

**PACIFICORP**  
**ENERGY WEST**  
HYDROLOGIC MONITORING PROGRAM  
DEER CREEK, WILBERG/COTTONWOOD, DES-BEE-DOVE  
and TRAIL MOUNTAIN MINES

**I. MONITORING LOCATIONS**

**A. Surface Water Hydrology** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1, Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D Mill Fork Lease for East Mountain locations listed below / Trail Mountain Mine: Volume 3 Plate 7-1 and Plate 7-2 for Trail Mountain locations listed below)

**1. Cottonwood Creek Drainage System**

a. *Cottonwood Canyon Creek* (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1 or Trail Mountain Mine Permit Volume 3 Plate 7-1)

- (1) SW-1 - Above Trail Mtn. Mine  
(Approximately 5000 feet upstream from the inlet culvert for the disturbed area.) 2150 feet South, 2000 feet East of the Northwest corner of Section 24, Township 17 South, Range 6 East.
- (2) SW-2 - Below Trail Mtn. Mine  
(Approximately 200 feet downstream from the outlet culvert for the disturbed area.) 1300 feet South, 1750 feet West of the Northeast corner of Section 25, Township 17 South, Range 6 East.
- (3) CCC01 - USGS Flume:  
(Approximately 7800 feet downstream from the outlet culvert for the disturbed area.) 1500 feet North, 200 feet East of the Southwest corner of Section 31, Township 17 South, Range 7 East.
- (4) SW-3 - Below Trail Mtn. Mine  
(Approximately 3800 feet above confluence with Straight Canyon) 2400 feet South, 2400 feet East of the Northeast corner of Section 6, Township 18 South, Range 6 East.

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- b. ***Unnamed Drainage off Straight Canyon*** (refer to Trail Mountain Mine Permit Volume 3 Plate 7-1)
  - (1) T-19  
(Approximately 200 feet upstream from the from confluence with Straight Canyon) 2500 feet South, 1100 feet East of the Northeast corner of Section 3, Township 18 South, Range 6 East.
- c. ***Grimes Wash*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)
  - (1) GWR01 - Right Fork:  
(Approximately 1500 feet upstream from the inlet culvert for the disturbed area.) 550 feet North, 1500 feet West of the Southwest corner of Section 22, Township 17 South, Range 7 East.
  - (2) GWR02 - Left Fork:  
(Approximately 50 feet upstream from the inlet culvert for the disturbed area.) 200 feet South, 2350 feet East of the Northwest corner of Section 27, Township 17 South, Range 7 East.
  - (3) GWR03 - Below the mine:  
(Approximately 500 feet downstream from the outlet culvert below the disturbed area.) 1770 feet South, 1820 feet West of the Northeast corner of Section 27, Township 17 South, Range 7 East.
- d. ***Indian Creek*** (refer to Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)
  - (1) ICA - Indian Creek Above  
(Approximately 2500 feet northwest of the Mill Fork permit boundary) 400 feet North, 2350 feet West of the Southwest corner of Section 3, Township 16 South, Range 6 East.
  - (2) ICF - Indian Creek Flume  
(Approximately 2100 feet west of the Mill Fork permit boundary) 300 feet North, 3400 feet West of the Southwest corner of Section 10, Township 16 South, Range 6 East.

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- (3) ICD - Indian Creek Ditch  
(Approximately 1600 feet west of the Mill Fork permit boundary, irrigation ditch for Upper Joes Valley) 240 feet North, 2850 feet West of the Southwest corner of Section 15, Township 16 South, Range 6 East.
- (4) ICB - Indian Creek Below  
(Approximately 3700 feet west of the Mill Fork permit boundary, junction of Indian Creek and FDR040) 70 feet North, 120 feet West of the Southwest corner of Section 16, Township 16 South, Range 6 East.

**2. Huntington Creek Drainage System**

- a. **Huntington Creek** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)
  - (1) HCC01 - Above Deer Creek Confluence:  
1400 feet north, 2200 feet west of the southeast corner of Section 36, Township 16 South, Range 7 East.
  - (2) HCC02 - Below Deer Creek Confluence:  
300 feet north, 300 feet west of the southwest corner of Section 31, Township 16 South, Range 8 East.
  - (3) HCC03 - Below Huntington Power Plant:  
2500 feet north, 1500 feet east of the southeast corner of Section 6, Township 17 South, Range 8 East.
  - (4) HCC04 - @ Research Farm\*  
800 feet north, 200 feet east of the southwest corner of Section 5, Township 17 South, Range 8 East.  
\*Not listed on map due to scale.
- b. **Deer Creek** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)
  - (1) DCR01 - Above the mine:  
(Approximately 600 feet upstream from the mine facility.)  
200 feet North, 800 feet West of the Southeast corner of Section 10, Township 17 South, Range 7 East.

