

ID0000027  
US Silver Idaho, Inc.  
Coeur and Galena Mines and Mills  
Response to Comments

Environmental Protection Agency (EPA)  
Region 10  
June 2019

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## General Information

EPA provided public notice of the draft permit with the draft Clean Water Act (CWA) § 401 Certification on March 4, 2019. The comment period was scheduled to end on April 4, 2019. The Idaho Conservation League (ICL) requested an extension of the comment period. EPA did not grant an extension to the comment period; however, EPA did accept comments from ICL after the close of the comment period.

EPA Region 10 has undergone an organizational realignment since the Draft Permit was issued. This has caused some name changes to groups within the organization, title changes and changes to mailstops within addresses. These updates have been made in the Final Permit.

The Idaho Department of Environmental Quality (DEQ) pointed out that there was a typographical error in the copper loading limitations at Outfall 002. Using the concentration effluent limitations and the effluent flow in the loading equation from the Fact Sheet, the loading limitations are a monthly average of 0.004 lbs/day and the daily maximum is 0.01 lbs/day. This correction was made in the final permit.

In the course of responding to comments, it was discovered that the wrong test was included for Whole Effluent Toxicity for *Ceriodaphnia dubia*. The static test was included when it should have been the Daphnid Survival and Reproduction Test. This correction was made in the final permit.

On June 3, 2019, the Idaho Department of Environmental Quality (DEQ) provided a final CWA § 401 Certification for this permit.

*As much as possible, the comments below were taken verbatim from the comments received by EPA.*

## Comments on the Draft Permit

- Comment:** ICL strongly urges the EPA delay issuing U.S. Silver's NPDES permit until after EPA issues a decision on Idaho's copper BLM criteria. The proposed BLM-based effluent limits for copper would be much more protective of the receiving waters than the limits derived from the outdated copper hardness criteria. The South Fork of the Coeur d'Alene River's is already exceedingly impaired by cadmium, lead, and zinc, and EPA should not subject this vulnerable water body to copper loading at rates orders of magnitude greater than what the BLM model prescribes solely due to an administrative approval issue.

Given that EPA approval of the BLM criteria may be imminent (as DEQ's 401 Certification suggests), it would be reasonable for EPA to wait for a decision on Idaho's copper BLM criteria before reissuing U.S. Silver's permit. The South Fork of the Coeur d'Alene River

and the communities that live near and rely on this river should receive the benefits of the most up- to-date water quality science and research. And, we feel prioritizing science and public/environmental health by pausing the issuance of this NPDES permit until there's a final decision on the BLM criteria would align with U.S. Silver's interest to be a good corporate neighbor and member of the Silver Valley community.

**Response:** EPA approved the BLM criteria on May 2, 2019, so no delay is necessary and this comment is moot.

2. **Comment:** In the event that the BLM criteria is not approved prior to the issuance of this permit, we request that EPA include a reopener clause in U.S. Silver's NPDES permit, authorizing EPA to reopen and modify the permit to include effluent limits and monitoring requirements based on the BLM criteria, if EPA approves them.

**Response:** EPA has approved the BLM criteria; therefore, this comment is moot. It should be noted that permitting authority will transfer to DEQ on July 1, 2019.

3. **Comment:** ICL requests continuous pH monitoring for all sampling locations rather than a 1/month grab sample. The proposed surface water monitoring requirements for pH in the draft NPDES permit include quarterly sampling at the upstream location and monthly sampling at the downstream location (Table 5 of Draft Permit). As noted in section 5.2 of DEQ's implementation guidance and the references cited within, the copper BLM is highly sensitive to changes in pH, and pH has significant diurnal variability:

"It is well known that pH and temperature vary cyclically throughout a single day, and these cycles can be dramatic. The BLM is highly sensitive to pH, and daily pH cycles could result in dramatic changes in the BLM-derived criteria.

Therefore, when designing monitoring programs or assessing data for derivation of BLM criteria, users should consider using continuous pH data to capture the daily variability of pH at a given site or collecting samples early in the day when temperatures and pH are generally at their lowest. When continuous data are available, the timing of sampling should coincide with minimum daily pH values." (pg. 16, emphasis added).

EPA's own materials regarding the copper BLM criteria also highlight the dramatic effects of pH on BLM-derived WQC (EPA Publication #820Q16001, pg. 12). EPA's Metals Translator Guidance states: "pH may vary over several units as a result of acidic precipitation in the watershed, photosynthetic activity in the water body (lowest pH at dawn and highest pH in early afternoon coincident with peak photosynthetic activity of phytoplankton and other aquatic vegetation), or effluent discharge to the water body." Moreover, the diurnal variability has been shown to impact the concentrations of metals in freshwater streams.

