ID0000175
Response to Comments
Hecla
Lucky Friday Mine

EPA, Region 10
September 2020

Prepared by:
Cindi Godsey, EPA

Table of Contents

General Information

On June 21, 2019, EPA reissued the National Pollutant Discharge Elimination System (NPDES) Permit for the Lucky Friday Mine. On July 22, 2019, Hecla filed a Petition for Review of the permit with EPA's Environmental Appeals Board (EAB). At the same time, Hecla filed a Petition to Initiate Contested Case and Request to Stay 401 Certification [CWA § 401] with the Idaho Board of Environmental Quality. In response to the EAB Petition, on January 21, 2020, EPA withdrew specific conditions of the permit. On February 12, 2020, the Idaho Department of Environmental Quality (DEQ) published a modified CWA § 401 Certification. EPA issued for public comment a revised draft permit that addresses the conditions in the new CWA § 401 Certification on July 8, 2020. The comment period ended on August 7, 2020. This document presents the comments received on the revised draft permit and provides corresponding response to those comments.

Comments were received from the Idaho Conservation League (ICL) and Hecla Lucky Friday (Hecla).

Permit Comments

1. **Comment:** ICL comments that after reading the Statement of Basis (SOB) prepared by EPA, their understanding is that Hecla is requesting to retain Outfall 001 as an backup/alternative option to discharging "treated water from Water Treatment Plant 2 (WTP2) via Outfall 001, should it be needed for best water management purposes in the future." Pg. 2 of SOB. Immediately following this statement, EPA's SOB states, "WTP2 currently discharges from Outfall 002."

   If WTP2 should be operating in a manner such that it is meeting the effluent limits for Outfall 002, and Outfall 001 would be receiving this same effluent, then under what scenario would Outfall 001 need less stringent effluent limits? In essence, WTP2 should always be operating at a level that complies with the more stringent effluent limits, regardless of which particular outfall effluent is being discharged from. As such, we fail to see the need for less stringent limits at Outfall 001 as the effluent being discharged from both Outfall 001 and 002 should be of the same quality.

   Response: 40 CFR 124.53(e) requires that a state certification include "[a] statement of the extent to which each condition … can be made less stringent without violating … State law." As explained in its CWA §401 Certification of the permit and in EPA's Statement of Basis, DEQ explained that the water quality based effluent limitations for Outfall 001 can be made less stringent because there are two tributaries between Outfall 002 and 001 that provide additional flow at Outfall 001. Since there is more flow at Outfall 001, EPA revised the effluent limits to take into account the receiving water flow and hardness upstream of Outfall 001. Statement of Basis at Appendix A. As a result of this additional flow, the effluent limits for Outfall 001 can be made less stringent. No change will be made to the permit as a result of this comment.

2. **Comment:** ICL states that the Schedule of Compliance is not applicable:

   Pursuant to 40 CFR § 122.47(a)(2), schedules of compliance are only applicable to "the first NPDES permit issued to a new source or a new discharger" or

"recommencing dischargers." As this facility meets neither of these criteria, it seems inappropriate for EPA to utilize a schedule of compliance.

In the Statement of Basis, EPA recognizes that this facility fails to meet this criteria *(sic)*, but ultimately concludes that these regulations do not apply to this facility. We request that EPA provide the regulatory and or legal justification for this conclusion.

Response: The compliance schedule regulations at 40 CFR § 122.47 apply to all permits. The section of the regulation that the commentor has cited applies to the first NPDES permit issued to a *new source* or a *new discharger.* Lucky Friday Mine is not a new source or a new discharger as defined in 40 CFR 122.2. For existing dischargers, a compliance schedule is allowed for effluent limitations that are based on new or revised water quality standards. See *In re Star-Kist Caribe Inc.*, 3 EAD 172 (April 16, 1990). This allows the permittee a reasonable opportunity to attain compliance with new requirements through a compliance schedule.

