurance for mining units by stating: “[t]his section does not apply to discharges of mining waste to mining waste management units (mining Units).” It then adds: “[t]he requirements of this paragraph do not preclude the RWQCB (under authority other than this subdivision) from requiring financial assurance for a known or reasonably foreseeable release at a mining Unit.” However, the Regional Board has not been able to identify any “authority other than this subdivision” that authorizes a “release” financial assurance. Thus, Section 22222 actually prohibits the imposition of a financial assurance for a potential release from a mining unit.

Meridian previously raised this issue with Regional Board Staff, but to date has not been provided with any authority authorizing this type of financial assurance for the RMKM mining units. Accordingly, in the absence of such legal authority, Meridian objects to the imposition of this financial assurance requirement.

5. Ferrous Sulfate Treatment

After a pilot test during 2010 and 2011,1 the Regional Board specifically approved the use of ferrous sulfate in Skyrocket Pit Lake to assist with the precipitation of arsenic in the Lake to allow increased NPDES permitted discharges. The use of ferrous sulfate for this purpose is recognized in the current NPDES permit (Attachment F of Order R5-2013-007) and there are no conditions put on its use therein. This is a proven and relatively harmless EPA BAT treatment process which is even used in potable water treatment. It has been successfully used at the facility over the last five years with no known negative consequences.

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1 Skyrocket Pit Lake Arsenic Treatment Pilot Study Report of Results, Strategic Engineering and Science, June 2012.
Paragraph 9 of the Discharge Specifications in the Tentative WDRs proposes, for the first time, an elaborate and unnecessary testing and reporting program that includes time-consuming and unproductive conditions requiring prior notice, continuous testing and special reporting for this approved treatment work within the WMU. However, after discussion with Regional Board Staff, our respective experts have agreed to modifications to the testing and reporting requirements that we have documented in our annotated Tentative WDRs. Meridian has agreed to withdraw its objection to some of these provisions and is in agreement with paragraph 9 if these revisions are incorporated into the adopted WDRs.

6. Transfer vs. Discharge

The word “discharge” is a term of art under both the federal Clean Water Act and California’s Porter-Cologne Water Quality Control Act. Under the Clean Water Act, it refers to a discharge to jurisdictional waters of the United States and under Porter-Cologne, it refers to a defined discharge to land. In both cases, it refers to an external discharge to the environment. A parallel definition incorporated through Title 27 appears in 22 C.C.R. § 66260.10. However, in no situation does it apply to an internal transfer of liquid between waste management facilities and units. For this and other reasons, all prior WDRs and Time Schedule Orders for RMKM have correctly referred to such internal movement of liquids as “transfers” rather than “discharges.” Indeed, consistent with this legal concept, the final text of the BPA approved by the State Water Board in January 2015 refers to saline leachate being “collected in sumps and transferred by pumping to Skyrocket Pit Lake…”

We believe that, in several places, the WDRs incorrectly characterize these types of internal transfers as discharges of waste. Accordingly, as you will see, we have changed “discharge(s)” to be “transfer(s)” in the Draft WDRs in these situations. Regional Board Staff has agreed to these changes and Meridian’s objections are withdrawn if these changes are accepted in the final WDRs.

7. Potential Skyrocket Pit Lake Water Storage Impacts

Paragraphs 52 and 53 of the Tentative WDRs contain a few unsupported statements regarding the potential impacts of water storage in Skyrocket Pit Lake on the historic flow and water quality in Littlejohns Creek. Meridian has documented in many reports that available historic evidence indicates that there were summer flows in this creek prior to mining and that the current conditions represent a return to pre-mining conditions. We would be happy to identify these reports and discuss this matter further with you. For these reasons, we have made appropriate changes in the text of paragraphs 52 and 53 to reflect the known data and to be consistent with the 2004 State Board Order.

8. Removal of Waste

We wanted to explain briefly our deletion of Provision H(7), which has a mandatory duty to “remove and relocate” any wastes discharged in contravention of the Tentative WDRs. Although this type of provision applies to other types of sites in certain situations, it is not an appropriate mandatory remedy in this kind of Order relating to groundwater and surface water quality degradation. We discussed this with Regional Board Staff, who agreed that this provision should be removed.

We appreciate the opportunity to have discussed these specific topics with the professional Regional Board Staff prior to submitting these comments. Please contact me if you have any questions regarding them.
Very truly yours,

Adam Whitman
President
Meridian Beartrack Co
775-200-4959

Cc: Marty Hartzell
    Tom Patterson
    Mark Trevor
    Skip Spaulding
The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. Meridian Beartrack Co. (MBC) and Meridian Gold Company (hereafter jointly Discharger), with landowner Felix Mining Company, operated the Royal Mountain King Mine (hereafter RMKM or facility or site) in Calaveras County. MBC now owns all of the property that comprises RMKM. MBC purchased the property owned by Felix Mining Company by Deed recorded on November 4, 2011 and acquired the property owned by Patricia McCarty through a lot line adjustment and Deed recorded on December 29, 2010. The Board regulates mining activities, including the closure of mine sites, pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) and regulations in California Code of Regulations, title 27, section 22470 et seq. (Title 27).

2. Mining activities at RMKM were originally regulated by Waste Discharge Requirements (WDRs) Order 88-176, which addressed the removal, transport, processing, and disposal of mined material. Since mining ceased, the Board has issued three WDRs for the closure of this site: WDRs Orders 97-165, 5-01-040, and R5-2008-0021. This Order supersedes all prior WDRs Orders and is intended as the Closure WDRs for the RMKM facility.

3. The following documents are attached to this Order and hereby incorporated into and made a part of this Order by reference:
   a. Attachment A – Site Location Map
   b. Attachment B – Site Plan
   c. Attachment C – De-designation and Variance Area
   d. Attachment D – Fault Zones
   e. Attachment E – June 2015 Groundwater Contours
   f. Attachment F – Groundwater Monitoring Network
   g. Attachment G – Surface Water Monitoring Network

4. The following acronyms are used throughout this Order:
   BPA Basin Plan Amendment
   FTR Flotation Tailings Reservoir
   LCRF Leached Concentrate Residues Disposal Facility
   LCRS Leachate Collection and Removal System
   ODS Overburden Disposal Site
5. RMKM comprises approximately 2,100 acres west of Highway 4 and south of Rock Creek Road near the town of Copperopolis, Calaveras County, in Sections 18, 19, 20, 24, 29, 30, and 32, T2N, R12E, MDB&M, as shown in Attachment A.

6. The facility includes the Assessor’s Parcel Numbers (APNs) listed in the table below. The approximate property boundary is shown on Attachment B.

<table>
<thead>
<tr>
<th>Land Owner</th>
<th>APN Number</th>
<th>Description</th>
</tr>
</thead>
</table>

7. The Discharger operated the facility for the mining and extraction of gold. Active mining began in March 1989 and ceased in June 1994. Ore was mined from a series of open pits (North, Skyrocket, and Gold Knoll) and milled at approximately 3,400 tons per day. Skyrocket Pit and North Pit were actively dewatered during mining and have filled with groundwater and runoff/precipitation since mining stopped. The Gold Knoll Pit was backfilled and has been covered by the Gold Knoll ODS. Currently, Skyrocket Pit is classified as an active WMU for the transfer of ODS seep water to Skyrocket Pit. Mining facilities consisted of three open pits, a mill, a Flotation Tailings Reservoir (FTR), a Leached Concentrate Residues Facility (LCRF), a Process Water Retention Pond (PWP), and three ODSs (FTR, West, and Gold Knoll). The Discharger also constructed a cyanide heap leach facility within the LCRF to process low-grade oxide ore. Attachment B shows
the locations of these units. The general constituents of concern in the waste and wastewater are dependent on the specific WMU and consist of acid (indicated by low pH), cyanide, arsenic, total dissolved solids (TDS), chloride, nitrate, selenium, and sulfate.

8. On 8 July 2015, the Discharger submitted a Report of Waste Discharge (ROWD). The information in the ROWD has been used in developing this Order. The ROWD and supporting documents contain information related to this revision of the WDRs including:
   a. Classification of the FTR and ODSs as Group C Mining Waste following State Water Board adoption of the Basin Plan Amendment (BPA) and a site specific modification to the Sources of Drinking Water Policy in January 2015.
   b. Implementation of Skyrocket Pit water management strategies.
   c. Classification of the North Pit as a Group C WMU for transfer of water from Skyrocket Pit during emergency situations.
   d. Closure of the ODSs.

9. This Order implements the applicable regulations for discharges of solid waste to land through Prohibitions, Specifications, Provisions, and monitoring and reporting requirements. Prohibitions, Specifications, and Provisions are listed in Sections A through H of this Order, below, and in the Standard Provisions and Reporting Requirements, dated April 2016 (SPRRs). Monitoring and reporting requirements are included in the Monitoring and Reporting Program (MRP) R5-2016-XXXX and in the SPRRs. In general, requirements that are either in regulation or otherwise apply to all facilities regulated under Title 27 are considered “standard” and are therefore in the SPRRs. Any site-specific changes to a requirement in the SPRRs are included in the applicable section (A through H) of this Order, and the requirement in the WDRs supersedes the requirement in the SPRRs.

REGULATORY HISTORY

10. The Discharger was originally regulated by WDRs Order 88-176, which addressed the removal, transport, processing, and disposal of mined material. Subsequent WDRs through 2001 dealt with changes in individual units or operations.

11. WDRs Order 97-165 and all prior orders classified the mining wastes deposited in the West, Gold Knoll, and Flotation Tailings Reservoir overburden disposal sites (ODSs) as Group C mining waste. However, on 15 March 2001, the Central Valley Water Board issued WDRs Order 5-01-040 and a companion Cease and Desist Order 5-01-041 (the “CDO”, which was subsequently revised). In issuing these orders, the Board reclassified the mining wastes in the ODSs as Group B mining waste, thereby subjecting these wastes to much more stringent closure criteria. The Board’s re-classification of the mining wastes reflected a regulatory shift that placed a greater emphasis on the enforcement of secondary maximum contaminant levels (secondary MCLs), which are regulatory limits established to protect the odor, taste, and appearance of drinking water. Before this shift, mining
wastes that threatened to cause exceedances of secondary MCLs could still be classified as Group C wastes, as long as the wastes did not threaten to impact human health-based regulatory limits. Because evidence in the Board’s files indicated that groundwater passing through the ODSs showed increases in TDS, sulfate, and other inorganic salts, the Board concluded that the ODSs could contribute to exceedances of secondary MCLs in the underlying groundwater, and therefore applied regulatory standards based on the Group B classification criteria.

12. Subsequent to the Central Valley Water Board’s issuance of WDRs Order 5-01-040 and the CDO, MBC petitioned the Central Valley Water Board’s actions to the State Water Resources Control Board (State Water Board). In the petition, MBC alleged, inter alia, that the Board’s recategorization was unwarranted, due to the fact that the underlying groundwater was naturally poor and should not be expected to be used as a source of drinking water. Therefore, MBC argued that subjecting the ODSs to the prescriptive standards of Title 27 that apply to Group B wastes was unreasonable and legally inappropriate.

13. On 20 May 2004, the State Water Board issued Water Quality Order 2004-0007 (Remand Order). In the Remand Order, the State Water Board agreed with MBC on their argument that subjecting the ODSs to the prescriptive standards of Title 27 was unreasonable. The Remand Order therefore vacated the CDO and remanded the matter to the Central Valley Water Board for reconsideration, directing the Central Valley Water Board to seek “alternate means of complying with applicable legal requirements for mine closure and cleanup.” Among the “alternate means” suggested by the State Water Board were options that would result in the classification of the FTR liquids and ODSs as Group C mining waste, such as de-designation of beneficial uses, or the establishment of a “containment zone” in an enforcement order, or the establishment of enhanced and expanded wetland and riparian areas in lieu of the installation of a clay cover.

14. In response to the Remand Order, the Central Valley Water Board investigated all potential regulatory options for the closure of the RMKM Site, and concluded that the de-designation of the underlying groundwater beneficial uses would be appropriate to facilitate the orderly and efficient closure of the RMKM Site.

15. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised June 2015 (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263, subdivision (a), waste discharge requirements must implement the Basin Plan. The beneficial uses of groundwater underlying RMKM as set forth in the Basin Plan prior to 2015 were municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND) and industrial process supply (PRO). The Basin Plan’s narrative water quality objectives for chemical constituents, at a minimum, require waters designated as MUN to meet the MCLs specified in Title 22 of the California Code of Regulations, including the secondary MCLs.
16. On 28 March 2014, the Central Valley Water Board adopted a BPA that de-designated the MUN and AGR beneficial uses of the groundwater underlying much of the RMKM Site. The BPA also modified Basin Plan Chapter IV (Implementation, under the heading “Control Action Considerations of the Central Valley Regional Water Board”) to add a policy for managing poor-quality groundwater and added a variance for TDS, arsenic, chloride, nitrate, selenium, and sulfate in groundwater for IND and PRO beneficial uses at the RMKM Site. Attachment C shows the groundwater de-designation and variance area.

17. The State Water Board’s Resolution 88-63 (Sources of Drinking Water Policy) articulates a state policy that all waters should be presumptively considered a source of drinking water (i.e., designated as MUN), subject to limited exemptions. The Central Valley Water Board’s BPA did not fit within the narrow exemption criteria contained in the Sources of Drinking Water Policy. However, on 20 January 2015, following the Central Valley Water Board’s adoption of the BPA, the State Water Board adopted resolutions that approved the Central Valley Water Board’s BPA and that made a site-specific modification to the Sources of Drinking Water Policy to resolve the inconsistency between the Sources of Drinking Water Policy and the Central Valley Water Board’s the BPA.

Consistent with the Central Valley Water Board’s BPA, this Order classifies the FTR liquid and ODSs as Group C mining wastes. This designation could change at a later time if, provided that the WMUs are shown to cause a measurably significant unreasonable degradation of groundwater quality downgradient of the BPA de-designation and variance area or cause such and do not impacts to surface water quality after completion of the applicable Title 27 investigation and corrective action process. If monitoring conducted pursuant to this Order reveals unreasonable degradation of groundwater quality downgradient of the of the de-designation area (Attachment C) by constituents from connected with the ODSs, Skyrocket Pit, or the North Pit, or if the Discharger cannot effectively prohibit mining impacted water from entering surface waters except in accordance with the terms of the NPDES Permit. In this event, the Board may consider imposing other regulatory requirements, such as those that would reclassify the ODS seeps, Skyrocket Pit, and/or the North Pit and subject them to more stringent remedial requirements. Such action by the Central Valley Water Board will only be undertaken after the Discharger has been allowed to conduct the required regulatory investigation and corrective action process, and only after the Central Valley Water Board finds that the Discharger is failing to address the impacts within a reasonable period of time.

