

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007

Sacramento Office (Main)
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002

[Regional Board Website](https://www.waterboards.ca.gov/centralvalley) (https://www.waterboards.ca.gov/centralvalley)

MONITORING & REPORTING PROGRAM R5-2016-0055-01



ORDER INFORMATION

Order Type(s):	Monitoring & Reporting Program (MRP)
Status:	Adopted
Program:	Title 27
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Meridian Beartrack Co. and Meridian Gold Co.
Facility:	Royal Mountain King Mine
Address:	Rock Creek Road, Copperopolis
County:	Calaveras County
Parcel No.:	053-411-016, 053-411-015, 053-411-014, 053-411-013, 053-411-002, 053-310-004, 053-012-008, 053-012-004, 053-012-001, 053-011-025, 053-011-018, 053-010-008, 053-101-007, 053-010-005, 053-010-004, 053-010-003, 053-010-002, 053-010-001, 053-009-008, 053-009-007, 053-009-006, 053-009-004, 053-009-003, 053-009-001, 050-431-004, 050-031-029, 050-031-018, 050-031-010, 053-322-003, 053-011-032, 053-322-002, 053-011-016, 053-011-033, 053-022-004, 053-011-034, 54-014-01 53-011-23, 53-011-24 050-

WDID:

031-011, 053-010-006 053-011-035, 053-011-037 053-011-038, 053-011-040 053-022-005, 53-011-03
5B052014002

Prior Order(s):

88-176, 97-165, 5-01-040, R5-2008-0021, R5-2016-0055

REGIONAL BOARD INFORMATION

Sacramento Office (Main)

Rancho Cordova, CA 95670-6114
11020 Sun Center Drive #200
Telephone: (916) 464-3291

Fresno Office

1685 "E" Street
Fresno, CA 93706-2007
Telephone: (559) 445-5116

Redding Office

364 Knollcrest Drive #205
Redding, CA 96002
Telephone: (530) 224-4845

[Regional Board Website](https://www.waterboards.ca.gov/centralvalley)

<https://www.waterboards.ca.gov/centralvalley>

TABLE OF CONTENTS

Table Index	iv
Glossary	v
Preface	vii
Monitoring & Reporting Program	1
A. General Provisions	1
1. Incorporation of Standard Provisions	1
2. Monitoring Provisions in WDRs Order	1
3. Compliance with Title 27	1
4. Sample Collection and Analysis Plan (SCAP)	1
B. Detection Monitoring Program (DMP)	2
1. Groundwater	2
a. Required Network	2
b. Sample Collection and Analysis	3
c. Groundwater Conditions	5
2. Surface Water	5
a. Required Network	5
b. Sample Collection and Analysis	7
3. Flotation Tailings Reservoir Leachate to Skyrocket Pit Transfer: Volume and Quality Monitoring	8
4. Skyrocket Pit Water to North Pit Transfer: Volume and Quality Monitoring	9
5. Skyrocket Pit Water Treatment Monitoring	9
6. Summary of Water Quality Protection Standard (WQPS) Components	9

a. Compliance Period	9
b. Monitoring Points	10
c. Point of Compliance (POC).....	10
d. Constituents of Concern (COCs)	10
e. Monitoring Parameters.....	10
f. Concentration Limits	10
g. Retesting Procedures	12
C. Additional Facility Monitoring	12
1. FTR Leachate Collection & Removal System (LCRS)	12
a. Annual FTR LCRS Testing	12
b. Semi-annual Sump Inspection	13
2. Annual Facility Inspections.....	13
3. Major Storm Events.....	13
4. Rainfall Monitoring	14
D. Reporting Requirements.....	15
1. Semiannual Monitoring Reports (SMRs)	16
2. Annual Monitoring Reports (AMRs).....	18
3. Skyrocket Pit to North Pit Transfer Report	19
4. Leachate Seep Reporting.....	19
5. Annual Facility Inspection Report.....	19
6. Major Storm Event Reports	19
7. Financial Assurances Report	20
8. Water Quality Protection Standard Report	20

9. General Reporting Provisions	21
a. Transmittal Letters	21
b. Monitoring Data and Reports	21
c. Compliance with SPRRs.....	22
d. Additional Requirements for Monitoring Reports	22
E. Record Retention Requirements	22
Attachment A: Monitoring Locations	25

TABLE INDEX

Table 1—Groundwater Monitoring Network 2

Table 2—Groundwater Detection Monitoring, Physical Parameters 4

Table 3—Groundwater Detection Monitoring, Constituent Parameters..... 4

Table 4—Groundwater Detection Monitoring, Groundwater Conditions..... 5

Table 5—Surface Water Detection Monitoring Network 5

Table 6—Surface Water Detection Monitoring, Physical Parameters 7

Table 7—Surface Water Detection Monitoring, Constituent Parameters..... 8

Table 8—FTR Leachate Transfer to Skyrocket Pit Physical Parameters 8

Table 9—Notable Concentration Limits for Groundwater and Surface Water Sampling
Points, 2019 Annual Report (WQPS) 11