No change has been made as a result of this comment.

3. **Comment:** Hecla comments that the Maximum Daily and Average Monthly limits for cadmium, zinc, lead, and mercury appear to be reversed. For example, the average monthly cadmium limit is 1.5 ug/L and the Maximum Daily limit is 0.5 ug/L. This is believed to be a typo that affects both the concentration and loading limits for the parameters listed.

   Response: The commenter is correct. The values in the Maximum Daily column for the listed parameters and copper were inadvertently switched with the Average Monthly column in the Revised Draft Permit, however, the Statement of Basis contained the appropriate values. EPA regrets this error and it has been corrected.

4. **Comment:** Hecla notes that the hardness sample type has been listed as Grab in Tables 1, 2 and 3 of the draft permit. They believe this to be a typographical error and it should be changed to a 24-hour composite sample to be consistent with the previous permit and more representative of the water quality of the discharge.

   Response: EPA meant to be consistent with the previous permit and is correcting this typographical error as a minor modification under 40 CFR 122.63(a).

5. **Comment:** Hecla notes that Permit Part I.B.1. includes effluent limits for copper at all 3 outfalls that are based on the Biotic Ligand Model (BLM) conservative regional default criteria values in the absence of site-specific input value. In September 2019, in-stream site-specific data collection began and continues on a monthly basis. A summary of the data collected to date was provided with the comments (See Attachment A). Hecla contends that the data shows the regional default criteria are overly conservative and, since the data is scientifically sound and valid, requests that EPA use the data to determine site-specific BLM criteria. In the meantime, Hecla states that it will continue to collect monthly site-specific data for the total of 24 data points (required by DEQ's BLM Implementation Guidance) to support the calculation of more appropriate and still protective site-specific BLM copper criteria.

   Response: Pursuant to IDEQ's BLM Implementation Guidance (Guidance), at least 24 consecutive months of data is considered appropriate to characterize seasonal variability for any single location. Hecla has collected less than a year's worth of data which is much less than the amount of data that is suggested under the Guidance. The Guidance does provide for times when less than 24 months would be

acceptable. The first is if, due to accessibility and safety considerations, monthly sampling is not feasible. Hecla states that it has been collecting monthly samples since September 2019; therefore, monthly sampling is feasible. The other situation is when a comparison of flow data from the time of sample collection to the historical flow record is used to demonstrate that the sampling efforts appropriately capture the temporal variability and range of expected long-term flow conditions. Hecla has not provided the information necessary to determine whether the data collected meets this requirement. In addition, Hecla stated that it will continue to collect monthly site-specific data to calculate site-specific BLM criteria. The CWA § 401 Certification states that “In the absence of site-specific data, any estimate that is derived from BLM outputs and is scientifically sound and protective of the aquatic life use in the receiving water body is allowed under the copper BLM criteria.” Further, in an email communication with EPA, DEQ has confirmed that the use of 12 months of data, as requested by Hecla, would not be “scientifically sound.” Since Hecla has limited data and has not provided information showing that the data is scientifically sound and protective of the aquatic life use, EPA is not making any changes to the permit based on this comment.