A 1/quarter or 1/month grab sample is insufficient to capture the effects of this short-term variance. Given the diurnal variability of pH, and the BLM's sensitivity to pH, continuous monitoring of pH would provide the best possible input parameters for the BLM, ultimately leading to the most accurate permit limits. This monitoring can be done relatively simply and inexpensively by probe measurement.

**Response:** The CWA § 401 Certification contains a condition that requires continuous pH monitoring downstream of each Outfall as part of the BLM monitoring. Continuous

monitoring in other locations will be evaluated as part of the QAP and Monitoring Plan developed for receiving water sampling.

4. **Comment:** ICL requests that EPA reevaluate and adjust the critical low flows for the South Fork of the Coeur d’Alene River (“SFCdA”) by incorporating water flow data from USGS’ Elizabeth Park water monitoring station, USGS 12413210, and evaluating it through the EPA software tool BASINS.

We are concerned that EPA’s proposed critical low flows for the SFCdA River inaccurately doubled from the current permit. The proposed critical low flows for U.S. Silver’s discharge to the SFCdA are higher than the critical low flows recently used to calculate effluent limits for the Page and Smelerville Wastewater Treatment plants and the Central Treatment Plant (CTP), which discharge into the SFCdA approximately 12 and 8 river miles, respectively, downstream of U.S. Silver’s Outfall 002.

SFCdA River	Current	Proposed	Page WWTP	Smelerville WWTP	CTP
1Q10 (cfs)	27	59	48.2	43.3	41.57
7Q10 (cfs)	31	60.4	60.8	54	52.16

According to EPA’s proposed critical low flows for U.S. Silver, the SFCdA River has higher flow volumes upstream than it does downstream. This cannot be true and EPA should re-propose critical low flows that accurately reflect water conditions in the SFCdA River to ensure the effluent limits derived from these flows are protective of the designated uses of the river.

In addition, the Elizabeth Park monitoring station has daily flow data records from 1987 through the present, and utilizing this historical data will ensure the proposed effluent limits are based on the lowest flow periods that have been observed on the SFCdA River.

**Response:** EPA used flow data that was collected by US Silver for the receiving waters at the point of the discharge. It should be noted that the SFCdA River is a complex system with gaining and losing reaches. EPA consulted the report: *Dissolved Cadmium, Zinc, and Lead Loads from Ground-Water Seepage into the South Fork Coeur d’Alene River System, Northern Idaho, 1999*. Water-Resources Investigations Report 01–4274, which was prepared by USGS in cooperation with EPA. Several losing and gaining reaches between Osburn and Smelerville are identified, see maps in Attachment A. Given this information, EPA made no changes to the final permit based on data from another flow set.

5. **Comment:** ICL requests EPA explain why the water quality criteria for salmonid spawning were not used in the reasonable potential analysis.

**Response:** EPA regrets this oversight in using only the designated uses listed in the Idaho Water Quality Standards and agrees the recently established existing use (identified in DEQ studies) should have been considered. The salmonid spawning use contains more stringent requirements (IDAPA 58.01.02.250.01(f)) for dissolved oxygen which is not a pollutant of concern and for temperature which is addressed in subsequent responses. See Responses to Comments #6 through # 8, below.

6. **Comment:** ICL requests EPA explain why the water quality criteria for salmonid spawning were not used in the reasonable potential analysis.

ICL requests EPA issue temperature effluent limits for U.S. Silver's Outfall 001. Applying the water quality criteria for salmonid spawning indicates that EPA must issue temperature effluent limits, at least for U.S. Silver's Outfall 001. DEQ's Beneficial Use

$$\text{Calculation based on: } (\text{Criterion} + 0.3) > \text{Criterion} + \frac{(\text{Effluent 95} - \text{Criterion})}{DF}$$

Reconnaissance Monitoring in 2014 identified both brook trout and cutthroat trout in Lake Creek. And, according to DEQ's 2016 Water Body Assessment Guidance, brook trout spawning and egg incubation occurs between October 1 and June 1 and cutthroat trout spawning and egg incubation occur between April 1 and July 1. Using a conservative screening analysis based on the salmonid spawning 13 degrees Celsius daily maximum, the 95th percentile of U.S. Silver's Outfall 001 effluent temperature data between April 1 and July 1 (26.8 degrees Celsius), and the EPA-calculated 1.008 dilution factor shows U.S. Silver's discharge into Lake Creek has the reasonable potential to cause or contribute to exceedances of the temperature criteria.

