



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

January 27, 2020

Mel Bickling

Via email at mbick7077@outlook.com

**Re: Loloff Construction, Inc., Loloff Mine, File No. M-1985-112,
Complaint Against Mining Operation (CT-13), Complaint Resolution**

Mr. Bickling,

The Division of Reclamation, Mining and Safety (Division/DRMS) received your complaint letter (CT-13) against the Loloff Mine permitted by Loloff Construction, Inc. (Loloff) on October 14, 2019. On December 19, 2019 and January 22, 2020 Loloff submitted responses to the complaint letter to the Division. A copy of the complaint response letters are attached. Additionally, the Division's responses to your specific complaint letter questions are attached.

Based on the complaint response from Loloff, the Koehler owned groundwater wells have returned to the historic groundwater elevation following the completion of the Loloff Mine slurry wall in 2017. Additionally, Loloff committed to working with the Koehler's on a mitigation measures related to potential impacts from the dewatering of the Derr Pit. The Division considers the complaint resolved and no further action will be taken by the Division regarding your complaint letter.

If you have any questions, please contact me at peter.hays@state.co.us or (303) 866-3567 Ext. 8124.

Sincerely,

Peter S. Hays

Environmental Protection Specialist

Enclosures – Loloff Construction, Inc. December 19, 2019 and January 22, 2020 Complaint Response Letters, DRMS Complaint Questions Response

Ec: Jared Ebert, Division of Reclamation, Mining & Safety
Kelly Hodges, Loloff Construction, Inc.
J.C. York, J&T Consulting, Inc.



December 19, 2019

Mr. Peter Hays
Division of Reclamation, Mining, and Safety
1313 Sherman Avenue, Room 215
Denver, CO 80203

RE: Loloff Construction, Inc. – Loloff Mine – DRMS M1985-112

Dear Mr. Hays,

Loloff Construction, Inc. would like to provide you with a response to the complaint filed by Mr. Bickling on October 14, 2019 and Ms. Lida Stout on November 22, 2019. We have reviewed the complaints and wanted to provide you with information that we have collected and items we have been working on in relation to the adjacent gravel mine permit owned by Broken Arrow Investments, LLC (the Derr Pit DRMS M2008-078) Use by Special Review Amendment with Weld County. Broken Arrow Investments, LLC is owned and managed by the same people that own and operate Loloff Construction, Inc.

- We have been monitoring the wells of those neighbors who have granted us access to their wells. This was done to provide more data for groundwater modeling efforts.
- Broken Arrow Investments, LLC / Loloff Construction, Inc. has completed well inspections on the Francis wells and the Taylor well. We are currently awaiting schedules from the well drilling contractors on when we can perform additional work on the Francis wells. We are also planning to lower the pump setting at the Taylor Well.
- Broken Arrow Investments is in the process of having the slurry wall design for the original Derr Pit mining cell completed, and has scheduled the construction to commence in March 2020.
- We have nearly completed exhibits that help explain our groundwater modeling efforts and plan to review these exhibits with the neighbors prior to finalizing the report conclusions and recommendations. To date we have met with Mel Bickling and the Koehler family. We just received some information on the wells that

Agpro measured to determine the bottom depth of the Koehler domestic and stock wells.

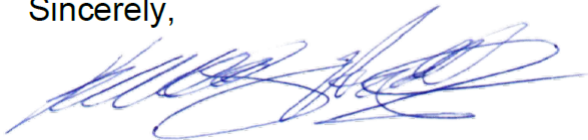
- J.C. York with J&T Consulting, Inc. met with Mr. Jay Goza who owns the well at 274 1st Avenue. Mr. Goza has allowed access to the well to measure the static level and it was at 10'-6" on November 19, 2019. Mr. Goza indicated that the well has been at its historic levels for the last several years (see attached e-mail from Mr. Goza).
- The complaint from Ms. Lida Stout indicates the well was re-drilled because it had gone dry. A slurry wall was constructed in 2017 around the Loloff Pit and a leak test was passed for this slurry wall. Per information from Mr. Goza at his well and which is approximately 650 feet from the Stout well it was likely not dry over the last couple years. J.C. York with J&T Consulting, Inc. contacted Quality Well and Pump and they indicated the water level during drilling of the Stout well was 15 feet and after completion of the well it was 8 feet. Quality Well and Pump also indicated the well was relocated due to it's location being hard to access as the original well was inside a vault under the drive/parking area at this residence. The complaint also states that the well had to be re-drilled to get it further away from the septic system because it was too close.
- Only minimal pumping occurred to remove water and storm water remaining in the sealed pit to complete the mining the remainder of 2017, 2018, and 2019 per the approved Substitute Water Supply Plan and accounting with the Division of Water Resources to complete mining in the pit.
- Monitor well data was provided with annual reports in previous years for the monitor wells adjacent to the Derr Pit. Monitor data on surrounding wells was provided in 2015 for the Parker, Harrel, and Francis Wells from April through June. The data for readings after that we do not have as it was on a computer that the hard drive is corrupted and files cannot be retrieved. We have been monitoring the adjacent wells where we have Agpro taking monthly readings at the wells shown on the attached maps and the monitor wells at the Derr Pit.
- The Monroe well was being taken care of by running dewatering water into a recharge pond adjacent to that well when dewatering was occurring. No dewatering is occurring now because the Loloff Pit is nearly mined out and the slurry wall sealed the pit from groundwater entering the pit. Water levels are higher in the adjacent wells (i.e. Jay Goza and Brian Harrell wells). Monroe has not indicated to us that there are any issues with their well.
- The Tyrell well was previously inspected by Quality Well and Pump and the inspection revealed that a bad regulator valve was the issue with the well. The valve was fixed and the well was placed back in operation. This has previously