Attachment A

Table 1. Hecla LFU - Site-Specific BLM Assessment - Outfall 001

Date: 2-Aug-20

			Notes	Units	Outfall 001 - Downstream (BL#1)													
					permit	9/11/19	10/9/19	11/13/19	11/13/19 Dup	12/11/19	1/15/20	2/10/20	3/10/20	4/8/20	5/5/20	6/9/20	6/29/20	6/29/2020 DUP	7/7/20
						8:40	9:40	11:13	11:15	8:32	8:52	10:38	10:30	9:45	9:25	10:52	7:10	7:12	9:46
BLM Model	laboratory analytical	Calcium	[1]	mg/L	--	17.3	16.6	22.8	23.8	16.8	20.8	21.9	20.3	23.7	9.12	8.09	11	10.9	12.6
		Chloride	[1]	mg/L	--	14.6	17.4	15.2	15.2	20.0	38.4	53.3	53.4	48.7	11.2	6.55	8.01	8.03	10
		Copper	[1]	ug/L	--	1.04	1.33	0.47	0.74	1.14	0.92	0.74	0.46	0.94	0.5	<0.4	<0.4	<0.4	0.6
		DOC	[1,2]	mg/L	--	0.382	0.674	1.55	1.50	0.544	0.609	0.63	0.44	1.13	0.70	not avail	0.59	0.52	0.56
		Magnesium	[1]	mg/L	--	5.27	4.85	4.75	5.02	4.97	6.03	5.89	6.71	6.24	2.38	2.03	2.83	2.81	3.6
		Potassium	[1]	mg/L	--	1.04	0.966	1.37	1.44	0.96	0.96	0.91	1.00	1.19	<0.5	0.72	0.47	0.49	0.54
		Sodium	[1]	mg/L	--	9.38	10.4	11.0	11.3	10.7	20.1	26.3	25.9	24.6	5.55	4.38	5.01	4.93	6.29
		Sulfate as SO4	[1]	mg/L	--	17.4	15.5	32.6	32.3	15.3	19.2	17.2	17.9	20.2	4.82	4.8	9.8	9.79	10.8
		Total Alkalinity		mg/L as CaCO3	--	49.0	45.8	43.2	43.3	44.5	46.8	41.9	46.6	46.4	25.7	27.3	24.2	31.7	34.7
	field	In-situ measurement time	[3]	--	--	8:40	9:40	11:13	11:15	8:32	8:52	10:30	10:30	9:45	9:20	10:52	7:10	7:10	9:36
		pH		s.u.	--	8.0	7.5	7.9	7.9	7.5	7.8	7.7	7.6	8.0	7.1	7.4	7.6	7.6	7.7
		Temperature		C	--	11.0	5.4	5.2	5.2	2.8	0.2	2.6	2.2	3.5	4.6	6	8.3	8.3	9.5
	default	HA (humic acid fraction of DOC)	[4]	%	--	10	10	10	10	10	10	10	10	10	10	10	10	10	10
		Sulfide	[5]	mg/L	--	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08
	result	CMC (criterion maximum concentration)	[1,6]	ug/L	1.00	2.55	2.53	8.80	8.57	2.05	3.34	3.26	2.08	7.60	1.46	-	[illegible]36	2.08	2.57
		CCC (criterion continuous concentration)	[1,7]	ug/L	0.60	1.58	1.59	5.46	5.32	1.27	2.08	2.02	1.29	4.72	0.91	-	1.[illegible]7	[illegible]	[illegible]

Notes:

1 Expressed as dissolved (except for Oct 9, 2019 sample, where highlighted in red. Dissolved sample not available)

2 Due to sampling error, DOC was not collected on 1/15/20 but collected on 1/22/20.
Since the 1/22/20 result is similar to the previous and post sampling events, it is considered representative of the 1/15/20 time period.

3 Measurements collected in-situ, with hand-held calibrated meter, at the time of sample collection

4 In accordance with IDEQ guidance, HA is input to the BLM at a default concentration of 10%.

5 In accordance with IDEQ guidance, sulfide is input to the BLM at a default concentration of 1.0E-8 mg/L.

6 Acute water quality criteria

7 Chronic water quality criteria

Not considered valid due to lack of dissolved data.