Table 10—LCRS Sump Monitoring, Monthly Inspection Parameters 13

Table 11—Summary of Required Reports 15

GLOSSARY

AMR	Annual Monitoring Report
BPA	Basin Plan Amendment
CIWQS	California Integrated Water Quality System Project
COCs	Constituents of Concern
DMP	Detection Monitoring Program
FTR	Flotation Tailings Reservoir
EC	Electrical Conductivity
GeoTracker	State Water Board's Data Management System for Sites with Potential Groundwater Impact
LCRS	Leachate Collection and Removal System
MDL	Method Detection Limit
MRP	Monitoring and Reporting Program
MU	Mining Unit
N/A	Not Applicable
ODS	Overburden Disposal Sites
PID	Photo Ionization Detector
POC	Point of Compliance for Water Quality Protection Standard
PQL	Practical Quantitation Limits
QA/QC	Quality Assurance/Quality Control
Qualified Professional	Professional Civil Engineer or Geologist licensed by the State of California
RL	Reporting Limit

SCAP	Sample Collection and Analysis Plan
SMR	Semiannual Monitoring Report
SPRRs / Standard Provisions ...	<i>Standard Provisions and Reporting Requirements for Industrial Facilities Regulated by Title 27, April 2016 Edition</i>
TDS	Total Dissolved Solids
Title 27	California Code of Regulations, Title 27
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WQPS	Water Quality Protection Standard
 UNITS	
°F	Degrees Fahrenheit
gpd	Gallons per Day
mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
µmhos/cm	Microsiemens per Centimeter
NTUs	Nephelometric Turbidity Units

PREFACE

Initially adopted by the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) pursuant to Water Code section 13267, subdivision (b)(1), and subsequently revised by the Executive Officer in accordance with delegated authority per Water Code section 13223, this Order establishes a Revised Monitoring and Reporting Program (Revised MRP) for Meridian Beartrack Co. and Meridian Gold Co. (collectively, Dischargers), which own and operate the Royal Mountain King Mine (Facility) in Calaveras County. Additional information regarding the Facility is set forth in the enumerated findings of the previously adopted Waste Discharge Requirements Order R5-2016-0055 (WDRs Order).

Except as otherwise provided in the following Revised MRP, these findings are incorporated herein. The Revised MRP also contains supplemental findings related to monitoring and reporting activities, and/or Facility conditions. For the purposes of California Code of Regulations, title 27 (Title 27) (e.g., §§ 21720, 20380-20435), the revised findings and provisions of this Order are conversely incorporated as part of the WDRs Order as well.

MONITORING & REPORTING PROGRAM

IT IS HEREBY ORDERED, pursuant to Water Code section 13267: that all previously issued Monitoring and Reporting Program(s) for the discharge of solid waste at the Facility are rescinded (except for enforcement purposes); and that the Dischargers, their agents, employees and successors shall comply with the following Revised Monitoring and Reporting Program (Revised MRP). The Dischargers shall not implement any changes until a revised MRP is issued by the Central Valley Water Board or its Executive Officer.

A. General Provisions

1. **Incorporation of Standard Provisions**—The Dischargers shall comply with all relevant provisions of the *Standard Provisions and Reporting Requirements* dated April 2016 (SPRRs or Standard Provisions), which are incorporated herein. See, e.g., SPRRs section I (*Standard Monitoring Specifications*) and section J (*Response to Release*).
2. **Monitoring Provisions in WDRs Order**—The Dischargers shall comply with all “Monitoring Provisions” in the Facility’s operative Title 27 WDRs Order **R5-2016-0055**, which are also incorporated herein.
3. **Compliance with Title 27**—The Dischargers shall comply with all of Title 27 provisions as they pertain to activities described in this MRP (including SPRRs).
4. **Sample Collection and Analysis Plan (SCAP)**—All samples shall be collected, preserved and transported in accordance with the approved Sample Collection and Analysis Plan (SCAP) and the Quality Assurance/Quality Control (QA/QC) standards specified therein. The Dischargers may use alternative analytical test methods (including new USEPA-approved methods), provided that the alternative methods have method detection limits (MDLs) equal to or lower than the analytical methods specified in this MRP and are identified in the approved 20 March 2015 SCAP.

B. Detection Monitoring Program (DMP)—To detect a release at the earliest possible time (see Title 27, § 20420, subd. (b)), the Dischargers shall implement a Detection Monitoring Program (DMP) for groundwater and surface water in accordance with the provisions of Title 27, particularly sections 20415 and 20420.

1. Groundwater

a. Required Network—The Facility’s groundwater monitoring well network consists of the wells listed in **Table 1**. As of the date of this Order, the network meets the requirements of Title 27. (Title 27, § 20415, subd. (b).)

Non-background monitoring wells at the Point of Compliance constitute “Monitoring Points” for purposes of the Water Quality Protection Standard (WQPS).

