

From: Scott Schierman (USA - Casper)
To: [Striz, Elise](#)
Subject: [External_Sender] FW: Table 4-1 vs. table 4-13
Date: Thursday, December 07, 2017 3:17:40 PM
Attachments: [image001.png](#)
[image002.png](#)

Elise

Please find the table for the waste stream that would be going to the evaporation ponds. I just talked with our contractor and this table is not in the document. Table 4.1 that is presently in the application is for the permeate pond water.

Scott

From: Renaldo DeLuna [mailto:rdeluna@woodardcurran.com]
Sent: Thursday, December 7, 2017 11:55 AM
To: Scott Schierman (USA - Casper) <Scott.Schierman@uranium1.com>
Subject: RE: Table 4-1 vs. table 4-13

Scott,

Below is the info I believe Elise is looking for:

Summary of Anticipated Liquid Byproduct Stream Water Quality

Chemical Parameter	Estimated Range of the Waste Stream Water Quality	
	Minimum	Maximum
	(mg/L)	(mg/L)
pH (standard units)	6	9
Sodium	150	30,000
Calcium	200	1,000
Potassium	10	1,000
Bicarbonate as HCO ₃	1,500	8,000
Carbonate as CO ₃	0	500
Sulfate	80	20,000
Chloride	200	35,000
Uranium as U-nat	1	15
Radium (in pCi/L)	300	3,000
Total Dissolved Solids	2,500	50,000
Arsenic	<0.001*	0.2
Barium	<0.1*	2
Cadmium	<0.001*	0.002
Chromium	<0.01*	0.05
Lead	<0.01*	0.065
Magnesium	10	150
Molybdenum	<0.01*	1

Nickel	<0.05*	0.2
Selenium	<0.005*	2
Th-230 (in pCi/L)	<0.2*	100

**Reporting limit*

From: Scott Schierman (USA - Casper) [<mailto:Scott.Schierman@uranium1.com>]
Sent: Tuesday, December 5, 2017 8:10 AM
To: Renaldo DeLuna <rdeluna@woodardcurran.com>
Subject: FW: Table 4-1 vs. table 4-13

Ray

Here is email from Elise regarding the Table 4.1 in the revised application.

Scott

From: Striz, Elise [<mailto:Elise.Striz@nrc.gov>]
Sent: Tuesday, November 21, 2017 2:48 PM
To: Scott Schierman (USA - Casper) <Scott.Schierman@uranium1.com>
Subject: Table 4-1 vs. table 4-13

Hi Scott,

I just wanted to check with you on Table 4-1 in the revised Technical Report (RTR) and Table 4-13 in the revised Environmental Report (RER). These tables provide exactly the same chemistry but the RTR states the evaporation pond will receive the waste stream in RTR Table 4-1, whereas the RER states Table 4-13 represents the permeate stream.

I think the Table 4-1 in the RTR is actually the water quality for the permeate. Is that correct? If yes, would it be possible to get the actual water quality of the anticipated waste stream (brines) that will go to the evaporation ponds in a revised Table 4-1?

Thanks,
Elise

Table 4-13: Anticipated Permeate Water Quality

Parameter	Unit	Typical Value	Minimum Value	Maximum Value
EC	uS/cm	300	180	400
TDS	mg/L	200	100	250
pH	s.u.	8	6	6.5
Alkalinity as CaCO ₃	mg/L	100	50	200
Sulfate	mg/L	15	10	20
Bicarbonate	mg/L	150	50	200
Chloride	mg/L	15	5	25
Calcium	mg/L	0	0	1
Sodium	mg/L	50	20	100
Manganese	mg/L	0	0	0.1
Selenium	mg/L	0	0	0.1
Arsenic	mg/L	0	0	0.1
Uranium	mg/L	0	0	0.1
Radium	pCi/L	30	5	100

License Amendment Application, Technical Report

Table 4-1: Summary of Anticipated Waste Stream Water Quality

Parameter	Unit	Typical Value	Minimum Value	Maximum Value
EC	µS/cm	300	180	400
TDS	mg/L	200	100	250
pH	s.u.	8	6	6.5
Alkalinity as CaCO ₃	mg/L	100	50	200
Sulfate	mg/L	15	10	20
Bicarbonate	mg/L	150	50	200
Chloride	mg/L	15	5	25
Calcium	mg/L	0	0	1
Sodium	mg/L	50	20	100
Manganese	mg/L	0	0	0.1
Selenium	mg/L	0	0	0.1
Arsenic	mg/L	0	0	0.1
Uranium	mg/L	0	0	0.1
Radium	pCi/L	30	5	100

URANIUM ONE - DISCLAIMER

This email, including any attachments, is confidential and may be privileged. Please check any attachments for viruses before opening them. If you are not the intended recipient, then any disclosure, copying, distribution or use of this email or any attachment, other than to or by the sender, is prohibited. If you received this email in error, please notify us immediately by returning it to the sender and delete this copy from your system.

[Uranium One Inc.](#)