been documented with DRMS by Superior Oilfield Services who was the operator for the 8th Street Pit.

- The Hernandez well was investigated by Quality Well and Pump for Loloff Construction previously and it was determined the well was too close to the septic tank and leach field so it could not be re-drilled. Loloff Construction paid for a water tap from North Weld County Water District (NWCWD) and the construction of the service from NWCWD water main to the Hernandez residence.
- The Davis well is being utilized as a monitoring well and measurements are being taken monthly. This well was not being used as the property owned by Global Asset Recovery was placed in a dry up agreement by the previous owners. The well is not dry.
- The Taylor well was inspected in October 2019 and pump tested. The static water level was at 15' prior to performing the pump test. The pump produced 13 gpm at a depth of 20 feet. This well is not dry. The well is also being measured monthly and Loloff Construction continues to pay Ms. Taylor's water bill for her water service from NWCWD.
- The Francis irrigation well and stock well were also inspected in October 2019 and pump tested. The Francis domestic well was also inspected but was not dry. The wells were not dry. As stated previously we are working with Mr. Francis on his wells. The well readings completed previously by Loloff Construction and DRMS in 2017 and 2018 were similar in depth to the readings in October 2019.

Please refer to the attached monitor well and well measurements that Agpro has been providing for Loloff Construction and Broken Arrow Investments. We will continue to monitor all of the wells included in the tables.

Sincerely,



Kelly Hodge Phone: (970) 566-5090
Loloff Construction, Inc. and Broken Arrow Investments, LLC

Monitoring Well and Well Water Levels
Well Location Map
Monitor Well Location Map
E-mails from Mr. Jay Goza

Project	2354-01
Client	Mill Iron
Location	Derr Pit

	9/26/2018	
Monitoring Well	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
MW-1	16.73	4614.65
MW-2	17.18	4613.73
MW-3	17.87	4613.51
MW-4	15.73	4615.90
MW-5	Broken, No Readings	Broken, No Readings
MW-6	15.31	4618.05
MW-7	0.00	0.00
MW-8	18.07	4617.17
MW-9	15.74	4618.28
MW-10	14.75	4617.36
MW-11	14.21	4616.25
MW-12	16.58	4614.62
MW-13	17.42	4613.96
MW-14	49.19	4611.40
MW-15	41.59	4618.77
MW-16		
MW-17		
MW-18		

10/26/2018		11/20/2018	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
17.06	4614.32	17.14	4614.24
17.06	4613.85	17.03	4613.88
17.67	4613.71	17.63	4613.75
15.38	4616.25	15.34	4616.29
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
14.89	4618.47	14.78	4618.58
16.57	4619.03	16.43	4619.17
17.79	4617.45	17.71	4617.53
15.32	4618.70	15.21	4618.81
13.89	4618.22	14.25	4617.86
13.89	4616.57	13.80	4616.66
16.51	4614.69	16.49	4614.71
17.21	4614.17	17.18	4614.20
45.97	4614.62	45.90	4614.69
41.11	4619.25	43.01	4617.35

12/18/2018		1/17/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
17.38	4614.00	17.72	4613.66
17.03	4613.88	17.56	4613.35
17.63	4613.75	18.16	4613.22
15.34	4616.29	15.74	4615.89
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
14.78	4618.58	15.13	4618.23
16.43	4619.17	16.75	4618.85
17.71	4617.53	18.09	4617.15
15.21	4618.81	15.56	4618.46
14.25	4617.86	14.60	4617.51
13.80	4616.66	14.22	4616.24
16.49	4614.71	16.95	4614.25
26.48	4604.90	17.70	4613.68
45.90	4614.69	46.37	4614.22
43.01	4617.35	41.37	4618.99

