



OGMCOAL DNR <ogmcoal@utah.gov>

Wellington WQ MRP Revision

1 message

Steve Christensen <stevechristensen@utah.gov>

Wed, Apr 2, 2014 at 5:16 PM

To: Erik Petersen <petersen@relia.net>

Cc: Patrick Collins <mt.nebo@xmission.com>, OGMCOAL DNR <ogmcoal@utah.gov>

Hi,

I got your message Erik. Sorry I missed the call. I would imagine you spoke with Pat about a clean-up revision on Wellington's water monitoring info. According to my notes, we initially discussed it back in November.

I've attached an example table that works really well in making sampling frequencies, parameters etc really clear (and it's easy to edit in the future). I extracted it from the West Ridge MRP. For some reason, I couldn't get the page numbers in the right order, but you'll get the idea. If you could do a table like that for Wellington, it would be great.

If you could also put some language in there about baseline monitoring (when it will be conducted etc.), that would be appreciated (a footnote to the table would be fine). In talking with Pat, I agree that 3rd quarter baseline sampling during base-flow conditions would be the best time. If you'd spell that out, that would be great.

D-Molybdenum was one of the parameters that's listed in Table 7.24.2 as required for baseline and operational monitoring. After talking with you and Pat in November, it sounded like (can't remember the reason), it's not sampled now. Could you clean that up/address that and any other parameter issues that might be hanging out there. I can't think of more off the top of my head.

This may or may not have answered your question, but give me a call or shoot me an e-mail. I'm out till about 3:30 PM tomorrow.

Steve

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Steve Christensen
Utah Division of Oil, Gas and Mining
1594 W North Temple, Suite 1210
Salt Lake City, Utah 84116
(801) 538-5350
stevechristensen@utah.gov



WQ Table Example.pdf

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Table 7- 1 HYDROLOGIC MONITORING PROTOCOLS AND LOCATIONS

Name	Sample Parameters	Sample Frequency	Location Description
Streams			
RST-1 ⁽¹⁾			See note below
ST-3	Flow, Field, Lab Analysis	Quarterly	Grassy Trail Creek
ST-6	Flow, Field, Lab Analysis	Quarterly	C Canyon
ST-8	Flow, Field, Lab Analysis	Quarterly	Grassy Trail Creek
ST-9 ⁽²⁾			See note below
ST-10 ⁽³⁾			See note below
ST-15	Flow, Field, Lab Analysis	Quarterly	Spring Canyon Stream
Patterfore	Flow, Field, Lab Analysis	Quarterly	Right Fork of Grassy Trail Reservoir
Flumes			
LF-1	Flow ⁽⁴⁾ , Field, Lab Analysis	Quarterly	Left Fork of Grassy Trail Reservoir
LF-2	Flow ⁽⁴⁾ , Field, Lab Analysis	Quarterly	Left Fork of Grassy Trail Reservoir
RF-1	Flow ⁽⁴⁾ , Field, Lab Analysis	Quarterly	Right Fork of Grassy Trail Reservoir
RF-2	Flow ⁽⁴⁾ , Field, Lab Analysis	Quarterly	Right Fork of Grassy Trail Reservoir
Springs			
SP-8	Flow, Field, Lab Analysis	Quarterly	North Horn Fm. In C Canyon
SP-12	Flow, Field, Lab Analysis	Quarterly	Colton Fm. Upper Whitmore Canyon
SP-13	Flow, Field, Lab Analysis	Quarterly	Colton Fm. Upper Whitmore Canyon
SP-101	Flow, Field, Lab Analysis	Quarterly	Little Spring Bottom
SP-102	Flow, Field, Lab Analysis	Quarterly	Spring Canyon Hillside
S-80	Flow, Field, Lab Analysis	Quarterly	Hanging Rock Spring
Road Spring	Flow, Field, Lab Analysis	Quarterly	Right Fork of Grassy Trail Reservoir
Sec 5 Spring	Flow, Field, Lab Analysis	Quarterly	Right Fork of Grassy, Section 5
Wells			
DH86-2	Water Level, Field, Lab	Quarterly	Sunnyside Sandstone in C Canyon
Underground			
UG-1	Field, Lab Analysis	Monthly	West Ridge Mine
U-14E	Flow only	Monthly	West Ridge Mine – 14 East
U-15E	Flow only	Monthly	West Ridge Mine – 15 East

Table 7-4 UPDES DISCHARGE POINT MONITORING

<u>MONITORING POINTS</u>	<u>FREQUENCY</u>
001	Monthly
002	Monthly

<u>FIELD MEASUREMENTS</u>	<u>REPORTED AS</u>
Flow	gpd
pH	pH units
Specific Conductivity	Φ s/cm @ 25EC
Temperature	EC

<u>LABORATORY MEASUREMENTS</u>	<u>MAXIMUM</u>
Oil and Grease (if sheen is visible)	10 mg/l
Total Suspended Solids	70 mg/l
Total Iron	1.0 mg/l
Total Dissolved Solids	One ton/day

Table 7-3 GROUNDWATER OPERATIONAL WATER QUALITY MONITORING

Field Measurements	Reported As
pH	pH units
Specific Conductivity	Φs/cm @ 25EC
Temperature	EC
Laboratory Measurements	Reported As
Total Dissolved Solids	mg/l
Carbonate	mg/l
Bicarbonate	mg/l
Alkalinity, Total	mg/l
Hardness	mg/l
Calcium (Dissolved)	mg/l
Chloride	mg/l
Iron (Total)	mg/l
Iron (Dissolved)	mg/l
Magnesium (Dissolved)	mg/l
Manganese (Total)	mg/l
Manganese (Dissolved)	mg/l
Potassium (Dissolved)	mg/l
Sodium (Dissolved)	mg/l
Sulfate	mg/l
Cations	meq/l
Anions	meq/l
Cation/Anion Balance	%

Table 7-2 SURFACE WATER OPERATIONAL WATER QUALITY MONITORING

Field Measurements	Reported As
Flow	gpm
pH	pH units
Specific Conductivity	Φ s/cm @ 25EC
Dissolved Oxygen	mg/l
Temperature	EC
Laboratory Measurements	Reported As
Total Dissolved Solids	mg/l
Total Suspended Solids	mg/l
Carbonate	mg/l
Bicarbonate	mg/l
Alkalinity, Total	mg/l
Hardness	mg/l
Calcium (Dissolved)	mg/l
Chloride	mg/l
Iron (Total)	mg/l
Iron (Dissolved)	mg/l
Magnesium (Dissolved)	mg/l
Manganese (Total)	mg/l
Manganese (Dissolved)	mg/l
Potassium (Dissolved)	mg/l
Sodium (Dissolved)	mg/l
Sulfate	mg/l
Oil and Grease	mg/l
Cations	meq/l
Anions	meq/l
Cation/Anion Balance	%

U-16E	Flow only	Monthly	West Ridge Mine – 16 East
U-17E	Flow only	Monthly	West Ridge Mine – 17 East
U-18E	Flow only	Monthly	West Ridge Mine – 18 East
U-19E	Flow only	Monthly	West Ridge Mine – 19 East

Notes:

- (1) RF-1 replaced RST-1 in 2011.
- (2) LF-1 replaced ST-9 in 2011.
- (3) LF-2 replaced ST-10 in 2011.
- (4) During low-flow conditions, discharge at these sites may be measured a short distance below the flumes using an appropriate alternate measurement technique.

ST-5, ST-6A, ST-7, ST-11, ST-12, ST-13, SP-15, SP-16, WR-1 and WR-2 were dropped in 2011.