18. 

19. NPDES permit Order R5-2007-0162 was adopted by the Central Valley Water Board on 6 December 2007 and revised and adopted on 31 May 2013 by Order R5-2013-0071. The NPDES permit authorizes controlled discharges of water from Skyrocket Pit to Littlejohns Creek during periods of high seasonal creek flow. The purpose of the discharge is to allow management of the site-wide water balance and to control Skyrocket Pit water levels without causing detrimental impacts to beneficial uses in the downstream surface waters.

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20. The Discharger proposes to continue to transfer mine impacted FTR Leachate Collection and Removal Systems (LCRS) water and ODS seep water to Skyrocket Pit at the facility. Additionally, during emergency situations, the Discharger proposes to pump water from Skyrocket Pit to the North Pit to prevent the overtopping of Skyrocket Pit when sufficient discharge from Skyrocket Pit is not allowed under conditions imposed by the NPDES permit. These classified wastes may be transferred only in accordance with Title 27. The remaining WMUs shall remain closed and are not authorized by this Order to receive any additional waste materials.

21. RMKM consists of eight WMUs classified as containing either a Group A, B, or C mining waste. The following are the definition of these waste classifications per Title 27, section 22480:

Group A – mining wastes of Group A are wastes that must be managed as hazardous waste pursuant to Chapter 11 of Division 4.5, of Title 22 of this code, provided the RWQCB finds that such mining wastes pose a significant threat to water quality;

Group B – mining waste of Group B is either:
   a. mining wastes that consist of or contain hazardous wastes, that qualify for a variance under Chapter 11 of Division 4.5, of Title 22 of this code, provided that the RWQCB finds that such mining wastes pose a low risk to water quality; or
   b. mining wastes that consist of or contain nonhazardous soluble pollutants of concentrations which exceed water quality objectives for, or could cause, degradation of waters of the state; or

Group C — mining wastes from Group C are wastes from which any discharge would be in compliance with the applicable water quality control plan, including water quality objectives other than turbidity.

22. The existing WMUs authorized by this Order are described as follows:
<table>
<thead>
<tr>
<th>WMU (Size)</th>
<th>Liner/LCRS¹ Components²</th>
<th>Waste Classification – Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flotation Tailings Reservoir (FTR) (150 acres)</td>
<td>Final Cover: 6-inch thick vegetative soil cover. Tailings ( k \leq 1 \times 10^{-5} ) cm/sec LCRS: Geotextile, crushed rock, and perforated 4-inch drain pipes Base Liner System: South area: 2-feet thick compacted clay ( k \leq 8 \times 10^{-7} ) cm/sec, North area: 1-foot thick compacted clay ( k \leq 8 \times 10^{-8} ) cm/sec, spine and spring drains</td>
<td>Group C Solids and Group C Liquid – 6.5 million tons of flotation tailings. The solids were classified as Group C mining waste based on the lack of acid generation. The liquid contains salts and arsenic metals and was reclassified as Group C.</td>
<td>Closed</td>
</tr>
<tr>
<td>Leached Concentrate Residues Facility (LCRF) (18 acres)</td>
<td>Final Cover: 6-inch thick vegetative soil cover, one-foot thick FTR tailings layer, a geocomposite drainage layer, 60-mil HDPE geomembrane, foundation layer. LCRS: geotextile, 1-foot thick gravel, perforated drain pipes, geotextile Base Liner System: 40-mil, very low density polyethylene (VLDPE) geomembrane, 2-feet thick compacted clay ( k \leq 8 \times 10^{-6} ) cm/sec, spine drains</td>
<td>Group B Liquid – 186,400 tons of leachate concentrate residue containing cyanide, salts and metals. The solids are classified as Group B based on the acid generation potential. The liquids are classified as Group B Based on the pH and cyanide concentrations.</td>
<td>Closed</td>
</tr>
<tr>
<td>Process Water Retention Pond (PWP) (8 acres)</td>
<td>Evaporation Pond: 1.3 acre lined pond to evaporate PWP liquids. Final Cover: 1.5-foot thick vegetative soil cover, geocomposite, 60-mil HDPE, 2-feet thick foundation layer Base Liner System: 80-mil, high density polyethylene (HDPE) geomembrane, geotextile, 1-foot thick gravel LCRS, geotextile, 80-mil HDPE geomembrane, 2-feet of compacted clay, gravel trenches with 6-inch diameter pipes Side-Slope Liner System: 80-mil HDPE geomembrane, geotextile, HDPE drain net, 80-mil HDPE geomembrane, geotextile</td>
<td>Group C Solids and Group B Liquid – 39,000 cubic yards of flotation tailings from the LCRF</td>
<td>Partially Closed</td>
</tr>
</tbody>
</table>

The evaporation pond on the surface of the PWP remains active.
<table>
<thead>
<tr>
<th>WMU (Size)</th>
<th>Liner/LCRS Component 1</th>
<th>Waste Classification – Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overburden Disposal Sites - Gold Knoll (60 acres), Western (125 acres), FTR (59 acres)</td>
<td>Final Cover: 6-inch thick vegetative cover soil (k ≤ 1 x 10⁻⁵ cm/sec) Base Liner System: Unlined.</td>
<td>Group C Solid – 54 million tons of overburden soil and rock with elevated salts and selenium metals.</td>
<td>Closed with active seep water management</td>
</tr>
<tr>
<td>Skyrocket Pit (52 acres) (6,000 acre-feet)</td>
<td>Unlined.</td>
<td>Group C - This WMU receives Group C liquids from the FTR LCRS and ODSs</td>
<td>Active</td>
</tr>
<tr>
<td>North Pit (23 acres) (1,400 acre-feet)</td>
<td>Unlined</td>
<td>Group C – This WMU receives Group C liquids from Skyrocket Pit during emergency situations only.</td>
<td>Active</td>
</tr>
</tbody>
</table>

LCRS – Leachate collection and removal system
Liner systems are listed from top to bottom.

23. On 25 January 2008, the Central Valley Water Board issued Order R5-2008-0021 in which the WMUs at the facility were classified as Group B and C units. This Order continues to classify WMUs as Group B and C units in accordance with Title 27. However, the FTR liquid and ODSs that were classified as Group B units in WDR R5-2008-0021 are now classified as Group C units consistent with the WDRs prior to 2001, the Remand Order, and the 2014 BPA as detailed in Findings 11 through 18.

24. Flotation tailings solids stored in the FTR were classified as a Group C mining waste per Section 22480 of Title 27 based on a net neutralization potential of 179 tons of CaCO₃ equivalent per 1000 tons of ore, and the lack of any significant extractable substances using the deionized water waste extraction test.

25. Flotation tailings liquid in the FTR were classified and managed as a Group B mining waste, based on pre-mining data that indicated the presence and potential presence of flotation reagents or their breakdown products, some heavy metals in the flotation tailings liquid, and elevated levels of TDS. All of these conditions indicated a potential threat to groundwater and surface water quality near the FTR. Subsequent FTR analytical testing data during mine operation showed that the flotation reagents, their breakdown products, and heavy metals were never detected no longer present in the FTR liquids. The Remand Order suggested that the FTR liquids could be classified as Group C due to the lack of these constituents in the FTR liquids and the natural background TDS concentrations in the vicinity of this facility. This Order classifies the FTR liquids as Group C consistent with the Remand Order and subsequent regulatory changes by the Central Valley Water Board and the State Water Board.

[33076:5447475:1]
26. Liquid in the LCRF was previously classified as Group B mining waste per Title 27 based on expected pH and free cyanide concentrations. Leached concentrates (solids) stored in the LCRF were also classified as Group B mining waste per Title 27 based on an acid generating potential of 668 tons of CaCO3 equivalent per 1000 tons of ore.

27. Liquid stored in the PWP was previously classified as Group A mining waste based on hazardous concentrations of copper and cyanide. The PWP contains 39,000 cubic yards of Group C flotation tailings excavated from the FTR. During the summer and fall of 1999, the Discharger completed an interim closure of the PWP, which consisted of evaporation of wastewater in the PWP to approximately 8 acre-feet, solidification of this remaining brine by placing flotation tailings into the PWP, and covering the solidified brine with an impervious liner to prevent contact between rainfall. Due to the removal of salt precipitate and dilution by rainfall, the waste contained in the PWP is now considered a Group B waste instead of a Group A waste. The concentrations of key constituents in this wastewater are below the California Hazardous Waste Criteria, and therefore it is appropriate to reclassify this waste as Group B.

28. Two of the three ODS seeps contain elevated concentrations of sulfate, selenium, nitrate, and TDS relative to Skyrocket Pit as shown below that could impact groundwater and surface water quality. This Order classifies the existing and any future ODS seeps (leachate) as Group C mine waste because the Discharger will manage the site such that any groundwater degradation will remain within the 2014 BPA de-designation and variance area (Attachment C) and ODS water will not enter surface waters. However, if groundwater impacted by constituents associated with the ODSs spreads outside of the de-designation and variance area and threatens to cause measurably significant water-quality degradation, or if the Discharger cannot effectively prohibit ODS impacted water from entering surface waters and from threatening surface water beneficial uses, then the Central Valley Water Board may consider other regulatory requirements, such as reclassifying the ODSs and subjecting them to more stringent remedial requirements.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>TDS</td>
<td>mg/l</td>
<td>6,872</td>
<td>3,398</td>
<td>4,478</td>
<td>3,367</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/l</td>
<td>4,178</td>
<td>1,980</td>
<td>2,032</td>
<td>1,560</td>
</tr>
<tr>
<td>Nitrate</td>
<td>mg/l</td>
<td>9</td>
<td>12</td>
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<td>0.27</td>
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<tr>
<td>Selenium</td>
<td>ug/l</td>
<td>63</td>
<td>20</td>
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<td>4</td>
</tr>
</tbody>
</table>

28. Skyrocket Pit is a mine pit that has filled with groundwater, precipitation, and water from the FTR and ODSs. The ODS seeps contain elevated concentrations of sulfate, selenium, nitrate, and TDS relative to Skyrocket Pit (as shown below). Additional transfers of FTR LCRS and ODS seep water into Skyrocket Pit may increase the concentrations of these constituents in Skyrocket Pit. Lastly, the North Pit is currently filled only with groundwater and surface water runoff, but could receive water from Skyrocket Pit in an emergency. Considering that the only beneficial uses that could be
affected by transfers from the ODSs, Skyrocket Pit and the North Pit (should the North Pit ever be utilized as an emergency contingency) are the MUN and AGR beneficial uses, and considering that the Board has de-designated the MUN and AGR beneficial uses in the area described in Attachment C, all of the ODSs, Skyrocket Pit and the North Pit are expected to be in compliance with the Basin Plan. Therefore, the ODS seeps are appropriately classified as Group C mine waste and Skyrocket Pit and the North Pit are appropriately classified as Group C WMUs.

If monitoring conducted pursuant to this Order reveals unreasonable degradation of groundwater quality downgradient of the de-designation area (Attachment C) by constituents associated with the ODSs, Skyrocket Pit, or the North Pit, or if the Discharger cannot effectively prohibit such mining impacted water from entering surface waters except in accordance with the terms of the NPDES Permit, the Board may consider imposing other regulatory requirements, such as those that would reclassify the ODS seeps, Skyrocket Pit, and/or the North Pit and subject them to more stringent remedial requirements. Such action by the Central Valley Water Board will only be undertaken after the Discharger has been allowed to conduct the required regulatory investigation and corrective action process, and only after the Central Valley Water Board finds that the Discharger is failing to address the impacts within a reasonable period of time.

**Discharge Transfer Concentrations to Skyrocket Pit and Average Skyrocket Pit Concentrations**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Gold Knoll</th>
<th>West ODS2</th>
<th>West ODS5</th>
<th>Skyrocket Pit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDS Units mg/l</td>
<td>6,872</td>
<td>3,398</td>
<td>4,478</td>
<td>3,367</td>
</tr>
<tr>
<td>Sulfate mg/l</td>
<td>4,178</td>
<td>1,980</td>
<td>2,032</td>
<td>1,560</td>
</tr>
<tr>
<td>Nitrate mg/l</td>
<td>9</td>
<td>17</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Selenium ug/l</td>
<td>63</td>
<td>20</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Skyrocket Pit is a mine pit now filled with groundwater, precipitation, and water from the ETR and ODSs. The Discharger is authorized to continue discharging Group C ETR LCRS and ODS seep water into Skyrocket Pit, which may increase the concentrations of constituents to levels that could impact groundwater and surface water quality if a release occurred. Skyrocket Pit is determined to remain a Group C WMU because the Discharger will manage the site such that the groundwater degradation will remain within the 2014 BPA de-designation and variance area (Attachment C) and Skyrocket Pit water will not enter surface waters, other than as approved through the NPDES permit. However, if groundwater impacted by constituents associated with Skyrocket Pit spreads outside of the de-designation and variance area and threatens to cause measurably significant water quality degradation, or if the Discharger cannot effectively prohibit Skyrocket Pit impacted water from entering surface waters and from threatening surface water beneficial uses, other than as approved.
through the NPDES permit, then the Central Valley Water Board may consider other regulatory requirements, such as reclassifying Skyrocket Pit and subjecting Skyrocket Pit to more stringent remedial requirements.

The North Pit is currently filled with groundwater and surface water runoff and has not been classified as a WMU for the disposal of mining waste. The Discharger is proposing to use the North Pit only in emergency situations for contingency storage for the discharge of water transferred from Skyrocket Pit to prevent the overtopping of Skyrocket Pit as a contingency plan in an emergency situation when the capacity to discharge water cannot be discharged from Skyrocket Pit is insufficient per the NPDES permit requirements. This Order classifies the North Pit as a Group C WMU for the transfer of water from Skyrocket Pit during emergency situations only. However, if groundwater impacted by constituents associated with Skyrocket Pit spreads outside of the de-designation and variance area and threatens to cause measurably significant water quality degradation, or if the Discharger cannot effectively prohibit North Pit impacted water from entering surface waters and from threatening surface water beneficial uses after the transfer of mining wastes to the North Pit, then the Central Valley Water Board may consider reclasifying the North Pit or other regulatory requirements, and subjecting the North Pit to more stringent remedial requirements.

31. Since the previous 2008 WDRs were adopted, the Discharger has completed the following site activities:
   a. Upgraded the Gold Knoll ODS seep collection system.
   b. Began regular transfer discharge of FTR LCRS water to Skyrocket Pit to control surface seepage on the FTR.
   c. Completed Phase 1 closure of the PWP including installing the final cover and an evaporation pond.
   d. Installed and is operating an approved diffuser discharge system for discharge of water from Skyrocket Pit Lake to Littlejohns Creek in conformance with the NPDES permit for the Site.