**Effluent Temperature Data - Outfall 001**

Date	Temp	Date	Temp	Date	Temp
4/1/14	23.3	4/1/15	16.4	4/4/16	18.8
4/11/14	26.8	4/8/15	15.8	4/14/16	18.1
4/18/14	21.4	4/15/15	14.8	4/21/16	16.5
4/24/14	15.5	4/22/15	25.3	4/28/16	24.8
5/1/14	23.3	5/6/15	18.6	5/5/16	27.1
5/8/14	26.8	5/13/15	24.3	5/13/16	26.2
5/15/14	11	5/20/15	8.6	5/19/16	17.25
5/23/15	11.2	5/28/15	6	5/25/16	19.2
		6/2/15	9	6/24/16	14.7
		6/9/15	11.6	6/30/16	18.5
		6/20/15	5.3		
		6/28/15	6.2		

**Response:** To date only quarterly temperature data is available upstream of the outfalls and only weekly effluent monitoring of the discharge is available. Since the time that EPA reissued the 2007 Permit, EPA determined that continuous effluent data is necessary to determine compliance with the temperature criteria. Without a more complete dataset to conduct a mixing zone analysis and a corresponding analysis under IDAPA 58.01.02.080.03 Temperature Exemption, EPA cannot determine whether there is reasonable potential to violate the temperature standard. EPA has added continuous effluent temperature monitoring to the final permit and requires continuous ambient monitoring for the full permit term. See also DEQ Response to Comment #3 in

Attachment B. The information collected during this permit cycle will allow DEQ, who will be the permitting authority when the permit is reissued, to determine whether there is reasonable potential necessitating an effluent limit.

7. **Comment:** If EPA declines to issue temperature effluent limits and determine whether U.S. Silver's discharge to Lake Creek has a reasonable potential to cause or contribute to exceedances of the temperature criteria, ICL requests an explanation of why the existing effluent and receiving water temperature data was insufficient for EPA to assess U.S. Silver's compliance with the salmonid spawning existing use. In EPA's 2007 Response to Comments in regards U.S. Silver's current NPDES permit, EPA stated: "The permit requires temperature monitoring of the effluent and South Fork which will help answer the question as to whether temperature related impacts to aquatic life may be occurring."

Given EPA's statement in 2007, is it EPA's opinion now that it did not require the correct quantity or quality of temperature monitoring in U.S. Silver's last NPDES permit, for EPA to make a determination regarding temperature in the context of its 2019 permit? If so, EPA must ensure it does not repeat this mistake again in U.S. Silver's 2019 permit. Salmonid species in Lake Creek should not suffer another decade because EPA failed to require U.S. Silver to collect monitoring data sufficient to make a compliance determination. Please explain how EPA's proposed temperature monitoring requirements ensure sufficient data will be collected for Idaho to make a compliance determination five years from now.

**Response:** See the Response to Comment # 6.

8. **Comment:** To ensure Idaho has sufficient data to make a temperature compliance determination during the next renewal of U.S. Silver's NPDES permit, ICL requests EPA refine the temperature monitoring requirements of the receiving water and effluent for both Outfalls 001 and 002. U.S. Silver's effluent data reveals that effluent temperature can vary dramatically, so, similar to other NPDES permits in Idaho where EPA suspects violations of temperature water quality criteria, we request EPA require U.S. Silver conduct continuous monitoring for effluent temperature from Outfall 001. At minimum, we request EPA require U.S. Silver sample effluent temperature 5 times per week (on different days) and report the monthly instantaneous maximum and weekly average.

**Response:** EPA agrees that more frequent temperature effluent monitoring would be helpful to DEQ in establishing the appropriate effluent limits and would also be useful in assisting DEQ in their subbasin assessment. See DEQ Response to Comment # 3 in Attachment B. As such, EPA has added continuous temperature effluent monitoring to ensure that the permittee is collecting adequate data to assess compliance with the temperature water quality standards. The data may also be used for development of WLAs in a TMDL. During the next permit cycle, DEQ will determine the appropriate monitoring frequency in a modified or reissued permit. See also the Response to Comment #6.

9. **Comment:** ICL requests that note 5 in Table 5 of U.S. Silver's draft permit be amended to require surface water quality monitoring to continue for the duration of the permit, even if it is administratively extended. We are particularly concerned about this monitoring requirement because in the event this permit is administratively extended by nearly a decade as U.S. Silver's current permit was, the monitoring data collected in the first two

years of the new permit will not be representative of the most current receiving water conditions.

**Response:** See the Response to Comment #6. While DEQ would like to use the collected data as soon as possible so a wasteload allocation can be determined and potentially incorporated as an effluent limit into a modified or reissued permit with the appropriate level of monitoring being determined at that time, EPA has determined that ambient monitoring should continue until the next reissuance of the permit. As stated in the Response to Comment # 2, this permit will transfer to the state of Idaho in July 2019. It is the goal of the newly authorized IPDES program to reissue permits in a timely manner so it is not expected that this permit would be administratively extended in 5 years.