2/12/2019		3/7/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
18.10	4613.28	18.30	4613.08
17.95	4612.96	18.19	4612.72
18.58	4612.80	18.79	4612.59
16.11	4615.52	25.46	4606.17
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
15.49	4617.87	15.74	4617.62
17.11	4618.49	17.34	4618.26
18.44	4616.80	18.65	4616.59
15.92	4618.10	16.13	4617.89
14.98	4617.13	24.30	4607.81
14.58	4615.88	14.81	4615.65
17.33	4613.87	17.54	4613.66
18.08	4613.30	18.32	4613.06
46.75	4613.84	46.99	4613.60
41.71	4618.65	51.07	4609.29

4/22/2019		5/14/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
27.66	4603.72	22.31	4609.07
19.06	4611.85	28.70	4602.21
19.46	4611.92	20.22	4611.16
17.02	4614.61	18.63	4613.00
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
16.34	4617.02	17.63	4615.73
17.91	4617.69	18.71	4616.89
19.27	4615.97	19.91	4615.33
16.75	4617.27	25.56	4608.46
15.85	4616.26	26.60	4605.51
15.55	4614.91	16.70	4613.76
18.03	4613.17	27.43	4603.77
19.18	4612.20	29.09	4602.29
47.61	4612.98	48.44	4612.15
42.55	4617.81	43.49	4616.87

6/21/2019		7/24/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
14.60	4616.78	16.41	4615.14
20.28	4610.63	20.75	4610.33
20.65	4610.73	20.92	4610.63
20.40	4611.23	20.49	4611.31
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
18.55	4614.81	18.61	4614.92
19.42	4616.18	19.42	4616.35
20.73	4614.51	20.90	4614.51
18.53	4615.49	18.77	4615.42
18.67	4613.44	18.79	4613.49
17.87	4612.59	18.04	4612.59
19.09	4612.11	19.62	4611.75
20.87	4610.51	21.17	4610.38
49.02	4611.57	50.15	4610.61
43.61	4616.75	44.31	4616.22

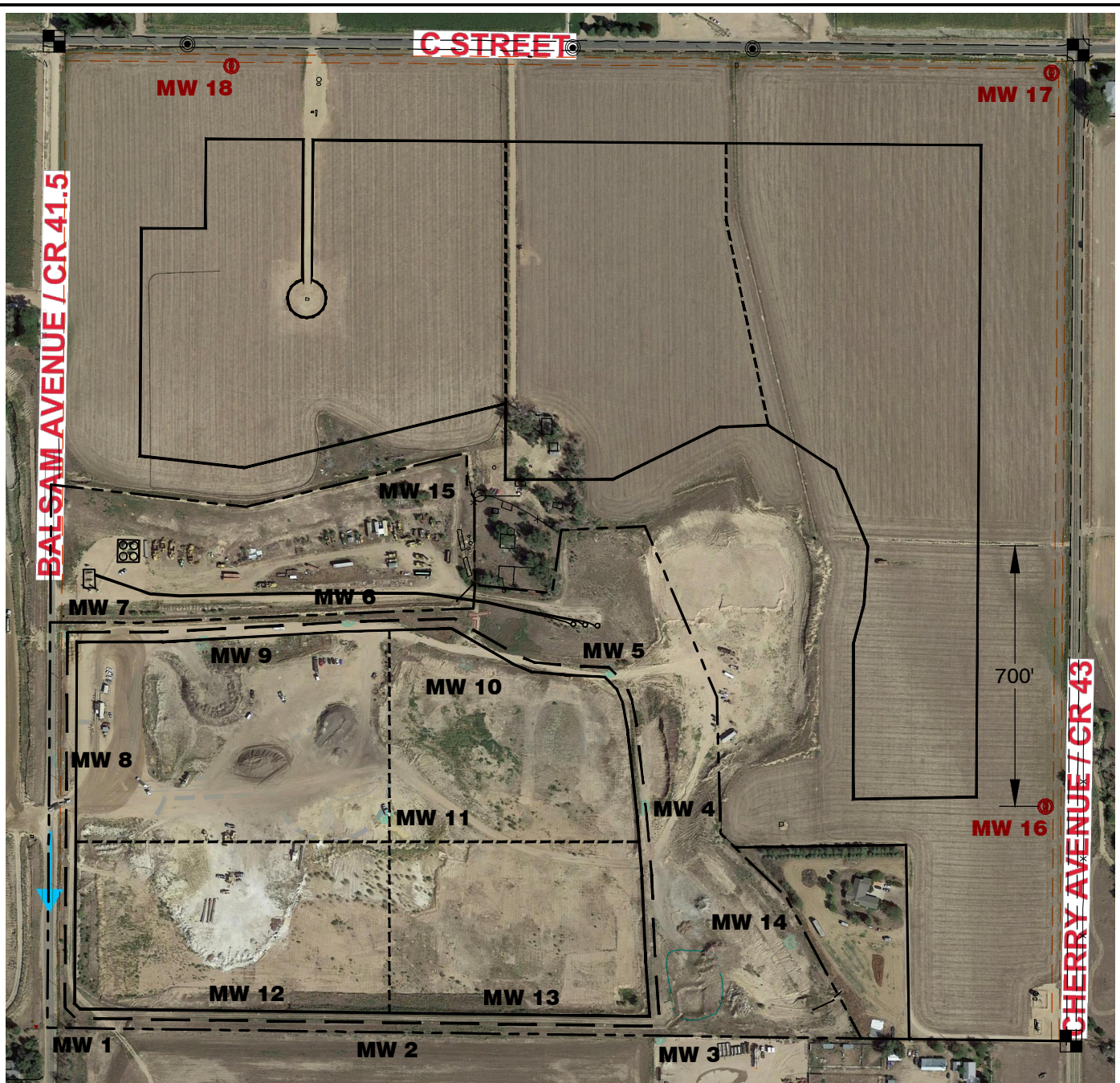
8/21/2019		9/17/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
17.99	4613.56	no reading, roots	no reading, roots
21.11	4609.97	22.56	4608.52
21.28	4610.27	22.57	4608.98
20.63	4611.17	22.74	4609.06
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
18.95	4614.58	19.54	4613.99
19.85	4615.92	20.38	4615.39
21.41	4614.00	22.27	4613.14
19.16	4615.03	19.75	4614.44
19.10	4613.18	19.87	4612.41
18.45	4612.18	19.61	4611.02
20.23	4611.14	21.61	4609.76
21.39	4610.16	22.97	4608.58
49.56	4611.20	50.66	4610.10
44.71	4615.82	45.08	4615.45
43.63	4612.73	44.44	4611.92
47.00	4616.80	46.95	4616.85
46.38	4621.28	46.52	4621.14