Table 1—Groundwater Monitoring Network

Groundwater Well	Program	Monitored Unit	Point of Compliance (WQPS)	Sampling Frequency
FPZ-3	Detection	FTR	No	Quarterly (Elevation only)
FPZ-4	Detection	FTR	No	Quarterly (Elevation only)
FPZ-5	Detection	FTR	No	Quarterly (Elevation only)
FPZ-6	Detection	FTR	No	Quarterly (Elevation only)
FPZ-7a	Detection	FTR	No	Quarterly (Elevation only)
GW-2	Detection	FTR	No	Annually
GWM-9	Detection	BPA Zone/ West ODS	Yes	Semiannually

Groundwater Well	Program	Monitored Unit	Point of Compliance (WQPS)	Sampling Frequency
GWM-10	Detection	BPA Zone/ Skyrocket Pit, West ODS	Yes	Semiannually
GWM-11	Background		No	Annually
GWM-12	Detection	Skyrocket Pit	No	Annually
GWM-21	Detection	Skyrocket Pit/ Gold Knoll ODS	No	Annually
GWM-25	Detection	Process Water Retention Pond	No	Annually
GWM-30R	Detection	FTR ODS	No	Annually
GWM-31	Detection	BPA Zone/ Gold Knoll ODS	Yes	Semiannually
GWM-32	Detection	BPA Zone/ West ODS	Yes	Semiannually
GWM-34	Detection	Gold Knoll ODS	No	Annually
GWM-37	Detection	Skyrocket Pit	No	Annually
PZ-4	Detection	Skyrocket Pit	No	Annually

See Glossary for definitions of terms and abbreviations in table.

- b. Sample Collection and Analysis**—Groundwater samples shall be collected from each well and analyzed for Monitoring Parameters listed in **Table 2** (*Physical Parameters*) and **Table 3** (*Constituent Parameters*), in accordance with the specified schedule for each parameter. (Title 27, § 20420, subs. (e)-(f).)

Table 2—Groundwater Detection Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Frequency	Reporting Freq.
Temperature	TEMP	°F	Per Table 1	Semiannually
Electrical Conductivity	SC	µmhos/cm	Per Table 1	Semiannually
pH (field)	PH	pH Units	Per Table 1	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Table 3—Groundwater Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Frequency	Reporting Freq.
Total dissolved solids	TDS	mg/L	Per Table 1	Semiannually
Sulfate	SO4	mg/L	Per Table 1	Semiannually
Nitrate as N	NO3N	mg/L	Per Table 1	Semiannually
Arsenic	AS	µg/L	Per Table 1	Semiannually

See Glossary for definitions of terms and abbreviations in table.

- c. **Groundwater Conditions**—The Dischargers shall monitor the Groundwater Conditions specified in **Table 4**, with the result of such monitoring being reported semiannually per **Section D.1**. (Title 27, § 20415, subd. (b)(1).)

Table 4—Groundwater Detection Monitoring, Groundwater Conditions

Groundwater Condition	GeoTracker Code	Measurement Frequency	Reporting Freq.
Elevation (Well-Specific)	ELEV	Quarterly	Semiannually
Gradient	(none)	Quarterly	Semiannually
Flow Rate	(none)	Quarterly	Semiannually

2. **Surface Water**—Runoff from the Facility periodically flows to Littlejohns Creek, which may be affected by a release. (See Title 27, § 20415, subd. (c)(1).). Skyrocket Pit, North Pit and ODS seep water quality monitoring is included in this section.
- a. **Required Network**—The Facility’s surface water monitoring network consists of the SWM monitoring points listed in **Table 5**. As of the date of this Order, the network meets the requirements of Title 27. (See § 20415, subd. (c).).

Table 5—Surface Water Detection Monitoring Network

Monitoring Point	Program or Function	Monitored Unit	Location / Notes	Sampling Frequency
SWM-2	Downstream	Skyrocket Pit	Tributary to Littlejohns Creek	Semiannually
SWM-8	Downstream	West ODS	Unnamed drainage to Clover Creek	Semiannually
SWM-9	Downstream	Gold Knoll ODS	Gold Knoll Creek	Semiannually

Monitoring Point	Program or Function	Monitored Unit	Location / Notes	Sampling Frequency
SWM-10	Downstream	Skyrocket Pit	Littlejohns Creek Diversion	Semiannually
Skyrocket Pit	Detection	Skyrocket Pit	Skyrocket Pit Water	Annually
North Pit	Detection	North Pit	North Pit Water	Annually
Gold Knoll ODS Seep	Detection	Gold Knoll ODS	Southwest Side of Gold Knoll ODS	Annually
West ODS 2	Detection	West ODS	West side of northern portion of West ODS	Annually
Gold Knoll ODS Seep	Detection	West ODS	Southeast of southern portion of West ODS	Annually

See Glossary for definitions of terms and abbreviations in table.

- b. Sample Collection and Analysis**—When surface water is present at monitoring points in **Table 5** at any point during the monitoring period, samples shall be collected from each monitoring point and analyzed for the Monitoring Parameters in **Table 6** (*Physical Parameters*) and **Table 7** (*Constituent Parameters*), in accordance with the specified schedule. (Title 27, § 20420, subds. (e)-(f).)

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 frequency specified in **Table 5** and methods listed in **Tables 6** and **7**.

Seepage from the West and Gold Knoll ODSs at the locations listed below shall be sampled at locations and sampling frequency described in **Table 5** and analyzed for monitoring parameters listed in **Tables 6** and **7**.