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- (2) DCR04 - Near C1/C2 Belt Intersection:  
(Approximately 5,000 feet downstream from the mine facility.) 300 feet North, 2000 feet East of the Southeast corner of Section 2, Township 17 South, Range 7 East.
- (3) DCR06 - @ Huntington Creek Confluence:  
(Approximately 15,000 feet downstream from the facility) 1400 feet north, 1100 feet east of the southeast corner of Section 36, Township 16 South, Range 7 East.
- c. **Meetinghouse Canyon - South Fork** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)  
(Approximately 200 feet upstream from the north and south convergence.) 800 feet North, 1500 feet East of the Southwest corner of Section 35, Township 16 South, Range 7 East.
- d. **Rilda Canyon** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)
  - (1) RCF-1 - Rilda Canyon - Right Fork:  
(Approximately 4000 feet upstream from the Right and Left fork convergence.) 400 feet South, 200 feet West of the Northeast corner of Section 30, Township 16 South, Range 7 East.
  - (2) RCLF1 - Rilda Canyon - Left Fork, below Rilda Canyon Portals: (Approximately 200 feet upstream from the Right and Left fork convergence.) 2400 feet North, 2100 feet West of the Southeast corner of Section 29, Township 16 South, Range 7 East.
  - (3) RCLF2 - Rilda Canyon - Left Fork, above Rilda Canyon Portals: (Approximately 1600 feet upstream from the Right and Left fork convergence.) 1600 feet North, 2300 feet West of the Southwest corner of Section 29, Township 16 South, Range 7 East.
  - (4) RCF2 - Rilda Canyon - Above NEWUA springs: 2500 feet South, 400 feet West of the Northeast corner of Section 29, Township 16 South, Range 7 East.

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- (5) RCF3 - Rilda Canyon - Below NEWUA springs: 2550 feet South, 1000 feet East of the Northeast corner of Section 28, Township 16 South, Range 7 East.
- (6) RCW4 - Rilda Canyon: (Approximately 1000 feet upstream from the confluence with Huntington Creek.) 850 feet North, 1900 feet West of the Southeast corner of Section 26, Township 16 South, Range 7 East.
- e. **Mill Fork Canyon** (refer to Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)
  - (1) MFA01 - Mill Fork Canyon - Above Old Mine: (Approximately 2000 feet above old mine portals @ end of USFS development road.) 100 feet North, 1500 feet West of the Southeast corner of Section 17, Township 16 South, Range 7 East.
  - (2) MFB02 - Mill Fork Canyon - Above Huntington Creek Confluence: (Approximately 200 feet above confluence with Huntington Creek @ culvert outfall.) 100 feet South, 1900 feet East of the Northwest corner of Section 22, Township 16 South, Range 7 East.
  - (3) MFU03 - Mill Fork Canyon - Above Mill Fork Fault Crossing: (Approximately 700 feet upstream of projected Mill Fork Fault crossing) 1150 feet North, 1700 feet East of the Southwest corner of Section 17, Township 16 South, Range 7 East.
3. Reclamation Monitoring:  
Following stage 1 final reclamation backfilling and grading monitoring will be conducted at points immediately above and below the last sediment pond(s).

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**B. Groundwater Hydrology**

**1. East Mountain Springs** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine Permit : Volume 9 maps HM-4 and HM-5)

Burnt Tree *	80-41
Elk Spring *	80-43
Sheba Springs *	80-44*
Ted's Tub	80-46*
79-2	80-47
79-10 *	80-48
79-15	80-50
79-23 *	82-51
79-24	82-52*
79-26 *	84-56*
79-28 (Flag Lake)	89-60(Alpine Spring)
79-29 *	89-61
79-32	89-65
79-34	89-66
79-35 *	89-67
79-38	89-68
79-40	Rilda Canyon-(Meters 2&3)

\* Recession Study Springs (Flow August & September)

**2. Trail Mountain Springs** (refer to Trail Mountain Mine Permit Volume 3 Plate 7-1)

T-6	T-14
T-8	T-15
T-9	T-16
T-10	T-18 (Oliphant Mine Discharge)

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**3. East Mountain Springs - Mill Fork Area** (refer to Deer Creek Permit Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)

EM-216	MFR-30
JV-9	RR-5
JV-34	RR-15
MF-7	RR-23A
MF-10	SP1-26
MF-19B	SP1-29
MF-213	UJV-101
MF-219	UJV-206
MFR-10	UJV-213
EMPOND	Grants Spring
Little Bear Spring	

**3. Piezometric Data**

a. Surface

- (1) Rilda Canyon (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

P1

P5

P6

P7

EM-47

- (2) Cottonwood Canyon Creek

*East Mountain (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)*

EM-31

CCCW-1A

CCCW-1S

CCCW-2A

CCCW-3A

CCCW-3S U

CCCW-3S L

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*Trail Mountain (refer to Trail Mountain Mine Permit  
Volume 3 Plate 7-1)*

TM-1B

TM-3

- b. Underground: In-Mine
  - (1) Deer Creek Mine (Refer to Annual Hydrologic Reports for Locations : Map HM-2)

**4. In-Mine Water Locations**

- a. Deer Creek Mine (Refer to Annual Hydrologic Reports for Locations : Map HM-2)
- b. Wilberg/Cottonwood Mines (Refer to Annual Hydrologic Reports for Locations : Map HM-3)
- c. Trail Mountain Mine (Refer to Annual Hydrologic Reports for Locations : PLATE 7-3)