10/10/2019		11/13/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)	Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
18.50	4613.05	18.46	4613.09
22.18	4608.90	23.31	4607.77
22.36	4609.19	23.28	4608.27
22.27	4609.53	23.18	4608.62
Broken, No Readings	Broken, No Readings	Broken, No Readings	Broken, No Readings
20.00	4613.53	20.30	4613.23
20.71	4615.06	21.05	4614.72
22.51	4612.90	23.01	4612.40
19.96	4614.23	20.28	4613.91
20.48	4611.80	20.82	4611.46
19.79	4610.84	20.36	4610.27
21.31	4610.06	22.43	4608.94
22.55	4609.00	23.62	4607.93
50.65	4610.11	50.65	4610.11
45.40	4615.13	45.64	4614.89
44.52	4611.84	44.87	4611.49
46.59	4617.21	46.75	4617.05
46.61	4621.05	46.74	4620.92

12/10/2019	
Meter Depth to Water from TOC (ft)	Water Elevation (MSL)
no reading, roots	no reading, roots
23.30	4607.61
23.32	4608.06
23.07	4608.56
Broken, No Readings	Broken, No Readings
20.28	4613.08
21.01	4614.59
22.97	4612.27
20.26	4613.76
20.78	4611.33
20.30	4610.16
22.41	22.41
23.62	4607.76
51.25	4609.34
45.57	4614.79
44.91	4611.28
46.80	4616.83
46.73	4620.76