Table 6—Surface Water Detection Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Static Water Level (Skyrocket and North Pit only)	(none)	Feet MSL	Semiannually	Semiannually
Flow Rate	(none)	gpm	Per Table 5	Semiannually
Temperature	TEMP	°F	Per Table 5	Semiannually
Electrical Conductivity	SC	µmhos/cm	Per Table 5	Semiannually
pH (field)	PH	Std. Units	Per Table 5	Semiannually
Turbidity	TURB	NTUs	Per Table 5	Semiannually
Dissolved Oxygen	E360.1	mg / L	Per Table 5	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Table 7—Surface Water Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Total Dissolved Solids	TDS	mg/L	Per Table 5	Semiannually
Nitrate as Nitrogen	NO3N	mg/L	Per Table 5	Semiannually
Sulfate	SO4	mg/L	Per Table 5	Semiannually
Arsenic	As	µg/L	Per Table 5	Semiannually

See Glossary for definitions of terms and abbreviations in table. Semi-annual sampling events shall be reported in semi-annual monitoring reports as specified in **Section D.1**.

- 3. Flotation Tailings Reservoir Leachate to Skyrocket Pit Transfer: Volume and Quality Monitoring**— In accordance with WDRs R5-2016-0055, 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. Leachate shall be sampled at the outlet pipe from the FTR to the Skyrocket Pit **quarterly** and analyzed for parameters listed in **Tables 7 and 8**.

Table 8—FTR Leachate Transfer to Skyrocket Pit Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Frequency	Reporting Freq.
Pumping/ Flow Rate	(none)	gpd	daily	Semiannually
Temperature	TEMP	°F	Quarterly	Semiannually
Electrical Conductivity	SC	µmhos/cm	Quarterly	Semiannually
pH (field)	PH	Std. Units	Quarterly	Semiannually

- 4. Skyrocket Pit Water to North Pit Transfer: Volume and Quality Monitoring**— In accordance with WDRs R5-2016-0055, 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. When water transfer from Skyrocket Pit to North Pit becomes necessary, the Discharger shall sample Skyrocket and the North Pit waters 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 **Tables 7** and **8**. Pumping rates and volumes shall be recorded daily during transfer operations. Volume and water quality data shall be reported in a tabular form as specified in **Section D.3** and summarized in annual monitoring report per **Section D.2**.
- 5. Skyrocket Pit Water Treatment Monitoring**— the Discharger may treat Skyrocket Pit with ferrous sulfate to reduce arsenic concentrations. If the Discharger chooses to treat Skyrocket Pit with ferrous sulfate, the Discharger shall monitor and/or sample Skyrocket Pit water prior to the treatment and after, in accordance with all applicable requirements of this MRP. The samples shall be analyzed for the parameters listed in **Tables 7** and **8**. Additionally, pumping rates, ferrous sulfate concentrations, and volumes shall be recorded daily during treatment operations. Treatment shall be described, and data provided in tabular form in the AMR (**Section D.2**).
- 6. Summary of Water Quality Protection Standard (WQPS) Components**—The Water Quality Protection Standard (WQPS) is the Title 27 analytical framework through which an individual MU is monitored for releases and impacts to water quality, i.e., the Detection Monitoring Program (DMP) (See Title 27, § 20390, subd. (a).) As explained in further detail below, for the duration of the *Compliance Period*, the *Monitoring Points* situated at *Point of Compliance* are sampled and analyzed for *Monitoring Parameters* indicative of a release. If concentrations of *Constituents of Concern* exceed *Concentration Limits*, the results are confirmed through *Retesting Procedures*.

 - a. Compliance Period**—The “compliance period” is the minimum time for which a water quality monitoring will be required— i.e., equal to the sum of active years and the closure period. (Title 27, § 20410.) The period restarts each time an Evaluation Monitoring Program (EMP) is initiated for a given MU. (*Id.*, §§ 20410(a), 20415, 20425.) If a MU is in corrective action, the

period continues until it is demonstrated that the MU has been in continuous compliance with its WQPS for at least three years. (*Id.*, § 20410, subd. (c).)

- b. **Monitoring Points**—For WQPS purposes, a “monitoring point” is any well, device, or location where monitoring is conducted, and is specified in the Facility’s WDRs and subject to the WQPS. (Title 27, § 20164.) Monitoring Points are listed in **Section B** (*Detection Monitoring Program*)—specifically **Table 1** (*Groundwater*) and **Table 5** (*Surface Water*).
- c. **Point of Compliance (POC)**—The Point of Compliance (POC) is a vertical plane hydraulically downgradient limit from the monitored unit, extending through the uppermost underlying aquifer. (Title 27, §§ 10164, 20405(a).)

The Facility’s POC monitoring wells GWM-9, GWM-10, GWM-31, and GWM-32 listed in **Table 1** monitor the perimeter of the Basin Plan Amendment de-designated zone rather than individual MUs because the concentrations of COCs in previous POC monitoring wells have been consistently stable or decreasing. As shown in **Attachment A**, POC monitoring wells are located at the downgradient edge of the Basin Plan Amendment de-designated zone defined by Order R5-2014-0047.