Table 2. Hecla LFU - Site-Specific BLM Assessment - Outfall 002

Date: 2-Aug-20

			Notes	Units	Outfall 002 - Downstream (BL#2)													
					permit	9/11/19 9:12	10/9/19 10:30	11/13/19 12:01	12/11/19 9:03	1/15/20 9:46	2/10/20 12:30	3/10/20 11:12	3/10/20 DUP 11:13	4/8/20 10:21	5/5/20 10:15	6/9/20 11:42	6/29/20 8:15	7/7/20 10:36	7/7/20 DUP 10:38
BLM Model	laboratory analytical	Calcium	[1]	mg/L	--	17.6	16.7	25.8	17.8	20.4	19.5	19.8	21.5	24.2	9.39	8.81	11.3	12.8	12.9
		Chloride	[1]	mg/L	--	14.2	17.7	15.2	18.7	35.3	51	49.5	49.3	47.9	12.4	6.9	8.31	10.3	10.3
		Copper	[1]	ug/L	--	1.31	1.59	0.78	1.50	1.81	1.4	0.75	0.71	1.16	0.7	0.4	0.4	0.8	0.7
		DOC	[1,2]	mg/L	--	0.392	0.748	1.81	0.403	0.628	0.60	0.43	0.50	1.45	0.84	not avail	0.62	0.54	0.57
		Magnesium	[1]	mg/L	--	5.55	5.0	5.17	5.29	6.06	5.86	7.2	7.07	6.54	2.5	2.17	3.1	3.94	3.9
		Potassium	[1]	mg/L	--	1.19	1.11	1.57	1.24	1.14	0.75	1.09	1.09	1.26	0.52	0.64	0.6	0.64	0.68
		Sodium	[1]	mg/L	--	8.94	10.4	11.3	11.0	18.4	23.6	24.9	24.1	23.6	6.06	4.34	5.26	6.56	6.59
		Sulfate as SO4	[1]	mg/L	--	19.8	11.4	39.4	22.1	21.9	11.7	18.3	18.5	22.4	6.87	8.12	11.3	13.4	13.4
		Total Alkalinity		mg/L as CaCO3	--	47.5	45.0	44.4	44.7	46.2	42.2	46.1	46.9	44.8	26.6	24	30.8	34.1	32.3
	field	In-situ measurement time	[3]	--	--	9:12	10:30	12:00	9:03	9:30	12:30	11:12	11:12	10:21	10:15	11:42	8:00	10:36	10:36
		pH		s.u.	--	8.1	7.9	8.1	7.8	8.0	7.7	7.8	7.8	8.0	7.5	7.2	7.5	7.7	7.7
		Temperature		C	--	11.6	5.7	5.6	3.4	1.2	2.7	2.8	2.8	3.7	4.9	8.5	8.6	9.7	9.7
	default	HA (humic acid fraction of DOC)	[4]	%	--	10	10	10	10	10	10	10	10	10	10	10	10	10	10
		Sulfide	[5]	mg/L	--	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08
	result	CMC (criterion maximum concentration)	[1,6]	ug/L	1.00	2.87	4.31	12.29	2.13	4.08	3.06	2.49	2.87	9.69	2.98	-	2.21	2.49	2.62
		CCC (criterion continuous concentration)	[1,7]	ug/L	0.60	1.78	2.68	7.63	1.32	2.53	1.9	1.55	1.78	6.02	1.85	-	1.37	1.54	1.63

Notes:

1 Expressed as dissolved (except for Oct 9, 2019 sample, where highlighted in red. Dissolved sample not available)

2 Due to sampling error, DOC was not collected on 1/15/20 but collected on 1/22/20.
Since the 1/22/20 result is similar to the previous and post sampling events, it is considered representative of the 1/15/20 time period.

3 Measurements collected in-situ, with hand-held calibrated meter, at the time of sample collection

4 In accordance with IDEQ guidance, HA is input to the BLM at a default concentration of 10%.

5 In accordance with IDEQ guidance, sulfide is input to the BLM at a default concentration of 1.0E-8 mg/L.

6 Acute water quality criteria

7 Chronic water quality criteria

Not considered valid due to lack of dissolved data.