SITE DESCRIPTION

32. The facility is located in Salt Spring Valley in the low rolling Sierra Nevada Foothill terrain. The valley and the low mountain ranges are trending northwest-southeast. Several surface water bodies are located within 1 mile of the facility. Littlejohns Creek and Underwood Creek originate in the hills to the east and flow through the facility as shown on Attachment B. These creeks have been diverted around Skyrocket Pit and through a diversion channel east of Skyrocket Pit. Gold Knoll Creek originates in the eastern mountain range, and flows through the southern end of the facility to drain into Littlejohns Creek. Clover Creek trends northwest-southwest along and through the western edge of the facility, and runs through a small reservoir called Clover Reservoir which is also...
shown on Attachment B. All creeks drain into the Flowers Reservoir located about a mile south from the southwestern edge of the facility. Salt Spring Valley Reservoir is located to the northwest.

33. Land uses and planned land uses within one mile of the facility, based on the Calaveras County General Plan Land Use Designations map, include agriculture preserve and future single family residential (5 acres minimum) to the north, future single family residential (5 acres minimum) to the south, agriculture preserve and future single family residential (5 acres minimum) to the east, and agriculture preserve and future single family residential (5 acres minimum) to the west.

34. There are 21 municipal, domestic, industrial, or agricultural groundwater supply wells that have been identified within one mile of the facility. Three of these 21 wells have been characterized as salt water bearing wells.

35. Royal Mountain King Mine is located in the western block of the Sierra Nevada foothills metamorphic belt. The gold deposit is hosted in Jurassic metasedimentary and metavolcanic rocks along a thrust fault. Geologic formations and faults at the facility are generally trending northwest-southeast. The generalized geology presented on Attachment D shows a greenstone belt on the east side of the facility, a fault zone that runs through the middle of the facility, and a phyllite zone on the west side of the facility. The greenstone belongs to the metavolcanic Copper Hill Volcanics, whereas Salt Springs Slate represents metamorphosed deep ocean deposits (phyllite). The fault zone is a lithologically mixed tectonic melange zone.

36. The Bear Mountains Fault Zone, consisting of the on Hodson Fault (west) and Littlejohns Fault (east) and related structures, passes through the facility and trends northwest-southeast. These faults generally separate the greenstone/greenschist rocks from the phyllites, creating a lithologically mixed zone in between. There has been no documented Holocene fault movement in the area. The fault zone includes mineralized rock that contains gold (as well as other minerals) and also sulfides that when oxidized, result in elevated dissolved TDS and sulfate concentrations in water.

37. Two general soil mapping units cover the site, based on the USDA-NCRS Soil Web map: Rock Outcrop-Henneke-Delpiedra, and Whiterock-Rock Outcrop-Auburn. Prevalent soil types include Argonaut (Mollic Haploxeralf), Auburn (Lithic Haploxerept), Henneke (Lithic Argixeroll), (and Whiterock (Lithic Xerorthent). These soils are classified as silts and clayey silts with some sand and gravel. The soils are generally well to moderately well drained.

38. The different rock types associated with the different fault zones affect the water quality in these areas. For example, greenstone rocks have high magnesium and bicarbonate ratios, whereas phyllites show high sodium and chloride ratios. As noted by the name Salt Spring Valley, various natural salt springs associated with phyllite zone have been documented in this area and the presence of three naturally salt bearing wells within 1 mile of the facility indicates the presence of natural salty groundwater.
Large variability in water quality from one side of the faults to the other is associated with varying rock types. Before mining began in 1989, groundwater and surface water quality varied widely across the site. Good quality water (defined as “below all beneficial use criteria”) to poor quality water was found west of Hodson Fault. To the east of the Hodson and Littlejohns Faults, water is of good quality; and between the faults groundwater varied from good to fair quality. Because there is a large variation in natural water quality, water quality evaluations from each well and surface water monitoring location are conducted relative to the geologic (rock type) position of the sampling point. Most of the groundwater and surface water comparisons are from one data period to another, showing change over time. Comparisons are made between pre-mining data (or early mining data) versus sampling results after mining up to present day. Because of the naturally varying water quality, “background” at most sampling points is considered to be pre-mining data.

Hydraulic conductivity tests show the phyllite rocks, generally west of the fault zone, have low hydraulic conductivity ranging from $2.3 \times 10^{-4}$ to $3.1 \times 10^{-7}$ centimeters per second (cm/s). The measured hydraulic conductivities of the fault zone bedrock underlying the WMUs in the fault zone range from $1.2 \times 10^{-3}$ to $9.7 \times 10^{-4}$ cm/s. The two measured hydraulic conductivities of bedrock within the greenstone area east of the fault zone are $6.4 \times 10^{-4}$ and $2.5 \times 10^{-8}$ cm/s.

Based on a site-specific seismic analysis, the controlling maximum credible earthquake (MCE) on the closest active fault is a moment of magnitude (Mw) event 8.0 along the San Andreas and Hayward faults approximately 87 miles from the facility. It is estimated that a MCE event would produce a peak ground acceleration of 0.17 g at the facility with a return period of 2,475 years.

The facility receives an average of 23.7 inches of precipitation per year as measured at the RMKM on-site Station. The mean pan evaporation is 76.5 inches per year as measured at the RMKM on-site Station. The 100-year wet season was calculated to be 58.0 inches based on data from the RMKM on-site Station.

The 100-year, 24-hour precipitation event for the facility is estimated to be 5.1 inches, based on the NOAA website, point precipitation frequency estimates.

The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency’s (FEMA) Flood Insurance Rate Map, Community-Panel Numbers 06009C0550E and 06009C0650E.

**SURFACE WATER CONDITIONS**

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

Surface water at the site is drained by Littlejohns Creek, Underwood Creek, and the most northeasterly tributary of Clover Creek. These surface waters drain to Flowers...
The designated beneficial uses of the San Joaquin River, as specified in the Basin Plan, are Municipal and Domestic Supply, Industrial Process Supply, Hydropower Generation; Agricultural Supply, Water Contact Recreation; Non-contact Water Recreation; Warm Freshwater Habitat; Cold Freshwater Habitat; Spawning, Reproduction, and/or Early Development; and Wildlife Habitat. The beneficial uses of the Sacramento-San Joaquin Delta are: Municipal and Domestic Supply; Agricultural Supply; Industrial Process Supply; Industrial Service Supply; Water Contact Recreation; Non-contact Water Recreation; Warm Freshwater Habitat; Cold Freshwater Habitat; Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development; Wildlife Habitat; and Navigation.

47.45 Streams flowing through the property are intermittent to seasonal streams. Most flow occurs during or just after rainfall. During the late spring, summer, and fall limited stream flow occurs. Year round flow has been recorded in Littlejohns Diversion through sampling point SWM-10 to Flowers Reservoir. No flow occurs upstream of the facility from late spring through fall.

48.46 Prior to mining, upgradient surface water quality east of the fault zone was generally good with TDS concentrations ranging from 50 to 265 mg/L at SWM-1 and SWM-4. SWM-1 and SWM-4 are located on Littlejohns Creek and Underwood Creek, respectively. These TDS concentrations are well below the drinking water standard. There was no detectable arsenic, and very low to non-detect concentrations of various trace metals.

49.47 Prior to mining, surface water quality downstream and west of the fault zone varied greatly, depending on the sampling location and flow conditions at the time of flow, with better water quality during higher flow conditions.

50.48 SWM-2 is directly downgradient of the Skyrocket Pit on Littlejohns Creek. Pre-mining sampling performed at this location in 1987 and 1988 represents sampling of Littlejohns Creek during low rainfall seasons, and consequently concentrations of TDS and other constituents may have been higher than in a normal wet season. TDS concentrations reported ranged from 865 to 15,150 mg/L and metals concentrations were low. Sodium was the predominant cation, while chloride and sulfate were the predominant anions, which is typical of groundwater in the fault zone and phyllite, suggesting that surface water quality can be also affected by rock type. Concentrations of sodium and chloride reported during this period were higher than sulfate, calcium and magnesium, which is typical of water associated with the phyllites. Because the next sampling event after 1988 was after Littlejohns Creek was diverted around Skyrocket Pit, no "normal" water year pre-mining samples were collected from Littlejohns Creek.

51.49 SWM-10 receives flows from the diverted Littlejohns and Underwood Creeks and a small drainage north of Gold Knoll ODS. The flows and constituent concentrations have changed since mining began. Based on monthly sampling results from 1990 to 1997,
flows only occurred at SWM-10 from approximately December to May of each year during the period of mining (when the groundwater levels were lowered by dewatering of the pits). In 1990, when SWM-10 was first being sampled during pit dewatering before any significant surface discharges from the WMUs occurred, the TDS concentrations ranged from 52 to 363 mg/L and metal concentrations were low. It appears no significant dry season surface flow occurred in Littlejohns Creek Diversion until June 1998, when the Skyrocket Pit water level (after cessation of pit dewatering) reached 953 feet above MSL. According to the record, the Littlejohns Creek Diversion at SWM-10 flows increased in 2000 and the constituent concentrations increased. TDS averaged approximately 1,500 mg/L from 2000 to 2015, with a maximum concentration of 4,090 mg/L in 2009. Although concentrations have shown increasing trends in SWM-10, the concentrations are within the range of pre-mining concentrations recorded at SWM-2 and it is unclear if increasing concentrations could be attributed to impacts from WMUs or spring water that previously flowed from the mineralized fault zone where Skyrocket Pit is located before it was mined and dewatered.

The data shows that mining activities have altered surface water; however, the extent of the impact compared to pre-mining conditions cannot be conclusively determined due to the lack of sufficient pre-mining data, as concluded in the Remand Order. However, as mentioned in finding number 50, the concentrations remain within the range of pre-mining concentrations recorded at SWM-2. As concluded in the Remand Order, the data shows that mining activities have altered surface water; however, the extent of the impact compared to pre-mining conditions cannot be conclusively determined due to the lack of sufficient pre-mining data. The concentration of salts in Littlejohns Creek increased due to the return of seeps and springs located adjacent to the WMUs due to the water table being restored after Skyrocket Pit dewatering was stopped. The Discharger collects the seeps and springs that are associated with the WMUs and stores the liquid in Skyrocket Pit to mitigate surface water impacts. To control the volume of water in Skyrocket Pit, water level is controlled by discharging under the terms of a NPDES Permit during the winter months when flow in Littlejohns Creek is high. The data shows that mining activities have altered surface water; however, the extent of the impact compared to pre-mining conditions cannot be conclusively determined due to the lack of sufficient pre-mining data, as concluded in the Remand Order. The major issue is storage of excess water that has created year round flows in the previously intermittent creek. In the winter months, dilution occurs which lowers the salts and metals concentration in surface water. In the summer months, all the flow coming from the mine site is collected in Littlejohns Creek.

This Order requires the Discharger to continue to capture all seeps and springs that are associated with flows from the WMUs. These seeps and springs are to be captured and managed so they are no longer a threat to water quality.

GROUNDWATER CONDITIONS

Groundwater generally flows to the south-southeast, along the topographic slope and the predominant fault and fracture direction. Cross faulting also occurs in the area.
allowing ground water movement to the southwest. The June 2015 groundwater contours are shown on Attachment E.

56. As presented in Findings 38 and 39, the facility contains three distinct geology-related groundwater zones, each of which is separated by faults. Attachment D shows the fault zones. East of the Littlejohns Fault, the groundwater is primarily in a greenstone formation. Between the Littlejohns Fault and the Hodson Fault to the west, groundwater is in a mixture of greenstone and phyllite and the mineralization that occurs in this area. West of the Hodson Fault, groundwater is primarily in a phyllite formation. The following findings describe the groundwater geochemical differences between these three zones.

57. Wells constructed within the greenstone include: PZ-1, GWM-1, GWM-2, GWM-11, GWM-18/30, GWM-26, GWM-33, GWM-35A/B, GWM-36A/B, and GWM-37. Well logs from these individual wells show that they are drilled through greenstone for the entire length of the gravel pack and screen interval. Groundwater chemistry associated with the greenstone indicates the anions are generally higher in bicarbonate relative to sulfate and chloride. Magnesium and calcium are the major cations, with sodium being relatively insignificant.

58. Wells constructed within the phyllite include: GWM-10, GWM-19, GWM-20, GWM-31, and GWM-32. The well logs from these individual wells show that they are drilled through phyllite for the entire length of the gravel pack and screen interval. Groundwater chemistry associated with the phyllites is generally high in sodium, sulfate, and chloride when compared to bicarbonate, calcium and magnesium.

59. Wells constructed between the Hodson and Littlejohns Faults generally have a mixture of phyllite and greenstone in the borehole. The monitoring wells in this area include: GWM-3, GWM-4, GWM-6, GWM-15, GWM-16, and GWM-25. Again, the well rock type is based on well logs from these individual wells, which shows that they are drilled through greenstone and phyllite for the entire gravel pack and screen interval. Groundwater chemistry associated with these wells is generally high in calcium when compared to sodium. Bicarbonate is the dominant anion.

60. The following table shows the groundwater quality from the pre-mining period (i.e., years 1987 through 1989). The data shown is the maximum, minimum, and average concentration for the wells in each area, which is represented by its geologic location. The following wells are used for each geologic area: Greenstone wells are GWM-1, GWM-2, GWM-11, GWM-18/30, and GWM-26; Phyllite wells are GWM-10, GWM-19 and GWM-20; and Fault zone wells are GWM-3, GWM-4, GWM-6, GWM-15, GWM-16 and GWM-25.

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Units</th>
<th>Greenstone Wells</th>
<th>Phyllite Wells</th>
<th>Fault Zones Wells</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td>Avg</td>
<td>Min</td>
</tr>
<tr>
<td>pH</td>
<td>number</td>
<td>7.1</td>
<td>8.0</td>
<td>7.6</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>umhos/cm</td>
<td>220</td>
<td>640</td>
<td>385</td>
</tr>
</tbody>
</table>
It is noted that groundwater concentrations within the phyllite area are highly variable. For example, the pre-mining phyllite monitoring wells in the above table have a TDS average concentration of 7,654 mg/l; however, monitoring well GWM-32, a phyllite well just west of two of the phyllite pre-mining wells, had a TDS concentration in 2015 of 402 mg/l.

Upgradient groundwater quality on the eastern side of RMKM is not well known, particularly east of the FTR ODS near Littlejohns and Underwood Creeks.