**5. Waste Rock Wells (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)**

- a. Deer Creek
- b. Cottonwood

**C. UPDES Monitoring Locations**

- a. ***Deer Creek Mine***  
UPDES UT0023604
  - 001- Sediment Pond
  - 002- Mine Discharge
- b. ***Des-Bee-Dove Mines***  
UPDES UTG040022
  - 001- Sediment Pond

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- c. ***Wilberg/Cottonwood Mines***  
UPDES UT0022896  
001- Mine Discharge @ Cottonwood Canyon (TMA)  
002- Sediment Pond Discharge @ Cottonwood Canyon  
003- Sediment Pond @ Mine Facilities  
004- Mine Discharge @ Miller Canyon  
005- Sediment Pond Discharge @ Waste Rock Site
- d. ***Trail Mountain Mine***  
UPDES UT0023728  
001- Sediment Pond  
002- Mine Discharge

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**II. MONITORING SCHEDULE** (see enclosed monitoring table)

**A. Field Measurements**

Field Measurements collected during quality sampling: Listed below are the sites which will be monitored by PacifiCorp - Energy West in accordance with the guidelines established by DOGM; i.e.,

- Date and Time
- Flow
- pH
- Temperature
- Conductivity
- Dissolved oxygen (perennial streams only)

**Surface Monitoring**

Surface monitoring locations will be field monitored quarterly for all field parameters, except Indian Creek - monitoring to be conducted during baseflow only.

**1. Cottonwood Canyon Creek**

- a. Cottonwood Canyon Creek
  - (1) SW-1
  - (2) SW-2
  - (3) Cottonwood Canyon Creek - USGS Flume
  - (4) SW-3
- b. Grimes Wash
  - (1) GWR01
  - (2) GWR02
  - (3) GWR03
- c. Indian Creek
  - (1) ICA
  - (2) ICF
  - (3) ICD
  - (4) ICB
- d. Straight Canyon
  - (1) T-19 (Unnamed Side Drainage)

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**2. Huntington Canyon Drainage**

- a. Deer Creek
  - (1) DCR01
  - (2) DCR04
  - (3) DCR06

- b. Huntington Creek
  - (1) HCC01
  - (2) HCC02
  - (3) HCC04

Flow in Huntington Creek is measured only at HCC01 by Utah Power, and will be reported in the Annual Hydrologic Report.

- c. Meetinghouse Canyon - South Fork: MCH01

- d. Rilda Canyon
  - (1) RCF1\*
  - (2) RCLF 1
  - (3) RCLF 2
  - (4) RCF2
  - (5) RCF3
  - (6) RCW4

\* Baseline flow will be measured adjacent to EM-163

- e. Mill Fork Canyon
  - (1) MFA01
  - (2) MFB02
  - (3) MFU03

**Groundwater Monitoring**

- 1. East Mountain Springs (see monitoring location list)
  - 2. Trail Mountain Springs (see monitoring location list)
  - 3. East Mountain Springs - Mill Fork Area (see monitoring location list)
- East/Trail Mountain Springs will be field monitored during the months of July and October. In addition, the East Mountain Recession Study Springs (denoted by asterisks in the Monitoring Location section) and Trail Mountain Springs will be field monitored for flow only from July through October. T-18: Oliphant Mine Discharge, will be collected and analyzed

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quarterly. Rilda Canyon Springs - NEWUA (meters 2 & 3) will be field monitored monthly depending upon access.

3. In-Mine

- a. Deer Creek
- b. Wilberg/Cottonwood
- c. Trail Mountain

In-mine locations will be field monitored quarterly for all field parameters except pH, conductivity, and dissolved oxygen.

4. Piezometric Wells

a. Surface

Piezometric surface wells will be field monitored for level only on a monthly basis depending upon access.

- (1) Rilda Canyon (see Map HM-1 for locations)

P1

P5

P6

P7

EM-47

- (2) Cottonwood Canyon Creek (see Map HM-1 for locations)

EM-31

CCCW-1A

CCCW-1S

CCCW-2A

CCCW-3A

CCCW-3S U

CCCW-3S L

TM-1B

TM-3

5. Waste Rock Wells

- a. Deer Creek
- b. Cottonwood

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**UPDES Monitoring**

1. Deer Creek
2. Des-Bee-Dove
3. Wilberg/Cottonwood
4. Trail Mountain

UPDES sites will be monitored as specified in the individual permits.

**Reclamation Monitoring**

Surface Water Resources: (see enclosed monitoring table)

Surface monitoring locations will be field monitored monthly for flow and all field parameters quarterly until bond release.

Ground Water Resources: (see enclosed monitoring table)

**Springs** East/Trail Mountain Springs will be field monitored during the months of July and October.

Rilda Canyon Springs NEWUA (meters 2 & 3) will be field monitored monthly for flow depending upon access. East/Trail Mountain Springs (including Rilda Springs and T-18 [Oliphant Mine]) monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.