MILL IRON
OFFSITE PRIVATE WELLS

Units = Feet				SEPTEMBER 2019		OCTOBER 2019		NOVEMBER 2019		DECEMBER 2019	
				PAS 9/26/2019	26-Sep-19	MK 10/10/2019	10-Oct-19	MK 11/14/19	14-Nov-19	MK 12/13/19	13-Dec-19
Site Number	Identifier	Stick-up (Ground or concrete slab to monitoring point)	Adjusted Meter Reading (Subtract 0.165)	Field Reading Depth to Water	Depth to Water from Ground Surface	Field Reading Depth to Water	Depth to Water from Ground Surface	Field Reading Depth to Water	Depth to Water from Ground Surface	Field Reading Depth to Water	Depth to Water from Ground Surface
1	Hofner #1 Dom	-0.875	-0.165	45.48	44.44	45.47	44.43	45.60	44.56	47.66	46.79
2	Hofner #2 Irr	-0.854	-0.165	48.67	47.65	48.45	47.43	48.89	47.87	49.00	48.15
3	Koehler #1 Dom (Vault)	5.000	-0.165	43.68	48.52	43.73	48.57	43.90	48.74	43.92	48.92
4	Koehler #2 stock (Vault)	6.290	-0.165	41.25	47.38	41.32	47.45	41.52	47.65	41.53	47.82
5	Koehler #3 Irr	-0.271	-0.165	50.80	50.36	49.99	49.55	50.18	49.74	50.18	49.91
6	Global Assets Davis Irr	-1.125	-0.165	47.90	46.61	47.91	46.62	48.10	46.81	48.10	46.98
7	Bliss Irr	-1.021	-0.165	46.20	45.01	46.40	45.21	47.05	45.86	47.24	46.22
8	Parker Dom (Vault)	-0.450	-0.165	no reading	#VALUE!	42.50	41.89	42.75	42.14	42.70	42.25
9	Francis #1 Stock	-1.625	-0.165	13.60	11.81	14.69	12.90	15.71	13.92	15.96	14.34
10	Francis #2 Irr	-1.375	-0.165	11.33	9.79	12.39	10.85	13.82	12.28	14.06	12.69
11	Francis #3 Dom	0.000	-0.165	12.20	12.04	13.21	13.05	14.61	14.45	14.87	14.87
12	Taylor Dom	-0.813	-0.165	17.33	16.35	17.03	16.05	18.95	17.97	19.45	18.64
13	Harrelll #1 Dom	-1.167	-0.165	11.25	10.08	11.80	10.47	12.03	10.70	12.00	10.83
14	Harrelll #2 Irr	-0.729	-0.165	10.08	9.35	10.65	9.76	10.95	10.06	10.92	10.19
15	Murata #1 Irr	-1.958	-0.165	50.25	48.13	50.20	48.08	50.80	48.68	50.82	48.86



LEGEND:

-  PROPOSED MONITORING WELL
MW 12 MONITORING WELL NUMBER



J&T Consulting, Inc.

1400 W 122nd Avenue - Suite 120
Westminster, CO 80234
303-457-0735

BROKEN ARROW INVESTMENTS, LLC
DERR PIT
MONITORING WELL LOCATION MAP

Date:	8.6.19
Job No:	07123
Drawn:	WSS
Scale:	1" = 400'
Sheet: 1	Of: 1

JC York

From: Jay Goza <kcl_llc@yahoo.com>
Sent: Wednesday, November 20, 2019 6:52 PM
To: JC York
Subject: Re: Loloff Pit - Dewatering and Slurry Wall

Yes they did make that offer

Sent from my iPhone

On Nov 20, 2019, at 2:03 PM, JC York <jcyork@j-tconsulting.com> wrote:

Jay –

Did Loloff offer to provide you water when your well was lower?

Regards,

J.C.

J.C. York, P.E.

J&T Consulting, Inc.
305 Denver Avenue, Suite D
Fort Lupton, CO 80621

Office: (303) 857-6222
Mobile: (970) 222-9530
FAX: (303) 857-6224

From: KCL . [mailto:kcl_llc@yahoo.com]
Sent: Wednesday, November 20, 2019 9:28 AM
To: JC York
Subject: Re: Loloff Pit - Dewatering and Slurry Wall

JC, yes, well is supplying my shop water needs now and for the past 3-4 yrs with no problems. A few years back, the well was not providing adequate water. At that time we checked water levels and only had 4-5 feet water in the well bore (normal was 15-16 feet) and would not recover fast enough to even fill my 20 gal pressure tank. (we are a low volume user, probably less than 100 gal/day). At that time a slurry wall was being installed and i was informed that should alleviate my well issue. On 11/19/19 we checked the water levels and found water at 10 feet, so approx. 15-16 feet of water in well-bore is historically were it should be.....jay

On Tuesday, November 19, 2019, 01:32:41 PM MST, JC York <jcyork@j-tconsulting.com> wrote:

Jay –

Thanks for meeting with me today and allowing us to measure your well water level. The water level from the top of your casing was at 10'-6.5". The depth of your well was approximately 26 feet.

I wanted to ask you a few questions about how things have been with your well since the slurry wall was installed and prior to it being installed.

Is your well working for your uses currently?

Did the slurry wall installation bring the water levels you historically have seen back to those levels? What was the historic water level in your well over the last several years?

When the Loloff Pit was being dewatered you mentioned it did affect your well? What were the affects? Did Loloff Construction provide assistance to help or offer to help with mitigating the affects?