Groundwater has been affected by the mining operations. Increases in concentrations of TDS, sodium, calcium, bicarbonate, sulfate, nitrate, selenium, and arsenic have been observed in groundwater wells throughout the site. The Table below shows concentrations of TDS and sulfate from wells GWM-25, GWM-5, GWM-2, GWM-30, GWM-12, GWM-21, GWM-11, GWM-34, and PZ-4. The table shows that at some locations TDS and sulfate have increased by 2 to 60 times when compared to pre-mining or first monitored concentrations.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>GWM-25</td>
<td>TDS (mg/L)</td>
<td>678</td>
<td>1,477</td>
</tr>
<tr>
<td></td>
<td>Sulfate (mg/L)</td>
<td>122</td>
<td>667</td>
</tr>
<tr>
<td>GWM-5</td>
<td>TDS (mg/L)</td>
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<td>514</td>
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<td></td>
<td>Sulfate (mg/L)</td>
<td>34</td>
<td>264</td>
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<td>TDS (mg/L)</td>
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<td>Sulfate (mg/L)</td>
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<td>GWM-30</td>
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<td>Sulfate (mg/L)</td>
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<td>GWM-12</td>
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<td></td>
<td>Sulfate (mg/L)</td>
<td>452</td>
<td>1,820</td>
</tr>
<tr>
<td>GWM-21</td>
<td>TDS (mg/L)</td>
<td>1,667</td>
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<tr>
<td></td>
<td>Sulfate (mg/L)</td>
<td>288</td>
<td>2,837</td>
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</table>
The data shows that mining activities have impacted groundwater; however, the localized impacts are within the BPA de-designation and variance area. Corrective action is not required when groundwater impacts remain within the BPA de-designation and variance area. If groundwater monitoring shows that measurably significant groundwater impacts from Meridian’s mining units are migrating downgradient outside the BPA de-designation and variance area, the Discharger shall follow the procedures detailed in the SPRR Section I Standard Monitoring Provisions and Section J Responding to a Release.

**GROUNDWATER AND SURFACE WATER MONITORING**

The existing groundwater monitoring network for the WMUs consists of background monitoring wells (GWM-1, GWM-3), detection monitoring wells (GWM-2, GWM-9, GWM-10, GWM-11, GWM-12, GWM-15, GWM-16, GWM-21, GWM-25, GWM-26, GWM-30R, GWM-31, GWM-32, GWM-34, GWM-37) and piezometers (FPZ-3, FPZ-4, FPZ-5, FPZ-6, FPZ-7A, PZ-1, and PZ-4) as shown in Attachment F and detailed in MRP R5-2016-XXXX. Groundwater seeps that once were or are now also monitored include Gold Knoll Seep, West ODS 1, West ODS 2, West ODS 3, West ODS 4 and West ODS 5 as shown in Attachment F and detailed in MRP R5-2016-XXXX. Attachment E also shows historical groundwater monitoring locations.

At the time this Order was adopted, the Discharger’s detection monitoring program for groundwater at the facility satisfied the requirements contained in Title 27.

The facility is exempt from unsaturated zone monitoring pursuant to Title 27, section 20415(d)(5)) because the facility received all permits necessary for construction and operation before 1991 and unsaturated zone monitoring would not provide meaningful data at this stage of closure.

The existing surface water monitoring network consists of eight surface water monitoring points (SWM-1, SWM-2, SWM-6, SWM-8, SWM-9, SWM-10, SWM-13, SWM-...
The Discharger submitted a Water Quality Protection Standard (WQPS) report in Appendix K of the Report of Waste Discharge dated July 2015 proposing statistical data analysis methods to calculate concentration limits for each monitored constituent in accordance with Title 27. The WQPS report proposed to use intrawell data analysis to calculate tolerance limits for the monitored constituents. The WQPS and approved data evaluation methods are included in MRP R5-2016-XXXX.

The historic groundwater and surface water monitoring program described above has been narrowed and targeted to address the compliance requirements of these Closure WDRs in light of the BPA and the monitoring results during the lengthy monitoring period for this facility. Among other things, the monitoring program contains certain wells which are labeled compliance wells, which are the only wells which will be utilized to determine if a measurably significant increase in a constituent has occurred that triggers the Title 27 investigative and corrective action process. Other wells are included for informational purposes.

DESIGN OF WASTE MANAGEMENT UNIT(S)

Water Code section 13360(a)(1) allows the Central Valley Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.

Title 27 section 20080(b) allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative in accordance with Title 27 section 20080(c)(1) or (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in §20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative(s) provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27 section 20080(b)(2) of Title 27 and that any proposed engineered alternative is consistent with the performance goal in accordance with Title 27 sections 20240, 20250, and 20310.

Construction will proceed only after all applicable construction quality assurance plans have been approved by Executive Officer.

Flotation Tailings Reservoir (FTR)

The FTR (also known as WMU #1) was constructed in an intermittent stream valley northeast of North Pit. The FTR was designed utilizing naturally occurring clay and fine-grained tailings as a bottom liner system. The southern portion of the FTR bottom liner...
system was constructed with 2-feet of clay with a maximum hydraulic conductivity of 8x10^{-7} cm/s. The northern portion of the FTR bottom liner system was constructed with 1-foot of clay with a maximum hydraulic conductivity of 8x10^{-8} cm/s.

74.72 Flotation tailings liquid within the FTR is collected by a LCRS. The LCRS overlies the bottom clay layer and is comprised of a network of perforated pipes in drain rock that is intended to minimize the hydraulic head on the outer liner. It was constructed with 4-inch diameter perforated drain pipe covered with crushed rock sized between 0.5 and 6-inches.

75.73 Above the LCRS the fines grained tailings consolidate and act as another barrier for liquid migration with a measured permeability of $\leq 1 \times 10^{-5}$ cm/sec. The FTR contains approximately 6.5 million tons of flotation tailings.

76.74 Groundwater and spring water beneath the FTR is managed by a series of drains described as Spine Drain 1, Spine Drain 2, and the Spring Drain. These drains were utilized during mining operations to maintain separation of groundwater from the outer clay liner. The Spine Drains consist of a network of interconnected trenches below the clay liner that contain perforated plastic pipe and gravel. The Spring Drain consists of a spring collection sump with a pipeline in a gravel filled trench conveying spring flow to the FTR drain collection sump. The FTR also has a foundation drain used to drain water from the foundation of the embankment. The foundation drain consists of vertical boreholes/wells constructed in the embankment foundation trench fitted with pipes that convey the collected water to the FTR drain collection sump.

77.75 The spine, spring, and foundation drains under the FTR were closed in October 1998 as a test to determine the effects of blocking the FTR drains on 1) groundwater conditions, 2) containment of the FTR and 3) Skyrocket Pit water level. According to the 08 July 2015 Report of Waste Discharge and the test results submitted periodically to the Water Board, closing the drains resulted in an inward gradient across the outer liner of the FTR (i.e., groundwater was flowing into the FTR and reporting to the LCRS drain). This Order allows the permanent closure of the spine, spring, and foundation drains underlying the FTR following written Executive Officer approval. See the Facility Specification C.5 for work plan submittal requirements.

78.76 Previous WDRs required leachate from the FTR be collected and transferred to Skyrocket Pit. In March 2003, the Discharger closed the LCRS to control the water balance in Skyrocket Pit. The LCRS was reopened during the third quarter of 2008 to remediate a surface seep that developed at the FTR because the FTR water levels had risen too high. This Order allows the Discharger to keep the LCRS drains closed as long as the liquids and groundwater does not seep to the surface as detailed in the Facility Specifications and monitored as specified in MRP R5-2016-XXXX.

79.77 The FTR was closed as a Group C mining waste management unit in 1997. Closure consisted of the following:

- Regrading the surface to a minimum slope of one percent;
• Placement of six inches of soil over the tailings, followed by revegetation;
• Construction of ditches along the eastern edge of the FTR;
• Construction of a permanent spillway through the embankment and swales connecting to the spillway to allow free drainage of surface water from the FTR;
• Decertification of the dam as a jurisdictional structure by the Department of Water Resources’ Division of Dam Safety; and
• Continued discharge of leachate from the FTR’s Leachate Collection Recovery System (LCRS) to Skyrocket Pit.

80.78. A stability analysis was completed for the FTR Dam on 8 March 2016. The stability analysis analyzes the FTR Dam under both static and dynamic conditions. The static stability analysis indicates a factor of safety of 1.52, which is greater than the factor of safety of 1.5 required by Title 27. The dynamic (seismic) stability was evaluated using a pseudo-static analysis with a peak ground acceleration of 0.17 g for the MCE. The pseudo-static analysis shows that the FTR Dam does not undergo deformation under dynamic conditions.

Leached Concentrate Residue Facility (WMU #2)

81.79. The 18-acre LCRF is divided into two portions, which together comprise the Group B waste management unit. Approximately 6 acres of the northern part of the facility encompasses the lined heap leach pile. The remaining 12-acre southern portion, separated by a liner system, impounds the leached concentrate residue (LCR).

82.80. The LCRF contains 186,400 tons of leached concentrate residue. The LCRF is lined with a two foot thick clay layer installed to a hydraulic conductivity of less than $1 \times 10^{-6}$ cm/sec; a 40-mil Very Low Density Polyethylene (VLDPE) liner; and geotextile layer as a filter layer over the underlying clay.

83.81. Liquids generated from the LCRF are collected by a LCRS system constructed with a one-foot thick layer of gravel between two geotextiles and a network of perforated pipes. The LCRF LCRS drains to the lower Process Water Pond (PWP) and is evaporated.

84.82. Since early 2007, leachate flowed out of the unit and into the LCRS at a rate of approximately 0.03 gpm, as reported by the Site Supervisor. This value falls within the range of levels defined as negligible. The most recent ROWD proposes to abandon the LCRS by pumping grout in the LCRS pipe system. However, plugging of the LCRS is not acceptable since the drainage will back-up into the waste and cause a head on the liner. This will increase the leakage rate from the unit, causing an impact or threatening to impact groundwater and surface water. Therefore, this Order requires that the Discharger continue to collect and properly dispose of leachate collected in the LCRS.

85.83. The Discharger was granted final closure for the LCRF in a letter dated 28 July 2005. Closure consists of (from top to bottom) a 6-inch thick vegetative soil cover, a one-foot thick FTR tailings layer, a geocomposite drainage layer, and a foundation layer. Surface
water runoff drains from northeast to southwest to a concrete-lined ditch along the western perimeter of the LCRF.

**Process Water Pond (WMU #3)**

86.84. The 8-acre PWP base liner system (from bottom to top) consists of a two foot thick layer of clay, a 150-mil geotextile, an 80-mil HDPE geomembrane, a 150-mil geotextile, a one foot thick layer of crushed and washed rock, a 150-mil geotextile, and an 80-mil HDPE geomembrane.

87.85. The sideslope liner system (from bottom to top) includes a 150-mil geotextile, an 80-mil HDPE geomembrane, and HDPE drain net, and an 80-mil HDPE geomembrane.

88.86. Liquids generated from the PWP are collected by a LCRS system constructed with a one-foot thick layer of gravel between two geotextiles and a network of perforated pipes.

89.87. The in-place closure of the PWP was constructed in 2008 as follows (from top to bottom):
- A 1.5-ft thick erosion/vegetative layer that sustains vegetation and that will be hydroseded with the seed mix approved for RMK;
- A geocomposite drainage layer;
- A 60-mil high-density polyethylene (HDPE) geomembrane that will serve as the low-hydraulic conductivity layer in accordance with Title 27, Section 21090(a)(2);
- A foundation layer at least 2-ft thick; and
- Soil fill as needed to reach the elevation of the base grading plan (i.e. the elevation of the bottom of the foundation layer)

90.88. During construction of the PWP final cover, a temporary 1.3-acre evaporation pond was constructed on top of the PWP lined with a 60-mil HDPE geomembrane that is separate from the PWP cover HDPE geomembrane. The temporary evaporation pond was constructed for management of the remaining liquid in the PWP waste mass. The liquid was removed using a sump system completed to the bottom of the encapsulated waste. The water was pumped to the evaporation pond where it evaporated. Water removal was terminated when the sump was not yielding enough water to allow removal.

91.89. Approximately 32,000 gallons of water were removed from the PWP during 2010. Water removal was stopped when the removal rate dropped below 0.1 gpm. The removal of the small amount of remaining water from the PWP waste solids is much slower. The most recent ROWD proposes to abandon the LCRS by pumping grout in the LCRS pipe system. However, plugging of the LCRS is not acceptable since the drainage will back-up into the waste and cause a head on the liner. This will increase the leakage rate from the unit, causing an impact or threatening to impact groundwater and surface water. Therefore, this Order requires that the Discharger continue to collect and properly dispose of leachate collected in the LCRS.
With the water not being removable at a significant rate and with infiltration prevented by the top cover, the potential for future accumulation or discharge of the liquids is negligible. Additionally, the liner system of the PWP is still in place and has been effective at containment. Thus, MBC recommends final closure of the PWP with the remaining liquid/soil matrix in place within the liner and cover containment systems.

The most recent ROWD proposes to remove the 1.3 acre evaporation pond by:

a. Cutting the geomembrane along the edge of the anchor trench along the crest of the pond slope.
b. Folding the geomembrane on the slope of the pond back over the bottom of the pond.
c. Removing the geomembrane from the anchor trench and laying over the geomembrane at the bottom of the pond.
d. Placing 1.5 feet of soil cover over the geosynthetics.

This Order approves the closure of the PWP evaporation pond. Closure construction of the PWP evaporation pond will proceed only after all applicable design drawings and construction quality assurance plans have been approved by Executive Officer. Following removal of the PWP evaporation pond, remaining liquids collected from the PWP and LCRF LCRSs will need to be disposed of at an appropriate disposal facility. On-site disposal of these liquids are prohibited with the exception of within the PWP evaporation pond.

Overburden Disposal Units (General)

During operation of the mine, approximately 54 million tons of overburden were removed from the three pits and disposed in either the: (1) West ODS, (2) FTR ODS, or (3) Gold Knoll ODS.

a. The FTR ODS is on the facility’s eastern side with Littlejohns Creek flowing along its southeastern flank and the FTR on its northwestern side. This ODS received overburden waste rock from Skyrocket Pit and North Pit.
b. The Western ODS is on western edge of the facility, west of Skyrocket Pit, southwest of North Pit and north of Littlejohns Creek. This ODS covers a surface area of approximately 125 acres. A north-south canyon was filled in with overburden from North and Skyrocket Pits.
c. The Gold Knoll ODS is located in an area where mining initially occurred. Gold Knoll pit was filled with overburden from Skyrocket Pit. In addition, some surrounding land was also covered by overburden until the disposal area covered approximately 60 acres. The former pit filled with groundwater and storm water that came in direct contact with the waste rock.

Reclamation of each ODS was conducted during the mine operation period. The slopes were graded to natural looking slopes ranging from 2:1 to 3:1 (horizontal:vertical), covered with 6 inches of topsoil, fertilized and revegetated, and trees and shrubs were
planted in irrigated trenches. In 1998, the covers of the West and Gold Knoll ODSs were enhanced by filling in swales, regrading the flat areas to a minimum two percent slope, placing a cover consisting of a minimum of four inches of compacted clayey topsoil over selected areas, replacing the topsoil layer, and revegetating. It is noted that the enhanced covers do not extend over the entire ODSs.