- d. **Constituents of Concern (COCs)**—Constituents of Concern (COCs) are waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in a MU. (Title 27, §§ 20164, 20395.)
- e. **Monitoring Parameters**—Monitoring Parameters are a predetermined set of COCs and measurable physical characteristics (e.g., temp., electrical conductivity, pH), which serve as reliable indicators of release, and for which samples will therefore be routinely analyzed. (Title 27, §§ 20164, 20395(a), 20420(e)-(f).) For the purposes of this MRP, the Monitoring Parameters are:
 - i. For **Surface Water**, those in **Table 6** and **Table 7**;
 - ii. For **Groundwater**, those in **Table 2** and **Table 3**; and
- f. **Concentration Limits**—The Concentration Limit for each COC is the “background concentration,” as determined by the statistical

methods outlined in subdivision (e)(8) of Title 27, section 20415.¹ (Title 27, § 20400, subs. (a), (b).) Methods for calculating Concentration Limits were proposed in the July 2015 WQPS Report and updated annually in annual monitoring reports. The approved methods use 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.

Concentration Limits shall be proposed and/or updated by the Dischargers every two years, in the Annual Monitoring Report submitted per **Section D.2**. As of the date of this Order, Concentration Limits were last specified in 2019, and shall be updated again as part of the 2021 Annual Monitoring Report, and again every two years thereafter.

Unless expressly rejected by the Executive Officer in writing, these Concentration Limits shall be incorporated as part of this Order. Several notable Concentration Limits, as submitted in the 2019 Annual Report, are set forth below in **Table 9**.²

Table 9—Notable Concentration Limits for Groundwater and Surface Water Sampling Points, 2019 Annual Report (WQPS)

Sampling Point	Analysis	pH (std units)	TDS (mg/L)	Nitrate as N (mg/L)	Sulfate (mg/L)	Arsenic (µg/L)
GWM-9	Intrawell	8.2-8.5	2,362	505	0.78	13.5
GWM-10	Intrawell	7.9-8.1	10,466	3,299	0.09	2

¹ Concentration Limits are initially proposed by the discharger, then reviewed and approved by the Central Valley Water Board (subject to any necessary revisions). The limits specified herein are approved and incorporated as part of the Facility's WDRs.

² The Concentration Limits set forth in **Table 9** is only a partial list of values that are provided for general informational purposes only. These limits shall be superseded once updated values are submitted.

Sampling Point	Analysis	pH (std units)	TDS (mg/L)	Nitrate as N (mg/L)	Sulfate (mg/L)	Arsenic (µg/L)
GWM-11	Intrawell	7.8-8.2	1,320	623	14.40	0.9
GWM-12	Intrawell	8.6-8.7	6,104	2,072	0.39	730
GWM-21	Intrawell	7.3-7.9	5,556	3,014	49.52	1
GWM-25	Intrawell	7.1-7.9	1,632	782	0.18	0.7
GWM-30R	Intrawell	7.5-8.1	3,135	1,814	10.60	6.5
GWM-31	Intrawell	7.9-8.1	9,280	2,970	1.73	18.5
GWM-32	Intrawell	7.5-8.2	468	100.2	2.71	3.3
GWM-34	Intrawell	8.0-8.3	682	247	6.74	7.5
PZ-4	Intrawell	7.6-8.0	3,030	1,560	0.26	2.4

See Glossary for definitions of terms and abbreviations in table.

- g. **Retesting Procedures**—If monitoring results indicate measurably significant evidence of a release, as described in Section I.45 of the SPRRs (*Standard Monitoring Specifications*), the Dischargers shall apply the following:
 - i. **Non-Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in less than 10 percent of background samples (e.g., non-naturally occurring COCs); and
 - ii. **Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in at least 10 percent of background samples (e.g., naturally occurring COCs).

C. Additional Facility Monitoring

- 1. **FTR Leachate Collection & Removal System (LCRS)**—The Dischargers shall operate and maintain leachate collection and removal system (LCRS) sump, and conduct monitoring of any detected leachate seeps in accordance with Title 27 and the following provisions.
 - a. **Annual FTR LCRS Testing**—Leachate Collection and Removal System (LCRS) shall be tested annually to demonstrate proper

operation, with the results of each test being compared to the results of prior testing and documented in the AMR (**Section D.2**). (See Title 27, § 20340, subd. (d).)

- b. **Semi-annual Sump Inspection**—LCRS sump shall be inspected semiannually for the presence of leachate. As provided in **Table 10**, the total flow and flow rate for leachate in sump shall be recorded after each inspection and reported annually per **Section D.1**. The current LCRS leachate sump monitoring point is FTR Sump.

Table 10—FTR LCRS Sump Monitoring, Monthly Inspection Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Presence of Leachate	Observation		Semiannually	Semiannually
Total Flow	(none)	Gallons	Monthly	Semiannually
Flow Rate	FLOW	Gallons/Day	Monthly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

- 2. **Annual Facility Inspections**—Prior to **30 September** of each year, the Dischargers shall inspect the Facility to assess repair and maintenance needs for drainage control systems, cover systems and groundwater monitoring wells; and preparedness for winter conditions (e.g., erosion and sedimentation control). If repairs are made as result of the annual inspection, problem areas shall be photographed before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by 31 October. See **Section D.5** for Reporting Requirements.
- 3. **Major Storm Events**—Within **seven days** of any storm event capable of causing damage or significant erosion (Major Storm Event), the Dischargers shall inspect the Facility for damage to any precipitation, diversion and drainage facilities, and all MU side slopes. Necessary repairs shall be completed within 30 days of the inspection. The Dischargers shall take photos of any problem areas before and after repairs. See **Section D.6** for Reporting Requirements.