Thank you for your time today and please let me know if you can provide answers to the questions above.

Regards,

J.C.

J.C. York, P.E.

[J&T Consulting, Inc.](#)

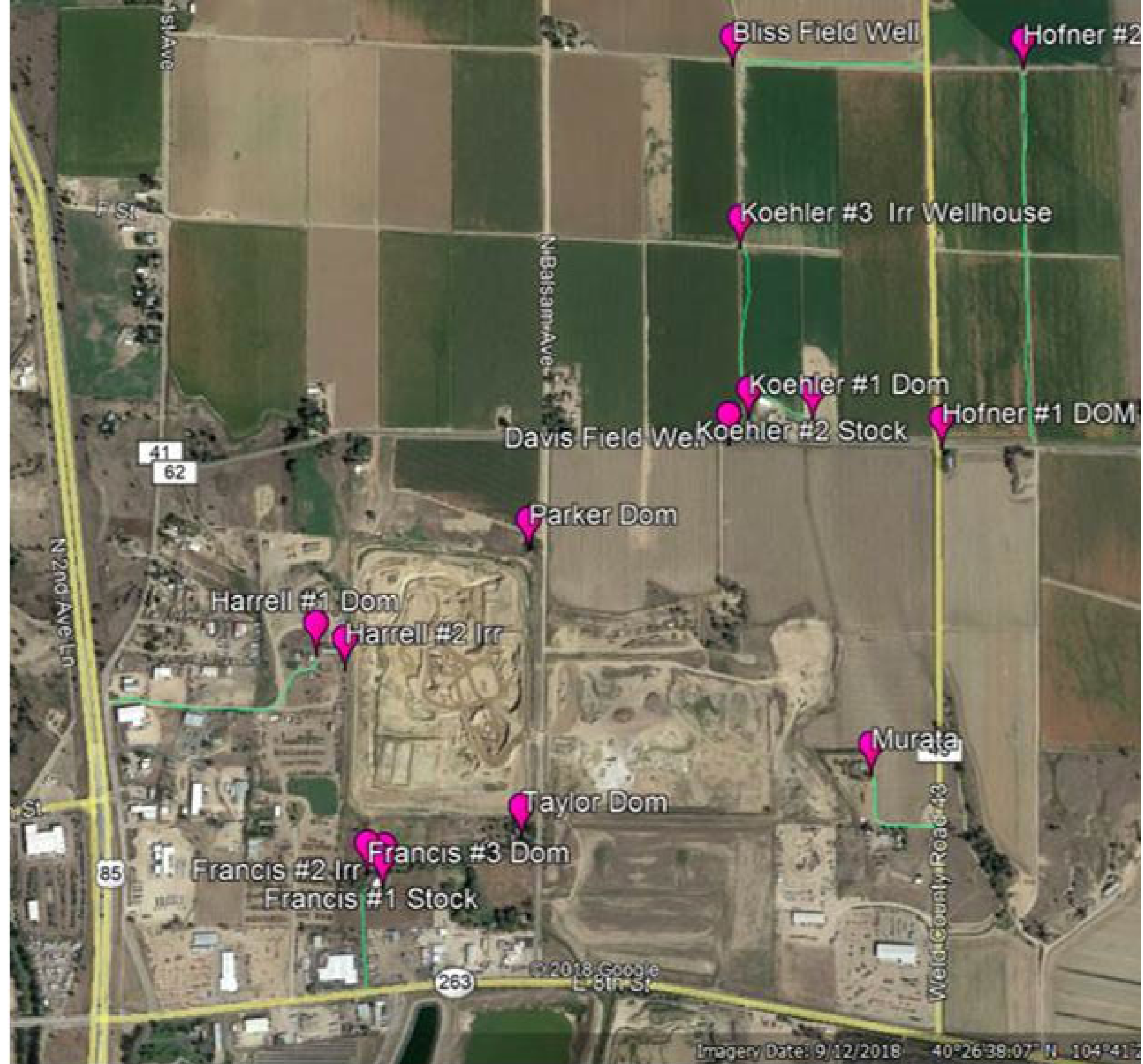
305 Denver Avenue, Suite D

Fort Lupton, CO 80621

Office: (303) 857-6222

Mobile: (970) 222-9530

FAX: (303) 857-6224



January 22, 2020

Mr. Peter Hays
Division of Reclamation, Mining, and Safety
1313 Sherman Avenue, Room 215
Denver, CO 80203

RE: Loloff Construction, Inc. – Loloff Mine – DRMS M1985-112

Dear Mr. Hays,

Loloff Construction, Inc. would like to provide with additional information on mitigation for the Loloff Pit in regards to the groundwater levels.