97.95 The Discharger conducted infiltration/permeability testing on the West and Gold Knoll ODSs in February 2000 in the areas where cover enhancements were performed. The testing procedure was a modified procedure developed by the U.S. Bureau of Reclamation. The Discharger concluded that the enhanced cover material has hydraulic conductivity about $1 \times 10^{-5}$ cm/sec.

98.96 A stability analysis was completed for the FTR, West, and Gold Knoll ODSs on 8 March 2016. The stability analysis analyzes the FTR, West, and Gold Knoll ODSs under both static and dynamic conditions. The static stability analysis indicates a minimum factor of safety for each ODS of 1.84, 1.83, and 2.45, respectively, which is greater than the factor of safety of 1.5 required by Title 27. The dynamic (seismic) stability was evaluated using a pseudo-static analysis with a peak ground acceleration of 0.17 g for the MCE. The pseudo-static analysis shows that the FTR, West, and Gold Knoll ODSs do not undergo deformation under dynamic conditions.

99.97 Surface water and groundwater has been impacted by water percolating through the ODS waste. The Discharger submitted an Alternatives Analysis Report that indicated the most feasible approach to closure of the ODSs is to collect the captured flows at the toes of the ODSs, transfer these to Skyrocket Pit for seasonal storage, and release flows from the pit during high runoff periods into Littlejohns Creek under the NPDES permit for the Site. This Order requires ODS seeps to be collected to prevent mining impacted water from reaching waters of the US.

100.98 The Remand Order determined that placing a Title 27 prescriptive cover on the ODSs would not be effective in preventing groundwater from coming in contact with waste. This conclusion was based on the fact that a cover would not prevent any lateral or upward movement of groundwater through the waste. The Remand Order also stated that a cover preventing storm water from percolating through the waste would not substantially reduce the flow of the discharge or improve the water quality. This Order classifies the ODSs as closed with a minimum 6-inch thick, $1 \times 10^{-5}$ cm/sec vegetative soil layer and the capture of ODSs seeps.

Skyrocket Pit

101.99 Skyrocket Pit was excavated during mining and allowed to fill with water when mining ceased. From September 1993, when the mining of Skyrocket Pit ceased, until April 1999, Skyrocket Pit was a hydraulic sink, drawing in poor quality groundwater from the west, north and south and good quality water from the east.
Skyrocket Pit is classified as a Group C mine WMU to allow the transfer of Group C water from the FTR LCRS and ODSs.

A Water Balance Model was prepared for Skyrocket Pit in the July 2015 ROWD. The Water Balance Model shows that the Skyrocket Pit water levels will not rise above 970 feet amsl. With the Skyrocket Dam, the spill elevation of Skyrocket Pit is 973 ft amsl. This Order requires Skyrocket Pit to maintain capacity for the 100-yr, 24-hr storm and 2-feet of freeboard. An updated Water Balance Model is required, per Provision H.15

A stability analysis was completed for the Skyrocket Pit Dam on 24 September 1996. The stability analysis analyzes the Skyrocket Pit Dam upstream and downstream slopes under varying saturation conditions for both static and dynamic conditions. The static stability analysis indicates a minimum factor of safety of 1.64, which is greater than the factor of safety of 1.5 required by Title 27. The dynamic (seismic) stability was evaluated using a pseudo-static analysis with a peak ground acceleration of 0.15 g. The pseudo-static analysis factor of safety was calculated to be 1.16, which is greater than the minimum factor of safety of 1.15 for dams established by Seed (1979, Giotchnique 29, No.3, 215-163)

North Pit

The North Pit was excavated during mining and allowed to fill with water when mining ceased. Historically, the North Pit has not been classified as a WMU and, therefore, is primarily filled with groundwater and surface water. The North Pit has reached an equilibrium level of approximately 1030 feet MSL. The spill elevation of North Pit is 1070 ft amsl. North Pit is only being classified as a WMU based on its future potential contingent use as a unit to which Skyrocket Pit water waste could be transferred in an emergency situation. Accordingly, unless and until that event occurs, the only compliance sampling required for North Pit is an annual grab sample for the parameters set forth in the Monitoring and Reporting Program. The Compliance Point for North Pit to determine containment will be GWM-30R. There will not be any requirement to “close” North Pit under Title 27 unless and until it receive wastes from Skyrocket Pit.

Closure and post-closure maintenance

The Discharger included closure and post-closure monitoring and maintenance information in the July 2015 ROWD. As detailed in the Provisions, the Discharger shall submit a Final Closure and Post-closure Maintenance Plan for closure and post-closure maintenance of the WMUs. The plan shall include inspection, maintenance, and monitoring of the facility during the post-closure maintenance period, and include a post-closure maintenance cost estimate for the entire facility. Inspection and maintenance will include the condition of the final cover, drainage features, LCRS, groundwater monitoring wells, access roads, and site security. The plan will be implemented for a minimum period of 30 years or until the waste no longer poses a threat to public health and safety and the environment, whichever is greater.
FINANCIAL ASSURANCES

105. Title 27 section 22212 requires the Discharger to establish financial assurances for post-closure maintenance for 30 years. A cost estimate for post-closure maintenance was included in the ROWD for 20 years. The Financial Assurances F.1 and Provision H.15.E of this Order requires the Discharger to submit an updated cost estimate for post-closure maintenance for the 30 year post-closure period. This Order also requires annual adjustments to account for inflation by 1 June of each year.

106. Title 27 section 22222 requires the Discharger to establish financial assurances for corrective action of a known or reasonably foreseeable release. A cost estimate for corrective action is not included in the ROWD. The Financial Assurances F.2 and Provision H.15.F of this Order requires the Discharger to submit an estimate for corrective action costs. This Order also requires annual adjustments to account for inflation by 1 June of each year.

CEQA AND OTHER CONSIDERATIONS

107. In January 1988, the Calaveras County Planning Commission adopted a Final Environmental Impact Report (EIR), in accordance with the California Environmental Quality Act (CEQA)(Pub. Resources Code, § 21000 et seq.). Calaveras County has approved a general plan of development for the project and has issued a Use Permit for the project.

108. Subsequent to the Planning Commission’s adoption of the EIR, the Central Valley Water Board adopted a negative declaration for the treatment and transfer of LCRF/PWP to FTR and the transfer of FTR fluids to the Skyrocket Pit on 4 August 1994.

109. This Order establishes closure requirements for the RMKM Site in order to ensure the protection of waters of the state. The issuance of this Order is exempt from the provisions of CEQA in accordance with California Code of Regulations, title 14, section 15301, which exempts the “operation, repair, maintenance, [and] permitting … of existing public or private structures, facilities, mechanical equipment, or topographical features” from environmental review. This action may also be considered exempt because it is an action by a regulatory agency for the protection of natural resources (Cal. Code Regs., tit. 14, § 15307.) and an action by a regulatory agency for the protection of the environment (Cal. Code Regs., tit. 14, § 15308.).

110. RMKM consists of numerous WMUs, potential discharge points, and associated monitoring locations. Although a majority of the site is closed, mine impacted water is actively collected and managed through storage at Skyrocket Pit and discharge via a separate NPDES permit. Based on the threat and complexity of the discharge, the facility is determined to be classified 2-A as defined below:

a. Category 2 threat to water quality, defined as, “Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term
violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."

b. Category A complexity, defined as, “Any discharge or toxic wastes; any small volume discharge containing toxic waste; any facility having numerous discharge points and groundwater monitoring; or any Class 1 waste management unit.”

113.111. State Water Board Resolution No. 68-16 (Antidegradation Policy) prohibits the Central Valley Water Board from authorizing the degradation of waters of the state unless it has been shown that:

a. The degradation is consistent with the maximum benefit to the people of the state;

b. The degradation will not unreasonably affect present and anticipated future beneficial uses;

c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and

d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.

Though the evidence in the Board’s files indicates that groundwater in the areas that underlie the RMKM Site is of generally poor quality, pockets of groundwater within these areas both inside and outside of the de-designation and variance area may nonetheless qualify as high-quality waters under the definition articulated in the Antidegradation Policy. Furthermore, though this Order largely contains provisions designed to restrict degradation by waste constituents associated with the RMKM, minor amounts of localized degradation, albeit at levels that do not threaten to impact beneficial uses, may nonetheless occur pursuant to this Order.

114.112. The discharges regulated by this Order are fully consistent with the Antidegradation Policy because:

a. This Order implements a groundwater management strategy that focuses on preventing groundwater impacts from mining from causing downgradient impacts spreading and that represents a reasonable expenditure of resources, which inhere to the maximum benefit of the people of the state, given the fact that MBC will still be required to protect groundwaters and surface waters that are not de-designated;

b. Following the Central Valley Water Board’s adoption of the BPA, portions of the groundwater underlying the RMKM Site is not designated as supporting the MUN and ARG beneficial uses, and therefore this Order is fully protective of all present and anticipated future beneficial uses;

c. Any degradation that may occur pursuant to this Order will not result in water quality less than that prescribed in any state or regional policies, including the Sources of Drinking Water Policy, as amended; and

d. As evidenced by the discussions in the Remand Order related to the impracticability of closing all of the WMUs to the prescriptive standards set forth under Title 27 for Group
B wastes, and given the generally poor quality of much of the groundwater underlying the RMKM Site, the Central Valley Water Board can reasonably conclude that the continued management of groundwater as proposed in this Order should be considered to be the “best practicable treatment or control” of the waste discharges.

Water Code section 13267(b) states, in relevant part, that:

In conducting an investigation … the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached "Monitoring and Reporting Program R5-2016-XXXX" are necessary to ensure compliance with these waste discharge requirements. The Discharger operates and owns all a majority of the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267, that Meridian Beartrack Co., their agents, successors, and assigns, in order to meet the provisions of Division 7 of the Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of ‘hazardous waste’, ‘designated waste’, ‘Group A mining waste’, and ‘Group B mining waste’ is prohibited other than as described in these WDRs. For the purposes of this Order, the terms ‘hazardous waste’, designated waste’, ‘Group A’ and
2. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater is prohibited except as specified by this Order and as authorized in NPDES Order No. R5-2013-0071.

3. The discharge of wastes outside of a waste management unit or portions of a waste management unit specifically designed for their containment is prohibited.

4. The discharge of wastes to the FTR, LCRF, PWP, and FTR, West and Gold Knoll ODS is prohibited.

5. The transfer discharge of waste, other than LCRF and PWP LCRS liquid, to the PWP evaporation pond is prohibited.

6. The transfer discharge of waste, other than FTR LCRS and ODS seep water, into Skyrocket Pit is prohibited.

7. The discharge of waste, other than water transferred from Skyrocket Pit during emergency situations, to the North Pit is prohibited.


B. DISCHARGE SPECIFICATIONS

1. The discharge shall not cause a condition of pollution or nuisance as defined by the Water Code section 13050.

2. The discharge of wastes shall not cause measurably significant degradation of current groundwater quality downgradient of the de-designation and variance area by allowing a statistically significant increase over background or baseline concentrations.

3. The Discharger shall operate and maintain the WMUs to minimize groundwater degradation and contain groundwater degradation within the de-designation and variance area.

4. If measurably significant evidence of a release of waste constituents downgradient of the de-designation and variance area is confirmed after resampling pursuant to the monitoring and reporting program, the Discharger shall implement the requirements of SPRR Section J Response to a Release.

5. Waste materials shall be confined to the waste management units designated for the specific waste as shown on Attachment B.
6. The Discharger shall comply with all Standard Discharge Specifications listed in Section D of the SPRRs dated April 2016.

**PWP, LCRF and FTR**

7. Leachate collected from the LCRF and PWP LCRS may be transferred into the PWP evaporation pond or transported off-site to an appropriate disposal facility.

**Skyrocket and North Pit**

8. Leachate generated by the FTR LCRS and the ODSs may be captured and discharged into Skyrocket Pit or transported off-site to an appropriate disposal facility.

9. Ferrous sulfate may be discharged into Skyrocket Pit to reduce the arsenic concentrations to levels acceptable for discharge in accordance with NPDES Order R5-2013-0071. Ferrous sulfate may be discharged at a maximum concentration of 200 mg/L, and a maximum of 60,000 pounds of ferrous sulfate shall be discharged into Skyrocket Pit each year. Prior to discharge of ferrous sulfate into Skyrocket Pit, the Discharger shall:

a. Submit written notification to Central Valley Water Board staff within four weeks of proposed discharge including a workplan detailing the proposed ferrous sulfate treatment of Skyrocket Pit, schedule, and estimated quantity of ferrous sulfate to be discharged into Skyrocket Pit.

b. If requested by Central Valley Board staff, the Discharger shall conduct periodic monitoring and sampling of Skyrocket Pit during the treatment period in accordance with the Board staff request.

c. Include a summary of treatment procedures, quantity of ferrous sulfate added into Skyrocket Pit, and tabulated Skyrocket Pit water quality data with associated analytical laboratory reports.

10. The Discharger may change the Skyrocket Pit treatment method following written approval from the Executive Officer.

11. In the event the Discharger cannot meet the requirements of the NPDES permit for discharge into Littlejohns Creek Diversion Channel and Skyrocket Pit is at risk of overflowing, this Order allows the Discharger to reduce the Skyrocket Pit water level by transferring water to the North Pit to prevent unauthorized discharges into Littlejohns...
Creek Diversion Channel. This event is considered an emergency condition, and therefore the Discharger is allowed to initiate transfer to the North Pit. In initiating the emergency, the Discharger shall:

a. Provide written notification to Central Valley Water Board staff **two weeks** prior to initiating emergency response and weekly during the transfer period.

b. Record the gallons of water pumped from Skyrocket Pit to North Pit.

c. Sample and test the North Pit liquid in accordance with the monitoring requirements in MRP R5-2016-XXXX.

d. Submit a report to the Central Valley Water Board **45 days** following the end of the transfer period documenting the emergency transfer operations including: cause of the emergency, gallons of water transferred, tabulated water quality data with associated analytical laboratory reports, summary of the changes to North Pit water quality, and a list of best management practices to implement to reduce the potential for future emergencies.

C. FACILITY SPECIFICATIONS

1. Annually, prior to the anticipated rainy season but no later than **31 October**, any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed and reported in compliance with MRP R5-2016-XXXX.

2. Surface drainage from diverted tributary areas shall not contact the ODSs, Skyrocket Pit, North Pit, FTR, LCRF, or PWP mining waste.

3. The Discharger shall comply with all Standard Facility Specifications listed in Section E of the SPRRs dated April 2016.