4. **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 SMRs as required by this MRP in **Section D.1**.

D. Reporting Requirements

Table 11—Summary of Required Reports

Section	Report	Deadline
§ D.1	<i>Semiannual Monitoring Reports (SMRs)</i>	1 February (submit with Annual Report) (1 January to 30 June) 1 February (submit with Annual Report) (1 July to 31 December)
§ D.2	<i>Annual Monitoring Reports (AMRs)</i>	1 February
§ D.3	<i>Skyrocket Pit to North Pit Transfer Report</i>	45 days following the end of transfer
§ D.4	<i>Leachate Seep Reporting</i>	Immediately upon Discovery of Seepage (staff notification) Within 7 Days (written report)
§ D.5	<i>Annual Facility Inspection Reports</i>	15 November
§ D.6	<i>Major Storm Reporting</i>	Immediately after Damage Discovery (staff notification) Within 14 Days of Completing Repairs (written report, photos)
§ D.7	<i>Financial Assurances Reports</i>	1 June
§ D.8	<i>Water Quality Protection Standard Reports</i>	Proposed Revisions (excluding Concentration Limits)

1. **Semiannual Monitoring Reports (SMRs)**—The Dischargers shall submit both Semiannual Monitoring Reports (SMRs) (1 Jan. to 30 June) and (1 July to 31 Dec.) with the Annual Report on **1 February**. SMRs shall contain the following materials and information:
 - a. A statement affirming that all sampling activities referenced in the report were conducted in accordance with the approved SCAP (see § A.4).
 - b. Map(s)/aerial photograph(s) depicting locations of all observation stations, monitoring points referenced in the report.
 - c. In tabulated format, all monitoring data required to be reported on a semiannual basis, including Groundwater Conditions and Monitoring Parameters. (See Section D.9.b for additional requirements.)
 - d. For each groundwater monitoring point referenced in the SMR:
 - i. The times each water level measurement was taken;
 - ii. The type of pump or other device used to purge and elevate pump intake level relative to screening interval;
 - iii. The purging methods used to stabilize water in the well bore before sampling (including pumping rate);
 - iv. The equipment and methods used for monitoring pH, temperature, and electrical conductivity (EC) during purging activity, and the results of such monitoring;
 - v. Methods for disposing of purged water; and
 - vi. The type of device used for sampling, if different than the one used for purging.
 - e. 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)].
 - f. Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, surface water, Skyrocket and North

Pits, LCRS/leachate, 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 2, 3, 6, 7 and 8 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.

- g. Evaluation of concentrations for all Constituent Parameters, comparison to current Concentration Limits, and results of any Retesting Procedures per Section B.6.g.
- h. In the event of a verified exceedance of Concentration Limit(s), any actions taken per Section J of the SPRRs (*Response to Release*) for the affected wells and/or constituents.
- i. Laboratory statements of results of all analyses evaluating compliance with the WDRs.
- j. Evaluation as to effectiveness of existing leachate monitoring and control facilities, and runoff/run-on control facilities.
- k. A summary of all Facility Monitoring including onsite rainfall data for the reporting period required in Section C.4 of this MRP.
- l. A summary of Skyrocket Pit ferrous sulfate treatment procedures, quantity of ferrous sulfate discharged into Skyrocket Pit, and tabulated Skyrocket Pit water quality data with associated analytical laboratory reports.
- m. A summary of the Skyrocket Pit discharge into the Littlejohns Creek pursuant to the Order R6-2018-0003.
- n. A summary and tabulated data of volume and quality of water transferred from Skyrocket Pit to North Pit.
- o. Tabulated monthly quantities of water discharged to Skyrocket Pit from each ODS and the FTR LCRS.
- p. Copies of the Division of Dam Safety inspection reports.

- 2. Annual Monitoring Reports (AMRs)**—On **1 February** of each year,³ the Dischargers shall submit an Annual Monitoring Report (AMR) containing following materials and information:
- a. In tabulated format, all monitoring data for which annual reporting is required under this MRP. (See Section D.9.b for additional requirements for monitoring reports.)
 - b. Graphs of historical trends for all Monitoring Parameters with respect to each monitoring point over.⁴
 - 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 spreadsheet accompanying the report.
 - d. For each groundwater well, quarterly hydrographs showing the elevation of groundwater with respect to the top and bottom of the screened interval, and the elevation of the pump intake,
 - e. A comprehensive discussion of the Facility's compliance record, and the result of any corrective actions taken or planned which may be needed to attain full compliance with the WDRs.
 - f. A summary of the monitoring results, indicating any changes made or observed since the previous AMR.
 - g. A discussion on the results of annual LCRS Testing conducted in accordance with Section C.1.a.
 - h. When required per Section B.6.f of this Order, periodic updates to the Concentration Limits for all Monitoring Parameters and WQPS Monitoring Points.

³ The Annual Monitoring Report may be combined with both Semiannual Reports.