The following are items that have been accomplished/completed to mitigate groundwater levels:

- The slurry wall was installed and completed in 2017 and the leak test passed and was approved by the State Engineer's Office on April 26, 2019.
- No dewatering is occurring at the Loloff Mine and mining is nearing completion as well as the reclamation of the mine.
- Well levels are being monitored monthly by Ag Pro adjacent to and in the surrounding areas to keep records of depths to static water levels. These will continue to be monitored as part of the monitoring program for the Loloff Mine and the Derr Pit.

The following are items that are in progress to mitigate groundwater levels for the Derr Pit:

- We met with Mr. Bickling who is representing the Koehler family and provided monitoring information to him.
- We have also provided information from the draft groundwater model that we are working to finalize for the Derr Pit as part of the Weld County USR Amendment application.
- We are working on an agreement to present to Mr. Bickling on mitigation measures for the Derr Pit. We have not presented the agreement yet as we are working on getting additional information on the existing Koehler wells to help establish the mitigation.

Sincerely,



Kelly Hodge Phone: (970) 566-5090
Loloff Construction, Inc. and Broken Arrow Investments, LLC



COLORADO
**Division of Reclamation,
Mining and Safety**
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

January 27, 2020

Mel Bickling

Via email at mbick7077@outlook.com

**Re: Loloff Construction, Inc., Loloff Mine, File No. M-1985-112,
Complaint Against Mining Operation (CT-13), Division's Complaint Responses**

Mr. Bickling,

The Division of Reclamation, Mining and Safety (Division/DRMS) received your complaint letter (CT-13) against the Loloff Mine permitted by Loloff Construction, Inc. (Loloff) on October 14, 2019. The Division's responses to your specific complaint letter questions are attached.

1. What are the dates when the dewatering started and stopped at the Loloff Mine? There was a pumping log that was to be provided by the operator. Cannot locate the pumping log in the file.

The Division does not require the Operator to provide notice of the commencement or termination of dewatering and does not require pumping logs to be submitted to the Division.

2. There is a Dewatering Well Permit No. 77467. This well is not to exceed 127.69 Acre feet. NPDES permit COG-500375 discharge is 3 million gallons per day? Is this correct?

The Division does not issue dewatering well permits. Please contact the Colorado Department of Water Resources.

3. A summary of all existing data from the current monitoring well locations is required as part of the DRMS permit. The applicant claims to have recorded ground water levels at the existing permit area on a monthly basis. Cannot file the monthly report on the water levels.

The groundwater monitoring data is required to be submitted with the Annual Report for the site on February 4th annually. The annual reports are available on the Division's website at: <https://dnrweblink.state.co.us/drms/search.aspx?dbid=0>



4. There were signed agreements with Parker, Taylor, Francis, Monroe, Tyrell and Harrell indicating that the operator was going to measure the ground water levels on a monthly basis starting in 2013. Was not able to find the monthly reports in the file? The Owners were not contacted with the water level reports.

The groundwater monitoring data is required to be submitted with the Annual Report for the site on February 4th annually. The annual reports are available on the Division's website at: <https://dnrweblink.state.co.us/drms/search.aspx?dbid=0>

5. There was a violation dated 3-17-15 TR-01 Operator has not monitored the wells as agreed. What was the outcome of the violation?

The Division did not issue a violation on March 17, 2015. A problem was cited on March 17, 2015. The problem was addressed by the Operator on April 23, 2015.

6. Could not find the final resolution for the Monroe Well? Permit number 44981. Last report indicated that the operator was filling the pond with the water from the Loloff dewatering?

The Operator and Monroe's agreed to recharge the pond with discharge water until dewatering conclude at the site. Please see the attached Operator's response to your question.

7. Could not find the final resolution for the Tyrrell Well. Permit number 134824-A. Last report the owner was looking into the City of Greeley water to be installed on his property.

Please see the attached Operator's response to your question.

8. Could not find the final resolution for the Hernandez/Palma well. Permit number 297435. The last report indicated that North Weld County Water District will install a new water tap?

Please see the attached Operator's response to your question.

J& T Consulting provided a ground water model from McGrane Water Engineering, LLC to predict the ground water levels before and after the slurry wall installation. The report was dated July 13, 2015 and was included in the report dated "2015-09-30 Permit File" starting with page 49. The summary indicates that there will be an increase of .5 to 2 feet on the up gradient wells and a decline in water levels of approximately 1 foot on the down gradient side of the slurry wall. This report was to be used to make sure that the homeowners were not harmed by the dewatering and the installation of the slurry wall. J&T Consulting and the Operator did not complete the measurements as suggested.