**PWP, LCRF and FTR**

4. There shall be no ponding of liquid on top of the LCRF, FTR, and PWP, excluding the PWP evaporation pond. Following removal of the PWP evaporation pond, there shall be no ponding of liquid on top of any portion of the PWP. Water that has contacted the leached concentrates of the LCRF or PWP shall be disposed of in the PWP evaporation pond or transferred offsite to an appropriate disposal facility.

5. The FTR spine, spring, and foundation drains may be abandoned by pressure grouting or other appropriate method approved by the Executive Officer. The Discharger shall submit a detailed workplan for approval by the Executive Officer a minimum of 90 days prior to the proposed work.

6. The FTR LCRS drains may be closed allowing leachate to build up within the FTR as long as the leachate does not seep to the surface at the FTR or further downstream. If an **uncontained** FTR surface seep is observed, the Discharger shall:

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a. Immediately begin pumping FTR LCRS liquids to Skyrocket Pit.

b. Immediately notify Central Valley Water Board staff by telephone and email.

c. Submit written notification within seven days that includes a time schedule to contain and collect the seep to prevent discharge of FTR seep water to surface water bodies.

7. All under-drains and LCRS drains within the PWP and LCRF shall remain open and free flowing. Any mining waste collected in these drains and LCRSs shall be contained and disposed of in the PWP evaporation pond or transported off-site to an appropriate disposal facility.

8. Leachate generation in the LCRF and PWP is currently less than 1 gpm. If LCRS production increases to above 5 gpm, then the Discharger shall notify the Central Valley Water Board in writing within seven days. Notification shall include a time schedule to evaluate the source of the additional water in the LCRS and conduct an assessment of the WMU final cover. The Central Valley Water Board may require repair or other action necessary to reduce or eliminate leachate production.

9. Measures shall be taken to assure that unauthorized persons and animals are effectively excluded from LCRF and PWP.

10. The Discharger shall test the PWP and LCRF LCRSs at least annually to demonstrate proper operation as detailed in MRP R5-2016-XXXX.

Skyrocket and North Pits

11. Skyrocket Pit water level shall be kept below a level to:

a. Maintain capacity for wastewater flows to the Pit, precipitation from a 100-year 24-hour storm event (design storm) of 5.1 inches, and at least two (2.0) feet of freeboard at all times. The Discharger shall submit an updated Water Balance Model as detailed in Provision H.15.

b. Prevent any measurably significant degradation of current water quality in groundwater downgradient of the de-designation and variance area shown in Attachment C, as detailed in the 2014 BPA.

12. The Discharger shall immediately notify Central Valley Water Board staff by telephone and email and immediately take measures to regain Pit capacity in the event that freeboard levels are equal to or less than 2.0 feet plus the amount needed to hold the 100-year 24-hour design storm event.

13. After the North Pit receives water from Skyrocket Pit, the following requirements shall take effect:

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a. The North Pit shall have capacity for wastewater flows to the impoundment, precipitation from a 100-year 24-hour storm event (design storm) of 5.1 inches, and shall maintain at least two (2.0) feet of freeboard at all times. The Discharger shall submit a Water Balance Model as detailed in Provision H.15.

b. The Discharger shall immediately notify Central Valley Water Board staff by telephone and email and immediately take measures to regain Pit capacity in the event that freeboard levels are equal to or less than 2.0 feet plus the amount needed to hold the 100-year 24-hour design storm event.

14. The Discharger shall record onsite rainfall to track the magnitude of storm events and shall record surface impoundment freeboard levels in accordance with the attached monitoring and reporting program.

15. Any direct-line discharge-transfer to Skyrocket or North Pit shall have fail-safe equipment or operating procedures to prevent overfilling.

16. The Pits shall be designed, constructed and maintained to prevent scouring and/or erosion of the containment features at points of discharge to the impoundments and by wave action at the water line.

FTR, West, and Gold Knoll ODSs

17. ODS seeps shall be contained and transferred to Skyrocket Pit or appropriate disposal facility.

18. If new ODS seeps are observed, the Discharger shall:

a. Immediately notify Central Valley Water Board staff by telephone and email.

b. Submit written notification within seven days that includes a time schedule to contain the collect the seep to prevent discharge of ODS seep water to surface water bodies.

D. DESIGN AND CONSTRUCTION SPECIFICATIONS

1. Containment structures and precipitation and drainage control systems shall be constructed and maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, and washout under 100-year, 24-hour precipitation conditions.

2. Waste management units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over their operating life.
4. Materials used to construct LCRSs shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the surface impoundments and the post-closure maintenance period.

5. The LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the outer liner at any time. The depth of fluid in LCRF and PWP LCRS sump shall be kept at or below one-foot. The depth of the liquid in the FTR LCRS shall be kept a level to prevent mining impacted water to seep to the surface.

6. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation without excessive pump cycling that could damage the pump.

7. The Discharger shall submit a design report including plans, specifications, and a construction quality assurance plan for review and approval prior to construction work related to the WMU containment and cover systems.

8. The Discharger shall submit a final report documenting construction work related to the WMU containment systems and cover for review and approval.

9. Measures shall be taken to ensure that synthetic liners are not punctured for the period during which the waste/processing material contained therein poses a threat to water quality.

10. The Discharger shall comply with all Standard Construction Specifications listed in Section F of the SPRRs dated April 2016.

11. The Discharger shall comply with all Storm Water Provisions listed in Section L of the SPRRs dated April 2016.

E. CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS

1. The 1.3 acre PWP evaporation pond closure shall consist of:
   a. Removing all precipitates and settled solids on the pond surface.
   b. Cutting the geomembrane along the edge of the anchor trench along the crest of the pond slope.
   c. Folding the geomembrane on the slope of the pond back over the bottom of the pond.
   d. Removing the geomembrane from the anchor trench and laying over the geomembrane at the bottom of the pond. The 1.5 feet of cover soil placed over the footprint of the pond will be graded to blend with the existing PWP cover.
   e. Placing a minimum of 1.5 feet of soil cover over the geosynthetics.
f. Backfilling and grading the area to promote drainage and prevent ponding.

g. Installing erosion control measures, as necessary, to reduce erosion before vegetation establishes itself.

h. Installing the required precipitation and drainage control systems to eliminate erosion.

2. Prior to closure, the Discharger shall submit an updated Final Closure and Post-Closure Maintenance Plan prepared by a California-registered civil engineer or certified engineering geologist, and that contains all applicable information required in Title 27 section 21769. The plan shall include any closure/post-closure elements proposed in the ROWD, and shall meet the requirements of this Order. The Final Closure and Post-Closure Maintenance Plan shall provide for continued compliance with the applicable standards of Title 27 for waste containment, precipitation and drainage controls, and monitoring throughout closure and the post-closure maintenance period.

3. During closure and post-closure maintenance, the following shall be complied with: (a) erosion control and surface flow containment facilities shall be constructed and maintained to prevent siltation of surface waters; (b) all exposed cuts and fills shall be compacted, reseeded, and adequately watered to initiate and sustain plant growth as soon as practicable, (c) disturbed areas of roadway shall be water barred as necessary and drained onto undisturbed areas with erosion control; (d) there shall be no removal of vegetation nor disturbance of natural soil conditions except where measures that will prevent erosion discharge to surface waters or storm drainage systems are installed and operational prior to 31 October in accordance with MRP R5-2016-XXXX.

4. Closed WMUs shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the postclosure maintenance period.

5. Closed WMUs including the FTR, LCRS, PWP, and ODSs, which utilize final caps, shall be graded and maintained to prevent ponding, promote revegetation, and prevent erosion.

6. Closed areas with slopes greater than 10%, surface drainage courses, and areas subject to erosion by wind or water shall be designed, constructed, and maintained to prevent erosion.

7. The Discharger shall comply with all Closure and Post-Closure Maintenance Specifications listed in Section G of the SPRRs dated April 2016.

F. FINANCIAL ASSURANCES

1. By 1 June 2017, pursuant to Title 27 Section 22212, the Discharger shall submit a report detailing the required post-closure site maintenance including a tabulated cost.
estimate for the 30-year post-closure period. Additionally, the Discharger shall include documentation showing that it has established an irrevocable post-closure fund with the Central Valley Water Board named as beneficiary to ensure post-closure maintenance for the FTR, LCRF, PWP, Skyrocket Pit, North Pit, and ODSs. The financial assurances mechanism shall be one listed in Title 27 section 22228 for which the Discharger is eligible. For financial assurance mechanisms requiring funding, the Discharger shall either fully fund the mechanism by 1 June 2017 or may propose a payment schedule. If the Discharger proposes a payment schedule to fund the mechanism, it shall submit a report by 1 June 2018 showing that the mechanism is fully funded. For financial assurance mechanisms not requiring funding, such as a Guarantee, the Discharger shall submit a report showing the mechanism is in place by 1 June 2017.

2. By 1 June 2017, pursuant to Title 27 section 22222, the Discharger shall submit a report detailing the corrective action associated with a known or reasonable foreseeable release including a tabulated cost estimate for the corrective action. Additionally, the Discharger shall include documentation showing that it has established an irrevocable corrective action fund with the Central Valley Water Board named as beneficiary to ensure funds are available to address a known or reasonably foreseeable release from the FTR, LCRF, PWP, Skyrocket Pit, North Pit, and ODSs. The financial assurances mechanism shall be one listed in Title 27 section 22228 for which the Discharger is eligible. For financial assurance mechanisms requiring funding, the Discharger shall either fully fund the mechanism by 1 June 2016 or may propose a payment schedule. If the Discharger proposes a payment schedule to fund the mechanism, it shall submit a report by 1 June 2018 showing that the mechanism is fully funded. For financial assurance mechanisms not requiring funding, the Discharger shall submit a report showing the mechanism is in place by 1 June 2017.

3. By 1 June of each year, the Discharger shall submit a report to the Central Valley Water Board that reports the balance of both the post-closure and corrective action funds and the amounts of the Guarantees and the adjustments to account for inflation in accordance with Title 27 section 22236.

4. The Discharger shall comply with all Standard Financial Assurance Specifications listed in Section H of the SPRRs dated April 2016.

G. MONITORING SPECIFICATIONS

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, and surface water and in accordance with Monitoring and Reporting Program (MRP) R5-2016-XXX, and the Standard Monitoring Specifications listed in Section I of the SPRRs dated April 2016.

2. The Discharger shall, for any waste management unit in a corrective action monitoring program, comply with the corrective action monitoring program provisions of Title 27, MRP R5-2016-XXX, and the Standard Monitoring Specifications listed in Section I of SPRRs dated April 2016.
3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, MRP R5-2016-XXXX, and the SPRRs dated April 2016.

4. The concentrations of the constituents of concern in waters passing the Point of Compliance (defined pursuant to Title 27, section 20164 as a vertical surface located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit) shall not exceed the concentration limits established pursuant to MRP R5-2016-XXXX. For waste management units located within the de-designation and variance area, the point of compliance is considered the vertical surface located at the hydraulically downgradient limit of the de-designation and variance area that extends through the uppermost aquifer underlying the de-designation and variance area.

5. For each monitoring event, the Discharger shall determine whether the waste management unit is in compliance with the Water Quality Protection Standard using procedures specified in MRP R5-2016-XXXX and the Standard Monitoring Specifications in Section I of the SPRRs dated April 2016.

6. The Discharger shall comply with all Standard Monitoring Specifications and Response to a Release specifications listed in Sections I and J of the SPRRs dated April 2016.

H. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated April 2016, which are attached hereto and made part of this Order by reference. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.

2. Pursuant to Water Code section 13267, the Discharger shall comply with Monitoring and Reporting Program R5-2016-XXXX, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring groundwater, the unsaturated zone, and surface waters throughout the active life of the waste management units and any applicable post-closure maintenance period. A violation of Monitoring and Reporting Program R5-2016-XXXX is a violation of these waste discharge requirements.

3. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

4. The Discharger shall maintain legible records of the volume and type of waste transferred to the Skyrocket and North Pits and PWP evaporation pond and the manner and location of the transfer. Such records shall be maintained at
the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Central Valley Water Board and of the State Water Resources Control Board, copies of these records shall be sent to the Central Valley Water Board upon request.

5. The Discharger shall provide the Regional Board a copy of the annual inspection report submitted to the Division of Safety of Dams (DSOD). The Discharger shall take appropriate actions to remedy damage as required by the DSOD.

6. The Discharger shall comply with all applicable provisions of Title 27 that are not specifically referred to in this Order.

7. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order and of the California Water Code. The Discharger shall immediately notify the Central Valley Water Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

8. In the event of any change in control or ownership of the facility or disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of General Provision K.2.e in the Standard Provisions and Reporting Requirements and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

9. The Discharger shall provide proof to the Central Valley Water Board within sixty days after completing final closure that the deed to the facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

   a. The parcel has been used for disposal of wastes.
b. Land use options for the parcel are restricted in accordance with post-closure land uses set forth in any post-closure plan (if applicable).

c. In the event that the Discharger defaults on carrying out either any corrective action needed to address a release, groundwater monitoring, or any post-closure maintenance (if applicable), then the responsibility for carrying out such work falls to the property owner.

44-10. The Discharger shall comply with the notification requirements of Section 21710(c) of Title 27.

42-11. These requirements are conditional upon receipt of all local and state permits for the project and are not intended to limit or reduce any obligations or requirements, which are imposed by any other authority having jurisdiction regarding the Project.

43-12. The Discharger must comply with all conditions of this Order including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action, imposition of civil monetary liability, or revision or rescission of this Order.

44-13. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

45-14. The following reports shall be submitted pursuant to Section 13267 of the Water Code and shall be prepared by a California-registered civil engineer or certified engineering geologist:

<table>
<thead>
<tr>
<th>Task</th>
<th>Compliance Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Construction Plans</td>
<td>90 days prior to proposed construction</td>
</tr>
<tr>
<td>Submit construction and design plans</td>
<td></td>
</tr>
<tr>
<td>for review and approval.</td>
<td></td>
</tr>
<tr>
<td>(see all Construction Specifications in</td>
<td></td>
</tr>
<tr>
<td>Section D, above and Section F of the SPRRs.)</td>
<td></td>
</tr>
</tbody>
</table>
B. Construction Report

Submit a construction report for review and approval upon completion demonstrating construction was in accordance with approved construction plans (see Standard Construction Specifications in Section F of the SPRRs).

60 days after completion of construction

C. Skyrocket Pit Water Balance Model

Submit a Water Balance Model report for Skyrocket Pit that includes:

a. Drainage calculations estimating the water level of the Skyrocket Pit corresponding to the maximum capacity of Pit equal to the 100-year 24-hour design storm event with two (2.0) feet of freeboard.

b. Water Balance Model showing Pit levels not rising above the maximum Pit capacity.