⁴ Each graph shall contain individual data points (not mean values) and be appropriately scaled to accurately depict statistically significant trends or variations in water quality. Outliers which reduce the resolution of graphs should be removed and mentioned in a footnote.

- 3. Skyrocket Pit to North Pit Transfer 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 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 emergency transfer operations.
- 4. Leachate Seep Reporting**—Upon discovery of seepage from any disposal area within the Facility, the Dischargers shall **immediately notify** the Central Valley Water Board via telephone or email; and **within seven days**, submit a written report with the following information:

 - a. Map(s) depicting the location(s) of seepage;
 - b. Estimated flow rate(s);
 - c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);
 - d. Verification that samples have been submitted for analyses of the Monitoring Parameters in **Table 8** (*Physical Parameters*) and **Table 7** (*Constituent Parameters*), and an estimated date that the results will be submitted to the Central Valley Water Board; and
 - e. Corrective measures underway or proposed, and corresponding time schedule.
- 5. Annual Facility Inspection Report**—By **15 November**, the Dischargers shall submit a report with results of the Annual Facility Inspection per **Section C.2**. The report shall discuss any repair measures implemented, any preparations for winter, and include photographs of any problem areas and repairs.
- 6. Major Storm Event Reports**—Immediately following each post-storm inspection described in **Section C.3**, the Dischargers shall notify Central Valley Water Board staff of any damage or significant erosion (upon discovery). Subsequent repairs shall be reported to the Central Valley

Water Board (together with before and after photos of the repaired areas) **within 14 days** of completion.

7. **Financial Assurances Report**—By **1 June** of each year, the Dischargers shall submit a copy of the annual financial assurances update (See WDRs Order Section F.)
8. **Water Quality Protection Standard Report**—Any proposed changes⁵ to the Water Quality Protection Standard (WQPS) components (§ B.6), other than periodic update of the Concentration Limits (§ B.6.f), shall be submitted in a WQPS Report for review and approval. The report shall be certified by a “Qualified Professional” (§ B), and contain the following:
 - a. *Potentially Affected Waterbodies*—An identification of all distinct bodies of surface water and groundwater potentially affected by a MU release (including, but not limited to, the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the Facility);
 - b. *Map of Monitoring Points*—A map of all groundwater, surface water⁶ and unsaturated zone monitoring points (including all background/upgradient and Point of Compliance monitoring points);
 - c. *Groundwater Movement*—An evaluation of perennial direction(s) of groundwater movement within the uppermost zone(s);
 - d. *Statistical Method for Concentration Limits*—A proposed statistical method for calculating Concentration Limits for Monitoring Parameters detected in at least 10 percent of the background data (naturally-occurring constituents) using a statistical procedure from

⁵ If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to onsite waste management activities, the Discharger may request modification of the WQPS.

⁶ To the extent that surface water monitoring is included in the Detection Monitoring Program.

subdivisions (e)(8)(A)-(D) or (e)(8)(E) of Title 27, section 20415; and

- e. *Retesting Procedure*—A retesting procedure to confirm or deny measurably significant evidence of a release (Title 27, §§ 20415(e)(8)(E), 20420(j)(1)-(3)).

9. General Reporting Provisions

- a. **Transmittal Letters**—Each report submitted under this MRP shall be accompanied by a Transmittal Letter providing a brief overview of the enclosed report, as well as the following:

- i. Any violations found since the last report was submitted, a description of all actions undertaken to correct the violation (referencing any previously submitted time schedules for compliance), and whether the violations were corrected; and
- ii. A statement from the submitting party, or its authorized agent, signed under penalty of perjury, certifying that, to the best of the signer’s knowledge, the contents of the enclosed report are true, accurate and complete.

- b. **Monitoring Data and Reports**

- i. **Electronic Submission via GeoTracker**—All reports with monitoring data (e.g., SMRs and AMRs) shall be submitted electronically via the State Water Board’s [GeoTracker Database](https://geotracker.waterboards.ca.gov) (<https://geotracker.waterboards.ca.gov>). After uploading a report, the Dischargers shall notify Central Valley Water Board staff via email at CentralValleySacramento@WaterBoards.ca.gov . The following information shall be included in the body of the email:

Attention:	Title 27 Permitting and Mining
Report Title:	[Title of Report]
GeoTracker Upload ID:	[Identification Number]
Facility Name:	Royal Mountain King Mine
County:	Calaveras County
CIWQS Place ID:	253448

- ii. **Data Presentation and Formatting**—In reporting monitoring data, the Dischargers shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Additionally, data shall be summarized in a manner that clearly illustrates compliance/noncompliance with WDRs.
 - iii. **Non-Detections / Reporting Limits**—Unless the reporting limits (RL) are specified in the same table, non-detections and sub-RL concentrations shall be reported as “< [limit]” (e.g., “< 5 µg/L”).
 - iv. **Units**—Absent specific justification, all monitoring data shall be reported in the units specified herein.
 - c. **Compliance with SPRRs**—All reports submitted under this MRP shall comply with applicable provisions of the SPRRs, including those in Section I (*Standard Monitoring Specifications*) and Section J (*Response to Release*).
 - d. **Additional Requirements for Monitoring Reports**—Every monitoring report submitted under this MRP (e.g., SMRs [§ D.1], AMRs [§ D.2]) shall include a discussion of relevant field and laboratory tests, and 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.
 - E. **Record Retention Requirements**—The Dischargers shall maintain permanent records of all monitoring information, including without limitation: calibration and maintenance records; original strip chart recordings of continuous monitoring instrumentation; copies of all reports required by this MRP; and records of all data used to complete the application for WDRs. Such records shall be legible, and show the following for each sample:
 - 1. 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;
 - 2. Date, time, and manner of sampling;
 - 3. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

4. A complete list of procedures used (including method of preserving the sample, and the identity and volumes of reagents used);
5. A calculation of results; and
6. The results of all analyses, as well as the MDL and PQL for each analysis (all peaks shall be reported).

