



J&T Consulting, Inc.

February 8, 2024

Ms. Hunter Ridley
Environmental Protection Specialist
State of Colorado
Division of Reclamation, Mining, and Safety

Physical Address:

1313 Sherman Street, Room 215
Denver, CO 80203

Mailing Address:

Division of Reclamation, Mining and Safety, Room 215
1001 East 62nd Avenue
Denver, CO 80216

RE: Adequacy Review #4; Technical Revision (TR9); NCCI Pit #1 – File No. M-2001-107

Dear Ms. Ridley,

Northern Colorado Constructors, Inc. (NCC) has received the Division's Adequacy Review #4 letter dated February 8, 2024. Below are the comments and the corresponding responses that we have provided to address the comments.

Per the letter we are addressing the comments as numbered in the letter that stated the following:

1. Please state a formal commitment to quarterly reporting of monthly groundwater level data which is submitted by the last day of each quarter.

Response: NCC commits to submitting the monthly monitor well readings quarterly on the last day of each quarter to the DRMS.

2. Trigger levels for monitoring wells around the site are still in place as permitted and updated under TR3, TR5 and TR7. Clarify for the Division what these trigger levels are as they correspond to the new wells as noted on the previously submitted "Thornton 2019 Gravel Pit Monitoring Map of Monitoring Wells at Zadel Pit" map. Please also re-commit to ensuring appropriate notice is given to the Division should trigger levels be exceeded at any of the wells.

Response: NCC proposes trigger levels for the existing monitoring wells remaining around the site are as follows:

For Monitor Wells Z-3, Z-4, Z-5, Z-6, and Z-7 we propose the trigger level to be 2 feet above the baseline readings that have been collected since June 27, 2023 as that is when NCC was finishing the clay liner construction and dewatering stopped after the first week of July 2023. If the levels reach 2 feet above the baseline readings for 3 consecutive months then NCC will notify the DRMS to discuss the levels and potential mitigation.



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For Monitor Wells Z-1 and Z-2 we proposed the trigger level to be within 1.5 feet of the ground surface based on the data that has been collected since June 27, 2023 as that is when NCC was finishing the clay liner construction and dewatering stopped after the first week of July 2023. If the levels are within 1.5 feet of the ground surface for 3 consecutive months then NCC will notify the DRMS to discuss the levels and potential mitigation. Currently the readings have been at around 1.5 feet below the ground surface and we expect this to go down once the drain is installed.

NCC appreciates your consideration of this adequacy review response.

Please feel free to contact me with any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads "J.C. York".

J.C. York, P.E.
J&T Consulting, Inc.