**Wells:** Piezometric surface wells (Rilda Canyon and Cottonwood Canyon including TM-3 in Straight Canyon): will be field monitored for level only on a monthly basis depending upon access. Piezometric surface well monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.

Waste Rock Wells and TM-1B: will be field monitored for level only on a quarterly basis. Monitoring will be conducted until sealing during Phase I reclamation.

**UPDES:** Sites will be monitored as specified in the individual permits

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**B. Quality Sampling (Laboratory Measurements)**

1. **Surface Water Hydrology:** Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter, except for Indian Creek - quality samples will be collected during baseflow only. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table #1). Quarterly sampling was initiated during March 1988 and will continue throughout the year; i.e., June, September, and December. Baseline analysis was performed in 2001 and will be repeated every five years thereafter.

**a. Cottonwood Creek Drainage**

(1) Cottonwood Canyon Creek

(a) SW-1

(b) SW-2

(c) SW-3

(2) Grimes Wash

(a) GWR01

(b) GWR02

(c) GWR03

(3) Indian Creek

(a) ICA

(b) ICD

(c) ICB

(4) Straight Canyon

(a) T-19

**b. Huntington Creek Drainage**

(1) Deer Creek

(a) DCR01

(b) DCR04

(c) DCR06

(2) Huntington Creek

(a) HCC01

(b) HCC02

(c) HCC04

(3) Meetinghouse Canyon - South Fork: MCH01

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- (4) Rilda Canyon
  - (a) RCF1
  - (b) RCF3
  - (c) RCW4
- (5) Mill Fork Canyon
  - (a) MFA01
  - (b) MFB02
  - (c) MFU03

**Reclamation Monitoring - Surface Water Hydrology:** Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table #1). Sampling will be conducted on a quarterly basis until bond release. Baseline analysis will be performed on the 5<sup>th</sup> and 9<sup>th</sup> years following reclamation. In no case will baseline sampling time frame exceed 5 years converting from operational to reclamation monitoring.

**2. Groundwater Hydrology**

- a. East/Trail Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Rilda Canyon Springs (NEWUA: Meters 2 & 3) and T-18 (Oliphant Mine Discharge) will be monitored for quarterly for quality. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- b. In-Mine: Two water samples will be collected and analyzed per mine quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- c. Wells: TM-1B will be sampled quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- d. Waste Rock Wells: One water sample will be collected and analyzed per location quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).

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Baseline analysis was performed in 2001 and will be repeated every five years thereafter.

**Reclamation Monitoring - Groundwater Hydrology:**

- a. East/Trail Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Rilda Canyon Springs (NEWUA: Meters 2 & 3) will be monitored quarterly for quality. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2). East/Trail Mountain Springs (including Rilda Springs and T-18 [Oliphant Mine Discharge]) monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.
- b. In-Mine: Two water samples will be collected and analyzed per mine quarterly until the mine is sealed or the sites become inaccessible. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- c. Wells: Well TM-1B will be sealed during Phase I reclamation. Quarterly sampling will continue until sealing. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- d. Waste Rock Wells: Waste rock wells will be sealed during Phase I reclamation. One water sample will be collected and analyzed per location quarterly until well sealing. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).
- e. Post Reclamation Monitoring: PacifiCorp commits to conduct annual surveys to identify new discharge locations within and below sealed portals. If discharge occurs, one water sample will be collected and analyzed per location quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2). Baseline analysis will be performed on the 5<sup>th</sup> and 9<sup>th</sup> year.

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**3. UPDES Monitoring Sites**

- a. Deer Creek Mine
- b. Des-Bee-Dove Mines
- c. Wilberg/Cottonwood Mines
- d. Trail Mountain Mine

UPDES sites will be monitored as specified in the individual permits.

***III. ANNUAL REPORTS***

All data collected regarding the hydrology of East/Trail Mountain will be summarized by the applicant in an annual Hydrologic Monitoring Report. Copies of the report will be submitted to the; U.S. Forest Service; and the Utah State Division of Oil, Gas and Mining. In addition, any raw data collected will be submitted to the Utah State Division of Oil, Gas and Mining on a quarterly basis.

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**TABLE 1  
SURFACE WATER (UPDES Monitoring) BASELINE, OPERATIONAL, POSTMINING  
WATER QUALITY PARAMETER LIST**

**Field Measurements:**

- \* - Water Level or Flow
- \* - pH
- \* - Specific Conductivity (umhos/cm)
- \* - Dissolved Oxygen (ppm) (Perennial Streams Only)
- \* - Temperature