SIGNATURE

This Order is effective as of the date set forth below.

ORDERED BY:

PATRICK PULUPA,
Executive Officer

February 23, 2021

DATE

LIST OF ATTACHMENTS

Attachment A: Monitoring locations.

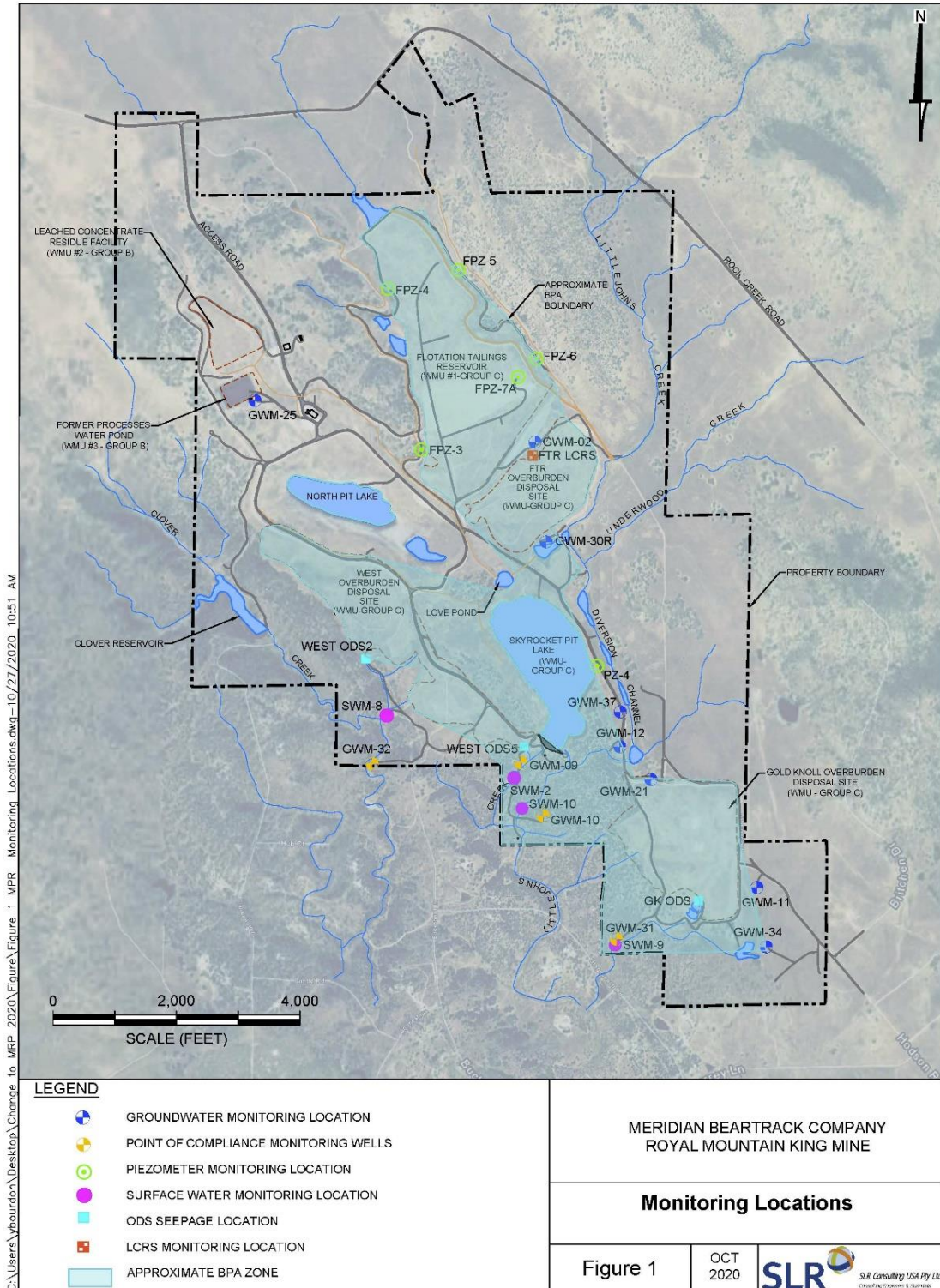
ENFORCEMENT

If, in the opinion of the Executive Officer, the Dischargers fail 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.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the [State Water Board website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A: MONITORING LOCATIONS



C:\Users\jbourdon\Desktop\MPR 2020\Figure 1 MPR Monitoring Locations.dwg - 10/27/2020 10:51 AM