12. The Division engineering staff has reviewed and accepts the MODFLOW model and report dated July 13, 2015 by McGrane Water Engineering, LLC.

13. Please provide mitigation measures for the groundwater mounding and shadowing effects due to the proposed slurry wall to be implemented and trigger points which would put mitigation measures into effect. The mitigation measures must include a scenario for the installation of a French drain to direct groundwater around the slurry wall and restore groundwater levels to the historic elevation in area of groundwater mounding.

On page 3 of the report McGrane Water Engineering, LLC recommended (1) Canvassing the area within the area of influence to confirm well locations and determine whether any basements or structures could potentially be impacted. (2) Evaluating whether the existing monitoring well network is adequate to monitor recovery after the slurry wall is installed and installing additional wells if necessary. (3) If actual recovery appears to be excessive, utilize the model to evaluate drain locations and designs (depths and size) to mitigate the situation. Intercepted groundwater could be piped down gradient and recharged to prevent impacts to senior water rights.

J & T Consulting and the Operator did not do anything with this modeling report. They did not measure a baseline ground water level on the listed wells before the installation of the slurry wall. The slurry wall was installed 2 years after the date of this modeling report in 2017. They did not measure the post slurry wall ground water levels even two years after the slurry wall was installed.

This is the list of the 2019 results from the McGrane report. (Previous owner)

(1) Terry Stout (Trujillo) 170 1st Ave Well dry for two years.
Owner drilled new well cost \$15098.96 in 2019. Will be filing a claim for reimbursement
Permit number 23312-A Static water level report 5 feet 2019 Static water level 15 feet

(2) Orona old address Route 1 Box 5B well location unknown
Permit number 28174 Static water level report 8 feet

(3) Palma/Hernandez 160 1st Ave. Well went dry. NWCWD water tap \$45,000 paid by Loloff
Permit number 297435 Static water level unknown. Cannot re-drill well too close to septic

(4) Harrell Eldon 288 1st Ave
Permit number 226878 - A Well static water level reported 16 feet

(5) Jay Goza Trust (Rothe) 274 1st Ave Well was out of water 50% of the time for two years.
Permit number 259513 Static water level reported 2 feet 2019 Static water level down

(6) Truyello well address unknown 1st Ave
Permit number 2947-F Static Water level report 6 feet

(7) Harrell Brian 288 1st Ave Well not used, abandoned

(8) Dilka well address unknown 1st ave
Permit number 44539 Static water level 3 feet

(9) Vanbeber well address is unknown
Permit number 25941 Static water level reported 2 feet

(10) Wadsworth 260 1st Ave. Well abandoned
Permit number 19472-F Static water level reported

(11) Vanbeber well address unknown
Permit number 16038 Static water level reported 4 feet

Conclusion for the up gradient: The ground water level decreased between 10 and 15 feet during the dewatering process. Do not know if the slurry wall increased the ground water levels along 1st Ave.

The Operator and J& T Consulting did not measure the baseline water levels starting 2 years before the slurry wall was installed, as suggested in the McGrane Report dated July 13, 2015. It appears that the ground water levels along 1st Ave have permanently been lowered by at least 10 feet since the dewatering and slurry wall installation. There has not been any ground water recovery since the slurry wall has been installed.

DOWN GRADIENT

(1) Varra this well is a dewatering well located in a gravel pit SE of the Loloff pit.
Permit number 75865-F

(2) Davis Farms This well is actually owned by the Global assets the owner of the Loloff & Derr Pits.
Permit number 14960-R Static water level report **31 feet**. This well has been **dry** several years

(3) Baab This well had been abandoned since the early 2000s
Permit number 620-W Static water level report **9 feet**

(4) Taylor This well has been dry since 2012
Permit number 223885 Static water level report **11 feet**

Conclusion on the down gradient wells: All of the wells had been abandoned or were dry, years before the report by McGrane July 13, 2015. McGrane suggested that the wells be located and water levels monitored before during and after the slurry wall installation.

This report was presented to the Board of County Commissioners in September and J&T Consulting and the Operator did not have an answer to "Why they did not follow up as suggested by McGrane". They asked for a continuance. There will be a Weld County Commissioner's meeting on November 20th covering the USR for the Derr Mining M-2008-017. There might be valuable information for the ORMS in this meeting.

Division's response:

The complainant did not provide independent data to validate the groundwater measurements provided in the complaint letter and the conclusions provided by the complainant are not supported by the data provided by the complainant and as observed in some of the listed wells by the Division and as measured by the Operator and their consultants. Please see the attached Operator's response to your question. No further action will be taken by the Division based on the well data provided by the complainant.