**Laboratory Measurements: (mg/l)**

- # \* - Total Settleable Solids (UPDES Only)
- # \* - Total Suspended Solids
- \* - Total Dissolved Solids
- \* - Total Hardness (CaCO<sub>3</sub>)
- Acidity (CaCO<sub>3</sub>)
- Aluminum (Al) - Dissolved
- Arsenic (As) - Dissolved
- Boron (B) - Dissolved (Waste Rock Sites Only)
- \* - Carbonate (CaCO<sub>3</sub>)
- \* - Total Alkalinity/Bicarbonate (CaCO<sub>3</sub>)
- Cadmium (Cd) - Dissolved
- \* - Calcium (Ca) - Dissolved
- \* - Chloride (Cl)
- Copper (Cu) - Dissolved
- \* - Iron (Fe) - Total & Dissolved
- Lead (Pb) - Dissolved
- \* - Magnesium (Mg) - Dissolved
- \* - Manganese (Mn) - Total & Dissolved
- Molybdenum (Mo) - Dissolved
- Nitrogen: Ammonia (NH<sub>3</sub>) - reported as N
- Nitrite (NO<sub>2</sub>) - reported as N
- Nitrate (NO<sub>3</sub><sup>-</sup>) - reported as N
- \* - Potassium (K) - Dissolved
- \* - Oil & Grease (UPDES & Above & Below Mine Sites Only)
- Ortho Phosphate (PO<sub>4</sub><sup>-3</sup>) - reported as P
- Selenium (Se) - Dissolved (Waste Rock Sites Only)
- \* - Sodium (Na) - Dissolved
- \* - Sulfate (SO<sub>4</sub><sup>-2</sup>)
- Zinc (Zn) - Dissolved
- \* - Cation-Anion Balance

# Construction                      \* Operational                      - Baseline

**INCORPORATED**

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**TABLE 2  
GROUND WATER BASELINE, OPERATIONAL, POSTMINING  
WATER QUALITY PARAMETER LIST**

**Field Measurements:**

- \* - Water Level or Flow
- \* - pH
- \* - Specific Conductivity (umhos/cm)
- \* - Temperature

**Laboratory Measurements: (mg/l)**

- \* - Total Dissolved Solids
- \* - Total Hardness (CaCO<sub>3</sub>)
- Acidity (CaCO<sub>3</sub>)
- Aluminum (Al) - Dissolved
- Arsenic (As) - Dissolved
- Boron (B) - Dissolved (Waste Rock Sites Only)
- \* - Carbonate (CO<sub>3</sub><sup>-2</sup>)
- \* - Total Alkalinity/Bicarbonate (CaCO<sub>3</sub>)
- Cadmium (Cd) - Dissolved
- \* - Calcium (Ca) - Dissolved
- \* - Chloride (Cl)
- Copper (Cu) - Dissolved
- \* - Iron (Fe) - Total & Dissolved
- Lead (Pb) - Dissolved
- \* - Magnesium (Mg) - Dissolved
- \* - Manganese (Mn) - Total & Dissolved
- Molybdenum (Mo) - Dissolved
- Nitrogen: Ammonia (NH<sub>3</sub>) - reported as N
- Nitrite (NO<sub>2</sub>) - reported as N
- Nitrate (NO<sub>3</sub><sup>-</sup>) - reported as N
- \* - Potassium (K) - Dissolved
- Ortho Phosphate (PO<sub>4</sub><sup>-3</sup>) reported as P
- Selenium (Se) - Dissolved (Waste Rock Sites Only)
- \* - Sodium (Na) - Dissolved
- \* - Sulfate (SO<sub>4</sub><sup>-2</sup>)
- Zinc (Zn) - Dissolved
- \* - Cation-Anion Balance

\* Operational                      - Baseline

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**WATER SAMPLE DOCUMENTATION**

The following information will be included on the lab sheets:

1. Sample time and date
2. Individual taking sample
3. Field parameters (except in-mine)
  - Temperature
  - Flow
  - pH (units)
  - Conductivity (umhos/cm)
  - Dissolved Oxygen (PPM), depending on location
4. Precipitation date if applicable
5. Date and time each parameter is analyzed at the lab