1 December 2016

D. North Pit Water Balance Model

Submit a Water Balance Model report for North Pit that includes:

a. Drainage calculations estimating the water level of the North Pit corresponding to the maximum capacity of Pit equal to the 100-year 24-hour design storm event with two (2.0) feet of freeboard.

b. Water Balance Model showing Pit levels not rising above the maximum Pit capacity.

1 December 2016

E. Final Closure and Post-Closure Maintenance Plan

Submit a Final Closure Post-Closure Maintenance Plan including inspection, maintenance, and monitoring of the facility during the post-closure maintenance period, a post-closure maintenance cost estimate for the entire facility, and proof the post-closure fund mechanism with the Central Valley Water Board listed as a beneficiary as detailed in Financial Assurances F.1. Inspection and maintenance will include the condition of the final cover, drainage features, LCRS, groundwater monitoring wells, access roads, and site security. The plan will be implemented for a minimum period of 30 years or until the waste no
longer poses a threat to environmental quality, whichever is greater.

F. Corrective Action Report
Submit a report detailing the corrective action associated with a known or reasonable foreseeable release from the FTR, LCRF, PWP, Skyrocket Pit, North Pit, and ODSs including a tabulated cost estimate for the corrective action. Additionally, the Corrective Action Report shall include documentation showing that it has established an irrevocable corrective action fund with the Central Valley Water Board named as beneficiary to ensure funds are available to address a known or reasonably foreseeable release, as detailed in Financial Assurances F.2.

16. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Central Valley Water Board.

17. The Central Valley Water Board will review this Order periodically and may revise requirements when necessary.

18. This Order shall take effect upon the date of adoption.

19. The Discharger shall comply with all General Provision listed in Section K of the SPRRs dated April 2016.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality
or will be provided upon request.
I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, on ________________.

______________________________
PAMELA C. CREEDON, Executive Officer

AAH/WMH
This monitoring and reporting program (MRP) is issued to Meridian Beartrack Co. (Discharger) pursuant to California Water Code section 13267 and incorporates requirements for groundwater, surface water, and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations, title 27, section 20005, et seq. (hereafter Title 27), Waste Discharge Requirements (WDRs) Order No. R5-2016-XXXX, and the Standard Provisions and Reporting Requirements dated April 2016 (SPRRs). Compliance with this MRP is ordered by the WDRs and the Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Central Valley Water Board or the Executive Officer. Failure to comply with this MRP, or with the SPRRs, constitutes noncompliance with the WDRs and with Water Code Section 13267, which can result in the imposition of civil monetary liability.

A. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and leachate in accordance with Standard Monitoring Specifications in Section I of the SPRRs. All monitoring shall be conducted in accordance with the March 2015 Sample and Analysis Plan, which includes quality assurance/quality control standards.

All compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern (COCs) as indicated and listed in Tables 1 through 4.

The Discharger shall use USEPA test methods with the lowest achievable detection limit for that constituent taking any matrix interferences into account. The reporting limit shall be no higher than the practical quantitation limit. The Discharger shall report all trace concentrations that are between the detection limit and the practical quantitation limit. All metals analyses shall be for dissolved metals.
The monitoring program of this MRP includes:

Section | Monitoring Program
---|---
A.1 | Groundwater Monitoring
A.2 | Surface Water Monitoring
A.3 | Skyrocket Pit and North Pit Water Monitoring
A.4 | ODS Seeps
A.5 | Floatation Tailings Reservoir (FTR) to Skyrocket Pit Water Transfer Monitoring
A.6 | Skyrocket Pit to North Pit Water Transfer Monitoring
A.7 | Skyrocket Pit Treatment Monitoring
A.8 | LCRS Monitoring, Action Leakage Rate, and Annual LCRS Testing
A.9 | Facility Monitoring

1. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. The detection monitoring system shall be certified by a California-licensed professional civil engineer or geologist as meeting the requirements of Title 27. The current groundwater detection monitoring system meets the applicable requirements of Title 27.

The current groundwater monitoring network shall consist of the following:

<table>
<thead>
<tr>
<th>Well</th>
<th>Status</th>
<th>Units Being Monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPZ-3*</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>FPZ-4*</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>FPZ-5*</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>FPZ-6*</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>FPZ-7A*</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>GWM-4</td>
<td>Background</td>
<td>Up-gradient of FTR</td>
</tr>
<tr>
<td>GWM-2</td>
<td>Detection</td>
<td>FTR</td>
</tr>
<tr>
<td>GWM-3</td>
<td>Background</td>
<td>Up-gradient of LCRP</td>
</tr>
<tr>
<td>GWM-9</td>
<td>Detection</td>
<td>West ODS</td>
</tr>
<tr>
<td>GWM-10</td>
<td>Detection</td>
<td>West ODS, Skyrocket Pit</td>
</tr>
<tr>
<td>GWM-10</td>
<td>Detection</td>
<td>Gold Knoll ODS</td>
</tr>
<tr>
<td>GWM-12</td>
<td>Detection</td>
<td>Skyrocket Pit</td>
</tr>
<tr>
<td>GWM-15</td>
<td>Detection</td>
<td>Process Water Pond</td>
</tr>
<tr>
<td>GWM-16</td>
<td>Detection</td>
<td>North Pit, West ODS</td>
</tr>
<tr>
<td>GWM-21</td>
<td>Detection</td>
<td>Skyrocket Pit, Gold Knoll ODS</td>
</tr>
<tr>
<td>GWM-25</td>
<td>Detection</td>
<td>Process Water Pond</td>
</tr>
<tr>
<td>GWM-26</td>
<td>Detection</td>
<td>Up-gradient of Gold Knoll ODS</td>
</tr>
<tr>
<td>GWM-30R</td>
<td>Detection</td>
<td>FTR ODS, North Pit</td>
</tr>
<tr>
<td>GWM-31</td>
<td>Detection</td>
<td>Gold Knoll ODS</td>
</tr>
<tr>
<td>GWM-32</td>
<td>Detection</td>
<td>West ODS</td>
</tr>
<tr>
<td>GWM-34</td>
<td>Detection</td>
<td>Gold Knoll ODS</td>
</tr>
</tbody>
</table>

Comment [A1]: Refer to Comment 3 in the Meridian comment letter for all substantive proposed changes to the MRP except where noted otherwise.

Comment [A2]: See Comment 1 in Meridian comment letter.
MONITORING AND REPORTING PROGRAM R5-2016-XXXX
MERIDIAN BEARTRACK CO.
ROYAL MOUNTAIN KING MINE
CALAVERAS COUNTY

<table>
<thead>
<tr>
<th>Well</th>
<th>Status</th>
<th>Units Being Monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWM-37</td>
<td>Detection</td>
<td>Skyrocket Pit</td>
</tr>
<tr>
<td>PZ-1</td>
<td>Detection</td>
<td>Gold Knoll ODS</td>
</tr>
<tr>
<td>PZ-4</td>
<td>Detection</td>
<td>Skyrocket Pit</td>
</tr>
</tbody>
</table>

* Monitored for groundwater elevation only

Groundwater samples shall be collected annually/semiannually from the background wells, detection monitoring wells, information wells, and any additional wells added as part of the approved groundwater monitoring system. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specifications in the following table Table 1:

**Table 1: Groundwater Monitoring**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Monitoring Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Field Parameters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>feet &amp; hundreds, MSL</td>
<td>Quarterly^Semianually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>umhos/cm</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>pH</td>
<td>pH units</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td><strong>Monitoring Parameters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab pH</td>
<td>pH units</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Magnesium</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nitrate as N</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chromium</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Copper</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Arsenic</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Iron</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Manganese</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Selenium</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nickel</td>
<td>mg/L</td>
<td>Semiannually^2</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>
### Table 1: Groundwater Monitoring

<table>
<thead>
<tr>
<th>Zinc</th>
<th>mg/L</th>
<th>Semi-decadally</th>
<th>Semi-annually</th>
</tr>
</thead>
</table>

1. The Discharger shall measure the groundwater elevation in each well quarterly semi-annually, determine groundwater flow direction, and estimate groundwater flow rates in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation monitored. The results shall be reported semiannually, including the times of expected highest and lowest elevations of the water levels in the wells, pursuant to Title 27, section 20415(e)(15).

2. Piezometers FPZ-3, FPZ-4, FPZ-5, FPZ-6, and FPZ-7A shall be monitored for groundwater elevation only.

3. Monitoring wells GWM-2, GWM-12, GWM-21, GWM-11 and GWM-26 shall be sampled annually.

#### 2. Surface Water Monitoring

The Discharger shall operate a surface water detection monitoring system for any facility where runoff from waste management unit areas flows or could flow to waters of the United States. The monitoring system shall comply with the applicable provisions of Title 27, sections 20415 and 20420. At the Royal Mountain King Mine runoff from waste management unit areas flows and discharges to Littlejohns Creek. The current surface water detection monitoring system and the modified monitoring system set forth herein meets the applicable requirements of Title 27.

The current surface water monitoring points for the facility are:

<table>
<thead>
<tr>
<th>Mon Pt.</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWM-1</td>
<td>Littlejohns Creek – Upstream of FTR storm water runoff channel</td>
</tr>
<tr>
<td>SWM-2</td>
<td>Tributary to Littlejohns Creek – Downstream of Skyrocket Pit</td>
</tr>
<tr>
<td>SWM-6</td>
<td>Littlejohns Creek – Upstream of Skyrocket Pit</td>
</tr>
<tr>
<td>SWM-8</td>
<td>Unnamed drainage to Clover Creek, Downstream of West ODS</td>
</tr>
<tr>
<td>SWM-9</td>
<td>Gold Knoll Creek – Downstream Gold Knoll ODS</td>
</tr>
<tr>
<td>SWM-10</td>
<td>Littlejohns Creek Diversion – Downstream of Skyrocket Pit</td>
</tr>
<tr>
<td>SWM-13</td>
<td>Littlejohns Creek Diversion – Downstream of Skyrocket Pit</td>
</tr>
<tr>
<td>SWM-17</td>
<td>Drainage ditch from Love Pond – Downstream of North Pit</td>
</tr>
<tr>
<td>Stockpond</td>
<td>Southeast of Gold Knoll ODS</td>
</tr>
<tr>
<td>Love Pond Spring</td>
<td>Spring near north of main haul road across from Love Pond</td>
</tr>
</tbody>
</table>

Flow data from all surface water flow gauging stations within or adjacent to the facility site shall be reported to the Regional Water Board on a semi-annual basis. For surface water detection monitoring, a sample shall be collected at each monitoring point location and analyzed for the monitoring parameters and constituents in accordance with the methods and frequency specified in the following table.
Table 2: Surface Water Monitoring

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Monitoring Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>gpm</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>umhos/cm</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>pH</td>
<td>pH units</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Turbidity</td>
<td>NTU</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Monitoring Parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Lab pH</td>
<td>pH units</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nitrate as N</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Arsenic</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chromium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Copper</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Iron</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Magnesium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Manganese</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nickel</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Selenium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Zinc</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>
3. **Skyrocket Pit and North Pit Water Monitoring**

For Skyrocket Pit and North Pit detection monitoring, a sample shall be collected at each monitoring point location and analyzed for the monitoring parameters and constituents in accordance with the methods and frequency specified in the following table.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Monitoring Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static Water Level</td>
<td>Feet MSL</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>pH (field)</td>
<td>pH units</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>umhos/cm</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Lab pH</td>
<td>pH units</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nitrate as N</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Arsenic(^1)</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Iron</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Magnesium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Manganese</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nickel(^1)</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually-Semi-decadal</td>
</tr>
<tr>
<td>Selenium(^1)</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Zinc</td>
<td>mg/L</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>

\(^1\) An appropriate Atomic Absorption (AA) method shall be used for analysis of this constituent.

4. **ODS Seeps**

Seepage from the West and Gold Knoll ODSs at the locations listed below shall be monitored quarterly for the constituents listed above in Table 2 excluding copper, chromium, and zinc.

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold Knoll ODS Seep</td>
<td>Southwest side of Gold Knoll ODS</td>
</tr>
<tr>
<td>West ODS 1</td>
<td>Northwest of northern portion of West ODS</td>
</tr>
<tr>
<td>West ODS 2</td>
<td>West side of northern portion of West ODS</td>
</tr>
<tr>
<td>West ODS 3</td>
<td>Southwest side of northern portion of West ODS</td>
</tr>
</tbody>
</table>
5. Flotation Tailings Reservoir (FTR) to Skyrocket Pit Water Quality Transfer Monitoring

In accordance with WDRs R5-2016-XXXX, leachate collected from the FTR LCRS shall be transferred to Skyrocket Pit or handled in some other manner consistent with Title 27, Section 20340 (g). If the Discharger chooses to transfer leachate to Skyrocket Pit then wastewater will be transferred directly from the FTR LCRS pump. The sampling station location will be the outlet pipe from the FTR to the Skyrocket Pit.

The following constituents shall apply to the Flotation Tailings Reservoir transfer water to Skyrocket Pit water quality monitoring station:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Monitoring Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pumping or flow rate</td>
<td>gpm</td>
<td>Daily</td>
<td>Semiannually</td>
</tr>
<tr>
<td>pH (field)</td>
<td>pH units</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>umhos/cm</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Magnesium</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Arsenic¹</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Chromium (Total)</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Copper¹</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Nickel¹</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Selenium¹</td>
<td>mg/L</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>

An appropriate Atomic Absorption (AA) method shall be used for analysis of this constituent.

6. Skyrocket Pit to North Pit Water Quality Transfer Monitoring

In accordance with WDRs R5-2016-XXXX, if the Discharger cannot meet the requirements of the NPDES permit for discharge into Littlejohns Creek Diversion Channel and Skyrocket Pit is at risk of overflowing, the Discharger is
allowed to reduce the Skyrocket Pit water level by transferring water to North Pit. In the event that transferring water to North Pit is necessary, the Discharger shall sample Skyrocket and the North Pits weekly beginning one week before water transfer operations begin and ending one week after water transfer operations end. The samples shall be analyzed for the parameters listed in Table 4. Additionally, pumping rates and volumes shall be recorded daily during transfer operations.

7. **Skyrocket Pit Treatment Monitoring**

In accordance with WDRs R5-2016-XXXX, the Discharger may treat Skyrocket Pit with ferrous sulfate to reduce arsenic concentrations. If the Discharger chooses to treat Skyrocket Pit with ferrous sulfate, and if the Board requests a treatment monitoring program, the Discharger shall monitor and/or sample Skyrocket Pit one week prior to the discharge of ferrous sulfate, weekly during the treatment period, and one week after the cessation of treatment in accordance with that request and all applicable requirements of this MRP.

8. **LCRS Monitoring, Action Leakage Rate, and Annual LCRS Testing**

**LCRS Monitoring:** The Discharger shall operate and maintain leachate collection and removal system (LCRS) sumps and conduct annual testing of each LCRS in accordance with Title 27 and this monitoring program.