Zadel Pit

	Off-site Monitoring Wells																				
Piezometer Number	MW-Z1			MW-Z2			MW-Z3			MW-Z4			MW-Z5			MW-Z6			MW-Z7		
Ground Surface Elevation (ft) ⁽¹⁾	4870.33 4869.73			4870.66 4870.05			4862.14			4862.72			4869.24			4869.47			4868.39		
Top of PVC Elevation (ft) ⁽¹⁾																					
Date of Measurement	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)	Depth to water from top of PVC (ft)	Water Surface Elevation (ft)	Change (ft)
8/6/2019	8.79	4860.94	(0.16)	8.63	4861.42	0.68	14.58	4847.56		15.79	4846.93		27.36	4841.88		26.65	4842.82		26.85	4841.54	
9/18/2019	7.01	4862.72	1.78	7.57	4862.48	1.06															
1/15/2020	8.97	4860.76	(1.96)	10.40	4859.65	(2.83)	17.77	4844.37	(3.19)	19.94	4842.78	(4.15)	19.73	4849.51	7.63	26.81	4842.66	(0.16)	26.88	4841.51	(0.03)
2/26/2020	10.42	4859.31	(1.45)	11.72	4858.33	(1.32)	18.20	4843.94	(0.43)	19.92	4842.80	0.02	19.98	4849.26	(0.25)	27.05	4842.42	(0.24)	26.94	4841.45	(0.06)
3/13/2020	10.84	4858.89	(0.42)	11.98	4858.07	(0.26)	20.38	4841.76	(2.18)	17.78	4844.94	2.14	15.25	4853.99	4.73	26.74	4842.73	0.31	26.00	4842.39	0.94
4/22/2020	10.30	4859.43	0.54	11.12	4858.93	0.86	16.64	4845.50	3.74	19.93	4842.79	(2.15)	15.96	4853.28	(0.71)	25.85	4843.62	0.89	26.50	4841.89	(0.50)
6/18/2020	7.46	4862.27	2.84	7.41	4862.64	3.71	13.10	4849.04	3.54	17.00	4845.72	2.93	14.54	4854.70	1.42	23.73	4845.74	2.12	24.71	4843.68	1.79
7/24/2020	6.90	4862.83	0.56	7.60	4862.45	(0.19)	12.15	4849.99	0.95	19.93	4842.79	(2.93)	9.45	4859.79	5.09	17.10	4852.37	6.63	20.40	4847.99	4.31
9/16/2020	7.02	4862.71	(0.12)	7.21	4862.84	0.39	8.62	4853.52	3.53	19.93	4842.79	0.00	18.47	4850.77	(9.02)	25.57	4843.90	(8.47)	26.60	4841.79	(6.20)
9/30/2020	7.05	4862.68	(0.03)	7.33	4862.72	(0.12)	8.60	4853.54	0.02	16.85	4845.87	3.08	21.42	4847.82	(2.95)	26.69	4842.78	(1.12)	26.90	4841.49	(0.30)
1/7/2021	9.10	4860.63	(2.05)	10.00	4860.05	(2.67)	12.90	4849.24	(4.30)	20.00	4842.72	(3.15)	25.80	4843.44	(4.38)	27.75	4841.72	(1.06)	27.25	4841.14	(0.35)
3/3/2021	10.21	4859.52	(1.11)	11.27	4858.78	(1.27)	14.16	4847.98	(1.26)	22.06	4840.66	(2.06)	26.73	4842.51	(0.93)	27.89	4841.58	(0.14)	27.32	4841.07	(0.07)
4/1/2021	10.41	4859.32	(0.20)	11.32	4858.73	(0.05)	13.40	4848.74	0.76	20.34	4842.38	1.72	24.56	4844.68	2.17	27.74	4841.73	0.15	27.24	4841.15	0.08
5/10/2021	9.14	4860.59	1.27	9.66	4860.39	1.66	10.43	4851.71	2.97	14.41	4848.31	5.93	18.65	4850.59	5.91	26.04	4843.43	1.70	25.88	4842.51	1.36
6/14/2021	8.57	4861.16	0.57	8.78	4861.27	0.88	7.20	4854.94	3.23	12.11	4850.61	2.30	18.97	4850.27	(0.32)	25.96	4843.51	0.08	24.80	4843.59	1.08
7/19/2021	7.34	4862.39	1.23	7.40	4862.65	1.38	7.17	4854.97	0.03	10.88	4851.84	1.23	20.54	4848.70	(1.57)	26.44	4843.03	(0.48)	26.68	4841.71	(1.88)
8/12/2021	6.93	4862.80	0.41	7.00	4863.05	0.40	8.63	4853.51	(1.46)	10.94	4851.78	(0.06)	20.94	4848.30	(0.40)	26.79	4842.68	(0.35)	26.85	4841.54	(0.17)
9/7/2021	6.22	4863.51	0.71	5.54	4864.51	1.46	9.30	4852.84	(0.67)	11.21	4851.51	(0.27)	16.68	4852.56	4.26	24.88	4844.59	1.91	26.12	4842.27	0.73
10/12/2021	6.61	4863.12	(0.39)	7.11	4862.94	(1.57)	8.75	4853.39	0.55	11.63	4851.09	(0.42)	23.55	4845.69	(6.87)	27.09	4842.38	(2.21)	26.91	4841.48	(0.79)
11/9/2021	6.78	4862.95	(0.17)	7.50	4862.55	(0.39)	10.10	4852.04	(1.35)	11.99	4850.73	(0.36)	24.25	4844.99	(0.70)	26.24	4843.23	0.85	20.72	4847.67	6.19
12/2/2021	8.30	4861.43	(1.52)	9.13	4860.92	(1.63)	11.69	4850.45	(1.59)	12.26	4850.46	(0.27)	24.50	4844.74	(0.25)	22.82	4846.65	3.42	21.50	4846.89	(0.78)