**ANALYTICAL METHOD AND DETECTION LIMIT**

<u>Parameter</u>	<u>MRL</u>	<u>UNITS</u>	<u>Method</u>
Acidity	5	mg/l CaCO <sub>3</sub>	D1067-92
Alkalinity, Bicarbonate	5	mg/l CaCO <sub>3</sub>	SM 2320 B
Alkalinity, Carbonate	5	mg/l CaCO <sub>3</sub>	SM 2320 B
Alkalinity, Total	5	mg/l CaCO <sub>3</sub>	SM 2320 B
Aluminum	0.03	mg/l	EPA 200.7
Anions	----	meq/l	-----
Arsenic	.01	mg/l	EPA 200.7
Barium	0.02	mg/l	EPA 200.7
Boron	0.01	mg/l	EPA 200.7
Cadmium	0.001	mg/l	EPA 200.7
Calcium	0.03	mg/l	EPA 200.7
Cations	----	meq/l	-----
Chloride	1	mg/l	EPA 300.0
Chromium	0.001	mg/l	EPA 200.7
Conductivity	---	umhos/cm	SM2510-B
Copper, Drinking Water	0.01	mg/l	EPA 220.1
Copper, Waste Water	0.01	mg/l	EPA 200.7
Fluoride	0.05	mg/l	EPA 300.0
Hardness, Total	----	mg/l CaCO <sub>3</sub>	SM2340-B
Iron	0.05	mg/l	EPA 200.7
Iron, Dissolved	0.03	mg/l	EPA 200.7
Lead, Drinking Water	0.001	mg/l	EPA 239.2
Lead, Waste Water	0.01	mg/l	EPA 200.7
Magnesium	0.01	mg/l	EPA 200.7
Manganese	0.002	mg/l	EPA 200.7
Mercury	.0002	mg/l	EPA 245.1
Molybdenum	0.005	mg/l	EPA 200.7
Nickel	0.001	mg/l	EPA 200.7
Nitrogen, Ammonia	0.1	mg/l	EPA 350.3
Nitrogen, Nitrate	0.05	mg/l	EPA 300.0
Nitrogen, Nitrite	0.05	mg/l	EPA 300.0
Oil & Grease	2	mg/l	EPA 413.1
Oxygen, Dissolved	----	mg/l	EPA 360.1
pH	----	Units	EPA 150.1
Phosphorus, Ortho	0.05	mg/l	EPA 300.0
Phosphorus, Total	0.05	mg/l	SM 4500P, B & E
Potassium	0.14	mg/l	EPA 200.7
Selenium	0.02	mg/l	EPA 200.7
Silver, Total	0.002	mg/l	EPA 200.7
Sodium	0.01	mg/l	EPA 200.7
Solids, Settleable	0.1	ml/l	EPA 160.5
Solids, Total Dissolved	30	mg/l	EPA 160.1
Solids, Total Suspended	5	mg/l	EPA 160.2
Sulfate	1	mg/l	EPA 300.0
Sulfide	1	mg/l	EPA 376.1
Turbidity	0.1	NTU	EPA 180.1
Zinc, Total	0.004	mg/l	EPA 200.7
Zinc, Dissolved	0.004	mg/l	EPA 200.7

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**HYDROLOGIC MONITORING PROGRAM**  
**DEER CREEK/COTTONWOOD-WILBERG/DES-BEE-DOVE/TRAIL MOUNTAIN MINES**

**SURFACE HYDROLOGY - OPERATIONAL SAMPLING (Table 1)**

<u>Drainage System</u>	<u>Drainage</u>	<u>Location</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Cottonwood Canyon Creek  Cottonwood Creek Drainage System</b>	<b>Cottonwood Canyon Creek</b>	SW1	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
		SW2	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
		CCC01	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	
			SW3	Flow	Flow	Operational									
	<b>Grimes Wash</b>	GWR01	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational
		GWR02	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational
		GWR03	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational
	<b>Joels Valley Indian Creek</b>	ICA	Based Flow Monitoring Only (October or November)										Operational		
		ICF	Based Flow Monitoring Only (October or November)										Field		
		ICD	Based Flow Monitoring Only (October or November)										Operational		
ICB		Based Flow Monitoring Only (October or November)										Operational			
<b>Straight Canyon</b>	T-19	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational	
<b>Huntington Creek Drainage System</b>	<b>Deer Creek</b>	DCR01	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
		DCR04	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
		DCR06	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
	<b>Huntington Creek</b>	HCC01	Flow *	Flow *	Operational*	Flow *	Flow *	Operational*	Flow *	Flow *	Operational*	Flow *	Flow *	Operational*	
		HCC02			Operational*			Operational*			Operational*			Operational*	
		HCC04			Operational*			Operational*			Operational*			Operational*	
	* Flow in Huntington Creek is measured @ HCC01 by Utah Power, and will be reported in the Annual Hydrologic Report														
	<b>Meetinghouse Canyon</b>	MCH01	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational
	<b>Rilda Canyon</b>	RCF1*	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational
		RCLF1	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Flow	Field
RCLF2		Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Flow	Field	
RCF2		Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Flow	Field	
RCF3		Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational	
RCW4	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational		
* Baseline flow will be measured adjacent to EM-163															
<b>Mill Fork Canyon</b>	MFA01	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational	
	MFB02	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational	
	MFU03	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Flow	Operational	

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**DEER CREEK/COTTONWOOD-WILBERG/DES-BEE-DOVE/TRAIL MOUNTAIN MINES**

**GROUNDWATER HYDROLOGY - OPERATIONAL SAMPLING (Table 2)**

Groundwater Type

			<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
<b>Springs</b>	<b>East Mountain</b> (Includes Mill Fork Springs)								Operational	Flow *	Flow *	Operational		
	<b>East Mountain-Rilda Canyon</b>		Flow	Flow	Operational	Flow	Flow	Operational	Flow	* Recession Springs	Operational	Flow	Flow	Operational
	<b>Trail Mountain</b> <b>Oliphant</b> T-18				Operational			Operational	Operational	Flow	Flow	Operational		Operational
<b>In-Mine</b>	<b>Cottonwood</b>				Operational			Operational			Operational			Operational
	<b>Deer Creek</b>				Operational			Operational			Operational			Operational
	<b>Trail Mountain</b>				Operational			Operational			Operational			Operational
<b>Wells</b>	<b>Cottonwood Waste Rock Well</b>				Operational			Operational			Operational			Operational
	<b>Cottonwood Canyon Wells</b> (includes Straight Canyon TM-3)		Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
	<b>Deer Creek Waste Rock Well</b>				Operational			Operational			Operational			Operational
	<b>Deer Creek In-Mine Well</b>				Level			Level			Level			Level
	<b>Rilda Canyon Wells</b>		Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
<b>Trail Mountain (TM-1B)</b>		Level	Level	Operational	Level	Level	Operational	Level	Level	Operational	Level	Level	Operational	