Table 3. Hecla LFU - Site-Specific BLM Assessment - Outfall 003

Date: 2-Aug-20

			Notes	Units	permit	Outfall 003 - Downstream (BL#3)												
						9/11/19 10:12	10/9/19 10:57	11/13/19 12:44	12/11/19 9:24	1/15/20 10:18	2/10/20 13:00	3/10/20 11:59	4/8/20 10:55	4/8/20 DUP 10:57	5/5/20 11:11	6/9/20 12:26	6/29/20 8:50	7/7/20 11:21
BLM Model	laboratory analytical	Calcium	[1]	mg/L	--	16.0	15.9	16.5	16.1	18.9	18.7	17.3	20.5	20.8	6.88	5.7	7.93	10.2
		Chloride	[1]	mg/L	--	14.7	16	14.9	18.8	24.9	34.3	30	36.8	37.2	13.8	6.72	9.09	11
		Copper	[1]	ug/L	--	1.51	1.32	0.88	1.06	1.04	0.65	0.38	0.82	0.95	0.5	<0.4	<0.4	0.5
		DOC	[1,2]	mg/L	--	0.471	0.758	0.539	0.658	0.602	0.66	0.43	1.02	1.00	0.74	not avail	0.59	0.53
		Magnesium	[1]	mg/L	--	5.17	4.99	5.13	5.20	6.24	6.00	6.99	6.44	6.55	2.24	1.83	2.61	3.45
		Potassium	[1]	mg/L	--	0.96	0.833	0.97	0.97	0.84	0.75	0.97	0.93	0.95	<0.5	0.44	0.36	0.43
		Sodium	[1]	mg/L	--	7.24	6.92	7.69	8.16	10.3	13.2	12.9	15.6	15.7	5.66	3.47	4.11	5.05
		Sulfate as SO4	[1]	mg/L	--	12.1	17.3	12.9	14.7	17.2	13.7	16.3	16.2	16.9	3.14	2.62	4.1	6.23
		Total Alkalinity		mg/L as CaCO3	--	45.2	42.2	43.2	41.6	43.8	35.5	43	40.7	40.8	20.2	17.1	24.6	29.8
	field	In-situ measurement time	[3]	--	--	9:35	10:57	12:46	9:24	10:18	13:00	11:59	10:55	11:00	11:09	12:26	8:50	11:21
		pH		s.u.	--	8.1	7.8	8.0	7.8	8.0	7.7	7.7	7.9	7.9	7.4	6.8	7.5	7.7
		Temperature		C	--	11.3	5.4	4.9	2.6	0.8	2.4	2.8	3.7	3.7	5.5	8.5	8.1	9.7
	default	HA (humic acid fraction of DOC)	[4]	%	--	10	10	10	10	10	10	10	10	10	10	10	10	10
		Sulfide	[5]	mg/L	--	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08	1.0.E-08
	result	CMC (criterion maximum concentration)	[1,6]	ug/L	1.00	3.36	3.83	3.34	3.34	3.72	3.15	2.09	6.01	5.90	2.34	-	2.09	2.41
		CCC (criterion continuous concentration)	[1,7]	ug/L	0.60	2.08	2.38	2.08	2.08	2.31	1.95	1.3	3.73	3.66	1.45	-	1.3	1.5

Notes:

1 Expressed as dissolved (except for Oct 9, 2019 sample, where highlighted in red. Dissolved sample not available)

2 Due to sampling error, DOC was not collected on 1/15/20 but collected on 1/22/20.
Since the 1/22/20 result is similar to the previous and post sampling events, it is considered representative of the 1/15/20 time period.

3 Measurements collected in-situ, with hand-held calibrated meter, at the time of sample collection

4 In accordance with IDEQ guidance, HA is input to the BLM at a default concentration of 10%.

5 In accordance with IDEQ guidance, sulfide is input to the BLM at a default concentration of 1.0E-8 mg/L.

6 Acute water quality criteria

7 Chronic water quality criteria

Not considered valid due to lack of dissolved data.