The current LCRS leachate sump monitoring points are:

<table>
<thead>
<tr>
<th>Mon Pt.</th>
<th>Unit Where Sump is Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTR Sump</td>
<td>FTR LCRS</td>
</tr>
<tr>
<td>LCRF Sump</td>
<td>LCRF LCRS</td>
</tr>
<tr>
<td>PWP Sump</td>
<td>PWP LCRS</td>
</tr>
</tbody>
</table>

Comment [A3]: See comment 5 in the Meridian comment letter.
All LCRS sumps shall be inspected semiannually for the presence of leachate, and flow shall be recorded in accordance with the following table.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Monitoring Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of leachate</td>
<td>observation</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Flow Rate¹</td>
<td>gallons/day</td>
<td>Semiannually</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>umhos/cm</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>pH</td>
<td>pH units</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Monitoring Parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Nitrate as N</td>
<td>mg/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Dissolved Metals (Barium, Copper, Lead)</td>
<td>ug/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>ug/L</td>
<td>Annually</td>
<td>Annually</td>
</tr>
</tbody>
</table>

¹ Flow in gallons per day from LCRS sump back to surface impoundment.

**Annual LCRS Testing:** All LCRSs shall be tested annually pursuant to Title 27, section 20340(d) to demonstrate proper operation. The results of these tests shall be reported to the Central Valley Water Board in the Annual Monitoring Report and shall include comparisons with earlier tests made under comparable conditions.

### 9. Facility Monitoring

#### a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess repair and maintenance needed for liner systems; LCRS pumps, piping and control systems; drainage control systems; groundwater monitoring wells; and shall assess preparedness for winter conditions including but not limited to the required surface impoundment capacity and erosion and sedimentation control. The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. Annual facility inspection reporting shall be submitted as required in Section B.5 of this MRP.
b. Major Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities and all waste management unit berms for damage within 7 days following major storm events capable of causing damage or significant erosion. Freeboard in Skyrocket and North Pits shall be measured and recorded within 24 hours after onsite rainfall of greater than two inches in a 24 hour period. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed within 30 days of the inspection. Notification and reporting requirements for major storm events shall be conducted as required in Section B.6 of this MRP.

c. Rainfall Monitoring

The Discharger shall monitor and record onsite rainfall data using an automated rainfall gauge. Data shall be used in establishing the severity of storm events and wet seasons for comparison with design parameters used for waste management unit design and conveyance and drainage design. Daily data and onsite observation shall be used for establishing the need for inspection and repairs after major storm events. Rainfall data shall be reported in the semiannual monitoring reports as required by this MRP under “Reporting”.

B. REPORTING

The Discharger shall submit the following reports in accordance with the required schedule:

<table>
<thead>
<tr>
<th>Section</th>
<th>Report</th>
<th>End of Reporting Period</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1</td>
<td>Semiannual Monitoring Report</td>
<td>30 June, 31 December</td>
<td>1 August, 1 February</td>
</tr>
<tr>
<td>B.2</td>
<td>Annual Monitoring Report</td>
<td>31 December</td>
<td>1 February</td>
</tr>
<tr>
<td>B.3</td>
<td>Skyrocket Pit Treatment Report</td>
<td>Continuous</td>
<td>1 August, 1 February</td>
</tr>
<tr>
<td>B.4</td>
<td>Skyrocket Pit to North Pit Transfer Report</td>
<td>Continuous</td>
<td>45 days following treatment period</td>
</tr>
<tr>
<td>B.5</td>
<td>Annual Facility Inspection Report</td>
<td>31 October</td>
<td>15 November</td>
</tr>
<tr>
<td>B.6</td>
<td>Major Storm Event Reporting</td>
<td>Continuous</td>
<td>7 days from damage discovery</td>
</tr>
<tr>
<td>B.7</td>
<td>Financial Assurances Report</td>
<td>31 December</td>
<td>1 June</td>
</tr>
</tbody>
</table>

Comment [A4]: See comment 5 in the Meridian comment letter.
Reporting Requirements

The Discharger shall submit monitoring reports **semiannually** with the data and information as required in this Monitoring and Reporting Program and as required in WDRs Order No. R5-2016-XXX and the Standard Provisions and Reporting Requirements (particularly Section I: “Standard Monitoring Specifications” and Section J: “Response to a Release”). In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format, such as a computer disk.

Field and laboratory tests shall be reported in each monitoring report. Semiannual and annual monitoring reports shall be submitted to the Central Valley Water Board in accordance with the above schedule for the calendar period in which samples were taken or observations made. In addition, the Discharger shall enter all monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27.

The results of **all monitoring** conducted at the site shall be reported to the Central Valley Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility. Such records shall be legible and shall show the following for each sample:

a) Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

b) Date, time, and manner of sampling;

c) Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

d) Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;

e) Calculation of results; and

f) Results of analyses, and the MDL and PQL for each analysis. All peaks shall be reported.
Required Reports

1. Semiannual Monitoring Report: Monitoring reports shall be submitted semiannually and are due on 1 August and 1 February. Each semiannual monitoring report shall contain at least the following:

   a) For each groundwater monitoring point addressed by the report, a description of:

      1) The time of water level measurement;

      2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;

      3) The method of purging used to stabilize water in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;

      4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and

      5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.

   b) A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.

   c) The estimated quarterly groundwater flow rate and direction in the uppermost aquifer, in any zones of perched water, and in any additional zone of saturation monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report [Title 27, section 20415(e)(15)].

   d) Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, LCRS/leachate, surface water, Skyrocket and North Pits, Skyrocket Pit treatment, Skyrocket Pit to North Pit transfer monitoring, ODS seeps and FTR LCRS discharges to Skyrocket Pit. Concentrations below the laboratory reporting limit shall not be reported as “ND” unless the reporting limit is also given in the table. Otherwise they shall be reported “<" the reporting limit (e.g., <0.10). Units shall be as required in Tables 1 through 5 unless specific justification is given to report in other units. Refer to the SPRRs Section I “Standard Monitoring Specifications” for requirements regarding MDLs and PQLs.

   e) Laboratory statements of results of all analyses evaluating compliance with requirements.

   f) An evaluation of the concentration of each monitoring parameter as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. Report any actions
taken under Section J: Response to a Release in the SPRRs for verified exceedances of a concentration limit for wells/constituents not already in corrective action monitoring.

g) A summary of all Facility Monitoring including onsite rainfall data for the reporting period required in Section A.9 of this MRP.

h) A summary of Skyrocket Pit treatment activities.

i) A summary of water transferred from Skyrocket Pit to North Pit.

j) Tabulated monthly quantities of water discharged to Skyrocket Pit from each ODS and the FTR LCRS.

k) Copies of the Division of Dam Safety inspection reports.

l) A summary of Skyrocket Pit Lake ferrous sulfate treatment procedures, quantity of ferrous sulfate discharged into Skyrocket Pit, and tabulated Skyrocket Pit water quality data with associated analytical laboratory reports, if collection of that data was requested by Board Staff during treatment.

2. Annual Monitoring Report: The Discharger shall submit an Annual Monitoring Report to the Central Valley Water Board by 1 February covering the reporting period of the previous monitoring year. If desired, the Annual Monitoring Report may be combined with the second semiannual report, but if so, shall clearly state that it is both a semi-annual and annual monitoring report in its title. Each Annual Monitoring Report shall contain the following additional information beyond what is required for semiannual monitoring reports:

a) All monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. Graphical analysis of monitoring data may be used to provide significant evidence of a release.

b) An evaluation of the monitoring parameters with regards to the cation/anion balance, and a graphical presentation using a Stiff diagram, a Piper graph, or a Schoeller plot.

c) All historical monitoring data for which there are detectable results, including data for the previous year, shall be submitted in tabular form in a digital file format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as “...the form necessary for...” statistical analysis [Title 27, section 20420(h)], that facilitates periodic review by the Central Valley Water Board.

d) Hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation
of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.

e) A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.

f) A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.

g) The results of the annual testing of the LCRS.

h) Updated concentration limits for each monitoring parameter at each monitoring well based on the new background data set.

3. **Skyrocket Pit Treatment Report:** The Discharger shall submit a report to the Central Valley Water Board within **45 days** following the completion of the discharge of ferrous sulfate documenting the treatment of Skyrocket Pit including: summary of treatment procedures, quantity of ferrous sulfate discharged into Skyrocket Pit, and tabulated Skyrocket Pit water quality data with associated analytical laboratory reports.

4.3. **Skyrocket Pit to North Pit Transferring Report:** The Discharger shall submit a report to the Central Valley Water Board within **45 days** following the end of water transfer from Skyrocket Pit to North Pit, documenting the emergency transfer operations including: cause of the emergency, gallons of water transferred, tabulated water quality date with associated analytical laboratory reports, summary of the changes to North Pit water quality, and a list of best management practices to implement to reduce the potential for future emergency transfer operations.

5. **Annual Facility Inspection Reporting:** By **15 November** of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. Refer to Section A.9.a of this MRP, above.

6. **Major Storm Event Reporting:** The Discharger shall notify Central Valley Water Board staff within **24 hours** after a storm event of greater than two inches in 24 hours as to the status of freeboard in Skyrocket and North Pits. The Discharger shall also notify Central Valley Water Board staff within **7 days** after major storm events of any damage or significant erosion and report any needed repairs within **14 days** of completion of the repairs, including photographs of the problem and the repairs. Refer to Section A.9.b of this MRP above for requirements for performing the inspection and conducting the repairs.

7. **Financial Assurances Report:** By **1 June** of each year, the Discharger shall submit a report to the Central Valley Water Board that reports the balance of both the closure and corrective action funds or the amounts of the Guarantees and the adjustments to account for inflation in accordance with Title 27 Section 22236. Refer to Financial Assurances Specifications F.1 through F.3 of the WDRs.
C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit, the Water Quality Protection Standard shall consist of all COCs, the concentration limit for each constituent of concern, the verification retesting procedure to confirm measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the COCs, the concentration limits, and the point of compliance and all monitoring points. Any proposed changes to the Water Quality Protection Standard other than annual update of the concentration limits shall be submitted in a report for review and approval.

The report shall:

a. Identify all distinct bodies of surface and ground water that could be affected in the event of a release from a waste management unit or portion of a unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.

b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with Title 27, section 20405.

c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

d. Include a proposed statistical method for calculating concentration limits for monitoring parameters and constituents of concern that are detected in 10% or greater of the background data (naturally-occurring constituents) using a statistical procedure from Title 27, section 20415(e)(8)(A-D) or section 20415(e)(8)(E).

e. Include a retesting procedure to confirm or deny measurably significant evidence of a release pursuant to Title 27, section 20415(e)(8)(E) and section 20420(j)(1-3).

The Water Quality Protection Standard shall be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons
unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

The Discharger proposed the methods for calculating concentration limits in the July 2015 Water Quality Protection Standards in Appendix K of the Report of Waste Discharge. The limits are calculated using Intrawell tolerance limits at 95% confidence and 95% coverage based on the historical monitoring data at each surface and groundwater point of compliance. Non-detect results were replaced by one-half of the detection limit for calculations.

The Water Quality Protection Standard shall be updated annually for each monitoring well using new and historical monitoring data.

2. Monitoring Parameters

Monitoring parameters are a select group of constituents that are monitored during each monitoring event that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a waste management unit. The monitoring parameters for all waste management units are those listed in the tables in Section A of this MRP specified monitored medium.

3. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415(e)(8); or

b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

The methods for calculating concentration limits were included in the Water Quality Protection Standards in Appendix K of the Report of Waste Discharge submitted July 2015. The limits are calculated using Intrawell tolerance limits at 95% confidence and 95% coverage based on the historical monitoring data at each surface and groundwater point of compliance. Non-detect results were replaced by one-half of the detection limit for calculations.

The most recent concentration limits for select parameters as reported in the Water Quality Protection Standards in Appendix K of the Report of Waste Discharge submitted July 2015 were as follows:

<table>
<thead>
<tr>
<th>Monitoring Location</th>
<th>Analysis Type</th>
<th>pH (Std units)</th>
<th>TDS (^1) (mg/L)</th>
<th>Sulfate (mg/L)</th>
<th>Nitrate as N (mg/L)</th>
<th>Arsenic (mg/L)</th>
<th>Selenium (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWM-9</td>
<td>Intrawell</td>
<td>8.3 - 8.9</td>
<td>2,370</td>
<td>480</td>
<td>0.04</td>
<td>0.012</td>
<td>0.0003</td>
</tr>
<tr>
<td>GWM-10</td>
<td>Intrawell</td>
<td>7.9 - 8.3</td>
<td>10,000</td>
<td>3,230</td>
<td>0.090</td>
<td>0.010</td>
<td>0.0026</td>
</tr>
</tbody>
</table>
4. Retesting Procedures for Confirming Evidence of a Release

If monitoring results indicate measurably significant evidence of a release, as described in Standard Monitoring Specification I.43 of the SPRRs, then:

a. For analytes that are detected in less than 10% of the background samples (such as non-naturally occurring constituents), the Discharger shall use the non-statistical retesting procedure required in Standard Monitoring Specification I.44 of the SPRRs.

b. For analytes that are detected in 10% or greater of the background samples (naturally occurring constituents), the Discharger shall use one of the statistical retesting procedure as required in Standard Monitoring Specification I.45 of the SPRRs.

5. Point of Compliance

The point of compliance for the water standard at each waste management unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the unit. For waste management units located within the de-designation and variance area, the point of compliance is considered the vertical surface located at the hydraulically downgradient limit of the de-designation and variance area that extends through the uppermost aquifer underlying the de-designation and
variance area. The following are monitoring locations at the point of compliance:

<table>
<thead>
<tr>
<th>Cell or Module</th>
<th>Point of Compliance Monitoring Wells</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCRF and PWP</td>
<td>GWM-25</td>
</tr>
<tr>
<td>North Pit</td>
<td>GWM-1630R</td>
</tr>
<tr>
<td>BPA Zone</td>
<td>GWM-9, GWM-10, GWM-31, GWM-32, PZ-1</td>
</tr>
</tbody>
</table>

No other groundwater wells shall be deemed to be compliance wells for purposes of Title 27 investigative or corrective action purposes. Wells within the BPA de-designation area may be used for investigative purposes when evaluating changes in the Point of Compliance Monitoring Wells identified directly above.

6. Compliance Period

The compliance period for each waste management unit shall be the number of years equal to the active life of the unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the waste management unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program [Title 27, section 20410].

7. Monitoring Points

A monitoring point is a well, device, or location specified in the waste discharge requirements, which monitoring is conducted and at which the water quality protection standard applies. The monitoring points for each monitored medium are listed in Section A of this MRP.

D. TRANSMITTAL LETTER FOR ALL REPORTS

A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by: ____________________________