**UPDES SAMPLING - (Table 1)**

			<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
<b>Mine Water Discharge</b>	<b>Cottonwood</b>	TMA	Operational											
		Miller	Operational											
	<b>Deer Creek</b>	DCD	Operational											
	<b>Trail Mountain</b>	TMD	Operational											
<b>Sediment Pond Discharge</b>	<b>Cottonwood</b>	2 Outfalls	Operational											
	<b>Deer Creek</b>	1 Outfall	Operational											
	<b>Des-Bee-Dove</b>	1 Outfall	Operational											
	<b>Trail Mtn</b>	1 Outfall	Operational											

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**SURFACE HYDROLOGY - BASELINE SAMPLING (Table 1) - 2006**

Drainage System	Drainage	Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<i>Cottonwood Creek Drainage System</i>	<i>Cottonwood Canyon Creek</i>	SW1	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		SW2	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		CCC01	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	
		SW3	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
	<i>Grimes Wash</i>	GWR01	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		GWR02	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		GWR03	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
	<i>Joel Valley Indian Creek</i>	ICA	Based Flow Monitoring Only (October or November)										Baseline		
		ICF	Based Flow Monitoring Only (October or November)										Field		
		ICD	Based Flow Monitoring Only (October or November)										Baseline		
ICB		Based Flow Monitoring Only (October or November)										Baseline			
<i>Straight Canyon</i>	T-19	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline		
<i>Huntington Drainage System</i>	<i>Deer Creek</i>	DCR01	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		DCR04	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		DCR06	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
	<i>Huntington Creek</i>	HCC01	Flow *	Flow *	Baseline*	Flow *	Flow *	Baseline*	Flow *	Flow *	Baseline*	Flow *	Flow *	Baseline*	
		HCC02			Baseline*			Baseline*			Baseline*			Baseline*	
		HCC04			Baseline*			Baseline*			Baseline*			Baseline*	
	* Flow in Huntington Creek is measured @ HCC01 by Utah Power, and will be reported in the Annual Hydrologic Report														
	<i>Meetinghouse Canyon</i>	MCH01	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
	<i>Rilda Canyon</i>	RCF1*	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	
		RCLF1	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	
RCLF2		Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field		
RCF2		Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field	Flow	Flow	Field		
RCF3		Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline		
RCW4	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline			
* Baseline flow will be measured adjacent to EM-163															
<i>Mill Fork Canyon</i>	MFA01	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline		
	MPB02	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline		
	MPU03	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline		

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**GROUNDWATER HYDROLOGY - BASELINE SAMPLING (Table 2) - 2006**

Groundwater Type			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Springs</b>	<b>East Mountain</b> <i>(Includes Mill Fork Springs)</i>								Baseline	Flow *	Flow *	Baseline		
	<b>East Mountain-Rilda Canyon</b>		Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline	Flow	Flow	Baseline
	<b>Trail Mountain</b> <i>Oliphant</i>	T-18			Baseline			Baseline			Flow	Flow	Baseline	Baseline
<b>In-Mine</b>	<b>Cottonwood</b>				Baseline			Baseline						Baseline
	<b>Deer Creek</b>				Baseline			Baseline						Baseline
	<b>Trail Mountain</b>				Baseline			Baseline						Baseline
<b>Wells</b>	<b>Cottonwood Waste Rock Well</b>				Baseline			Baseline						Baseline
	<b>Cottonwood Canyon Wells</b> <i>(includes Straight Canyon TM-3)</i>		Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
	<b>Deer Creek Waste Rock Well</b>				Baseline			Baseline						Baseline
	<b>Deer Creek In-Mine Well</b>				Level			Level						Level
	<b>Rilda Canyon Wells</b>		Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
<b>Trail Mountain (TM-1B)</b>		Level	Level	Baseline	Level	Level	Baseline	Level	Level	Baseline	Level	Level	Baseline	

**UPDES SAMPLING - (Table 1)**

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mine Water Discharge</b>	<b>Cottonwood</b>	TMA	Operational											
		Miller	Operational											
	<b>Deer Creek</b>	DCD	Operational											
	<b>Trail Mountain</b>	TMD	Operational											
<b>Sediment Pond Discharge</b>	<b>Cottonwood</b>	3 Outfalls	Operational											
	<b>Deer Creek</b>	1 Outfall	Operational											
	<b>Des-Bee-Dove</b>	1 Outfall	Operational											
	<b>Trail Mtn</b>	1 Outfall	Operational											

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**SURFACE HYDROLOGY - RECLAMATION SAMPLING (Table 1)**