1/10/2022	10.00	4859.73	(1.70)	11.10	4858.95	(1.97)	12.91	4849.23	(1.22)	12.65	4850.07	(0.39)	25.38	4843.86	(0.88)	23.30	4846.17	(0.48)	22.50	4845.89	(1.00)
2/10/2022	10.75	4858.98	(0.75)	12.05	4858.00	(0.95)	13.95	4848.19	(1.04)	13.10	4849.62	(0.45)	25.71	4843.53	(0.33)	23.90	4845.57	(0.60)	23.15	4845.24	(0.65)
3/14/2022	11.30	4858.43	(0.55)	12.50	4857.55	(0.45)	14.23	4847.91	(0.28)	13.08	4849.64	0.02	23.70	4845.54	2.01	23.83	4845.64	0.07	20.40	4847.99	2.75
4/19/2022	11.65	4858.08	(0.35)	12.94	4857.11	(0.44)	14.41	4847.73	(0.18)	12.50	4850.22	0.58	23.25	4845.99	0.45	23.32	4846.15	0.51	23.02	4845.37	(2.62)
5/13/2022	9.78	4859.95	1.87	11.20	4858.85	1.74	10.63	4851.51	3.78	11.77	4850.95	0.73	20.90	4848.34	2.35	20.54	4848.93	2.78	18.29	4850.10	4.73
6/14/2022	6.66	4863.07	3.12	8.05	4862.00	3.15	7.93	4854.21	2.70	11.13	4851.59	0.64	7.80	4861.44	13.10	5.49	4863.98	15.05	3.65	4864.74	14.64
7/11/2022	5.95	4863.78	0.71	6.76	4863.29	1.29	9.55	4852.59	(1.62)	10.96	4851.76	0.17	12.33	4856.91	(4.53)	11.77	4857.70	(6.28)	8.90	4859.49	(5.25)
8/10/2022	3.96	4865.77	1.99	4.70	4865.35	2.06	9.33	4852.81	0.22	11.23	4851.49	(0.27)	10.52	4858.72	1.81	9.39	4860.08	2.38	7.60	4860.79	1.30
10/14/2022	1.40	4868.33	2.56	2.30	4867.75	2.40	6.80	4855.34	2.53	10.72	4852.00	0.51	10.64	4858.60	(0.12)	8.54	4860.93	0.85	6.23	4862.16	1.37
11/15/2022	1.82	4867.91	(0.42)	2.44	4867.61	(0.14)	7.21	4854.93	(0.41)	10.98	4851.74	(0.26)	10.63	4858.61	0.01	8.64	4860.83	(0.10)	6.40	4861.99	(0.17)
12/17/2022	2.05	4867.68	(0.23)	2.76	4867.29	(0.32)	9.28	4852.86	(2.07)	12.84	4849.88	(1.86)	11.64	4857.60	(1.01)	10.00	4859.47	(1.36)	7.92	4860.47	(1.52)
2/14/2023	2.42	4867.31	(0.37)	3.13	4866.92	(0.37)	9.96	4852.18	(0.68)	13.60	4849.12	(0.76)	12.14	4857.10	(0.50)	10.45	4859.02	(0.45)	8.38	4860.01	(0.46)
3/13/2023	3.44	4866.29	(1.02)	4.08	4865.97	(0.95)	10.35	4851.79	(0.39)	13.67	4849.05	(0.07)	12.55	4856.69	(0.41)	10.93	4858.54	(0.48)	8.91	4859.48	(0.53)
4/24/2023	3.32	4866.41	0.12	4.08	4865.97	0.00	9.88	4852.26	0.47	13.46	4849.26	0.21	11.49	4857.75	1.06	10.28	4859.19	0.65	8.40	4859.99	0.51
6/27/2023	1.40	4868.33	1.92	2.03	4868.02	2.05	7.15	4854.99	2.73	7.10	4855.62	6.36	4.27	4864.97	7.22	4.10	4865.37	6.18	2.87	4865.52	5.53
8/24/2023	0.60	4869.13	0.80	1.04	4869.01	0.99	3.38	4858.76	3.77	6.70	4856.02	0.40	5.30	4863.94	(1.03)	4.89	4864.58	(0.79)	3.25	4865.14	(0.38)
9/11/2023	0.45	4869.28	0.15	0.75	4869.30	0.29	3.17	4858.97	0.21	6.76	4855.96	(0.06)	6.25	4862.99	(0.95)	5.75	4863.72	(0.86)	4.05	4864.34	(0.80)
10/18/2023	0.50	4869.23	(0.05)	0.90	4869.15	(0.15)	3.22	4858.92	(0.05)	7.15	4855.57	(0.39)	5.78	4863.46	0.47	5.39	4864.08	0.36	3.81	4864.58	0.24
11/13/2023	1.02	4868.71	(0.52)	1.45	4868.60	(0.55)				7.18	4855.54	(0.03)	6.53	4862.71	(0.75)	6.04	4863.43	(0.65)	4.42	4863.97	(0.61)
12/13/2023	1.52	4868.21	(0.50)	2.07	4867.98	(0.62)	4.15	4857.99	(0.93)	7.30	4855.42	(0.12)	7.09	4862.15	(0.56)	6.50	4862.97	(0.46)	4.82	4863.57	(0.40)
1/9/2024	1.80	4867.93	(0.28)	2.40	4867.65	(0.33)	4.25	4857.89	(0.10)	7.35	4855.37	(0.05)	7.37	4861.87	(0.28)	6.73	4862.74	(0.23)	5.01	4863.38	(0.19)
2/5/2024	1.97	4867.76	(0.17)	2.61	4867.44	(0.21)	4.22	4857.92	0.03	7.47	4855.25	(0.12)	7.52	4861.72	(0.15)	6.76	4862.71	(0.03)	5.01	4863.38	0.00
Max	14.71	4869.28		14.75	4869.30	5.92															
Min	0.45	4855.02	(4.32)	0.75	4855.30	(4.48)															
Max Change	14.26	14.26		14.00	14.00																
Average	7.83	4861.90	0.02	8.58	4861.47	0.03															

¹ Elevations surveyed by Survey Systems, Evergreen, Colorado (July, 2011).