Drainage System	Drainage	Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cottonwood Creek Drainage System*	Cottonwood Canyon Creek	SW1			Operational			Operational			Operational			Operational	
		SW2			Operational			Operational			Operational			Operational	
		CCC01			Field			Field			Field			Field	
			SW3			Operational			Operational		Operational			Operational	
	Grimes Wash	GWR01				Operational			Operational			Operational			Operational
		GWR02				Operational			Operational			Operational			Operational
		GWR03				Operational			Operational			Operational			Operational
	Joes Valley	ICA	Based Flow Monitoring Only (October or November)										Operational		
	Indian Creek	ICF	Based Flow Monitoring Only (October or November)										Field		
	Indian Creek	ICD	Based Flow Monitoring Only (October or November)										Operational		
ICB		Based Flow Monitoring Only (October or November)										Operational			
Straight Canyon	T-19				Operational			Operational			Operational			Operational	
Deer Creek	DCR01				Operational			Operational			Operational			Operational	
	DCR04				Operational			Operational			Operational			Operational	
	DCR06				Operational			Operational			Operational			Operational	
Huntington Creek	HCC01				Operational**			Operational**			Operational**			Operational**	
	HCC02				Operational**			Operational**			Operational**			Operational**	
	HCC04				Operational**			Operational**			Operational**			Operational**	
<i>** Flow in Huntington Creek is measured @ HCC01 by Utah Power, and will be reported in the Annual Hydrologic Report</i>															
Meetinghouse Canyon	MCH01				Operational			Operational			Operational			Operational	
	Rilda Canyon	RCF1***				Operational			Operational			Operational			Operational
		RCLF1				Field			Field			Field			Field
		RCLF2				Field			Field			Field			Field
		RCF2				Field			Field			Field			Field
		RCF3				Operational			Operational			Operational			Operational
RCW4				Operational			Operational			Operational			Operational		
<i>*** Baseline flow will be measured adjacent to EM-163</i>															
Mill Fork Canyon	MFA01	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	
	MFB02	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	
	MFU03	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	

\* Analyzed for Baseline Parameters During the Fifth (5) and Ninth (9) Year After Final Reclamation

HUNTINGTON  
 Drainage  
 System\*  
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**DEER CREEK/COTTONWOOD-WILBERG/DES-BEE-DOVE/TRAIL MOUNTAIN MINES**

*In no case will baseline sampling time frame exceed 5 years converting from operational to reclamation monitoring.*

**GROUNDWATER HYDROLOGY - RECLAMATION SAMPLING (Table 2)**

Groundwater Type

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Springs</b>													
<b>East Mountain (Includes Mill Fork Springs)</b>							Operational				Operational		
<i>Spring monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>East Mountain-Rilda Canyon</b>	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	Flow	Flow	Operational	
<i>Rilda Spring monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>Trail Mountain</b>							Operational				Operational		
<b>Oliphant</b>	T-18			Operational			Operational				Operational	Operational	
<i>Spring monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>In-Mine</b>	Deer Creek/Cottonwood/Trail Mtn. samples will be collected and analyzed quarterly until the mine is sealed or the sites become inaccessible												
<i>Oliphant Mine discharge monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>Wells</b>													
<b>Cottonwood Waste Rock Well</b>			Operational			Operational				Operational			
<i>Cottonwood Waste Rock Well will sealed during Phase I reclamation. One water sample will be collected and analyzed per location quarterly until well sealing</i>													
<b>Cottonwood Canyon Wells*</b>	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	
<i>(includes Straight Canyon TM-3)</i>													
<i>Cottonwood Canyon well monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>Deer Creek Waste Rock Well</b>			Operational			Operational				Operational			
<i>Deer Creek Waste Rock Well will sealed during Phase I reclamation. One water sample will be collected and analyzed per location quarterly until well sealing</i>													
<b>Rilda Canyon Wells*</b>	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	
<i>Rilda Canyon well monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.</i>													
<b>Trail Mountain (TM-1B)</b>	Level	Level	Operational	Level	Level	Operational	Level	Level	Operational	Level	Level	Operational	
<i>TM-1B well will sealed during Phase I reclamation. One water sample will be collected and analyzed per location quarterly until well sealing</i>													
<i>* Monitored monthly subject of access</i>													

**UPDES SAMPLING - (Table 1)**

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
<b>Mine Water Discharge**</b>												
<b>Cottonwood</b>	TMA	As Needed Basis According to UPDES Permit Stipulations										
<b>Miller</b>	As Needed Basis According to UPDES Permit Stipulations											
<b>Deer Creek</b>	DCD	As Needed Basis According to UPDES Permit Stipulations										
<b>Trail Mountain</b>	TMD	As Needed Basis According to UPDES Permit Stipulations										
<b>** After Portal Sealing, PacifiCorp Will Monitor Down Dip For Development Of Groundwater Seeps/Springs Until Bond Release</b>												
<b>Sediment Pond Discharge</b>												
<b>Cottonwood</b>	2 Outfalls	As Needed Basis According to UPDES Permit Stipulations										
<b>Deer Creek</b>	1 Outfall	As Needed Basis According to UPDES Permit Stipulations										
<b>Des-Bee-Dove</b>	1 Outfall	As Needed Basis According to UPDES Permit Stipulations										
<b>Trail Mtn</b>	1 Outfall	As Needed Basis According to UPDES Permit Stipulations										

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