10. **Comment:** ICL requests that the interim limits for cadmium and mercury at Outfall 001 be deleted and require immediate compliance with the proposed limits because U.S. Silver effluent data demonstrates it can immediately achieve compliance with these limits at Outfall 001. U.S. Silver's current permit already requires it achieve compliance with a 1.9 ug/L cadmium effluent limit, and U.S. Silver regularly records cadmium concentrations orders of magnitude below this concentration. The proposed cadmium effluent limit for Outfall 001 is not much more stringent, which is illustrated by U.S. Silver's effluent data in Appendix B of EPA's Fact Sheet, showing that U.S. Silver would not have accrued any additional compliance violations for cadmium at Outfall 001, had the proposed effluent limit been in effect during that time. And, the same reasoning applies to the proposed interim limits for mercury at Outfall 001. The concentration of mercury in discharges from Outfall 001 are regularly 0, and EPA's proposed mercury effluent limits are not much more restrictive than the current limits, again illustrated by the fact that U.S. Silver would not have accrued any additional compliance violations had the proposed mercury effluent limit been in effect during the permit term shown in U.S. Silver's effluent monitoring data.

**Response:** A review of the compliance data reveals that there have been exceedances of both parameters so DEQ chose to maintain the Interim Limits in the Compliance Schedule contained in the final CWA § 401 Certification. In addition, although the cadmium concentration effluent limitations have changed, the mass loading limitations have not so the load of cadmium to the SFCdA River would not be increased. The mass loading limitations calculated using the lower effluent flow rate of the previous permit are included in the final permit. These limitations would have been higher if the current effluent flow rate were used. As such, this effectively decreases the concentration that can be discharged if effluent flows remain the same. For mercury, the effluent limitations at every tier level are more stringent under the new permit thus a compliance schedule was authorized by DEQ in the CWA § 401 Certification.

11. **Comment:** If EPA does not strike these interim limits, ICL requests the basis on which it determined U.S. Silver is unable to immediately achieve compliance at Outfall 001. It would be suspect to find U.S. Silver unable to immediately achieve compliance with the proposed effluent limits for cadmium and mercury at Outfall 001 because, if that were the case, U.S. Silver is likely unable to immediately achieve the current effluent limits for these constituents, even now, over a decade since its last NPDES permit was issued.

**Response:** As stated in the Response to Comment # 9, there have been exceedances of both the cadmium and mercury effluent limitations during the last permit cycle. The

exceedances have occurred infrequently but as noted in the DEQ Response to Comment # 4 in Attachment B, there is a high probability that U.S. Silver could exceed the new water quality-based effluent limits in the permit.

**12.Comment:** Please explain why EPA declined to analyze the full record of monitoring data for receiving water quality, outfall flow rate, and effluent characterization. EPA's Fact Sheet indicates the following analyses were based off varying date ranges of monitoring data U.S. Silver collected pursuant to its current NPDES permit:

Receiving water quality: (2012-2016)

Outfall flow rate: (EPA did not include a data range at Fact Sheet, Table 2)

Effluent characterization: (2013-2016)

U.S. Silver's current NPDES permit was issued in 2007. So, EPA has the benefit of well over a decade of monitoring data that should inform the development of U.S. Silver's updated permit. For example, analyzing another year's worth of data (or more) could change EPA's calculation of the 99th percentile outfall flow rate. Similarly, another year's worth of data (or more) could reveal higher or lower potential maximum and minimum constituent levels in U.S. Silver's effluent. And, changes to either or both of these variables could significantly affect EPA's determination of effluent limits and monitoring requirements. But rather than analyze all the data, EPA chose to limit its analysis to 3 years of data in some cases, without providing a reasonable basis for this decision.

ICL requests that EPA re-analyze receiving water quality, outfall flow rate, and effluent characterization based on the complete record of U.S. Silver's monitoring data recorded since its current permit became effective.

**Response:** EPA generally uses the most recent five years of data to properly reflect the most current conditions at the facility and to avoid using data that may be of lesser quality because more sensitive detection levels are being used. As shown in the Fact Sheet, both the effluent characterization data and the effluent flow data utilized data into 2017. EPA used over 250 data points to characterize the effluent for most of the parameters at Outfall 001 and over 140 data points at Outfall 002. The current effluent flow was characterized by over 1500 data points at each outfall. EPA utilized the available ambient data, which is reported annually, at the time the calculations were made. No changes were made to the final permit as a result of this comment.

**13.Comment:** Please explain the statutory and regulatory basis of the Clean Water Act that grants EPA authority to set effluent limits based on tiers of receiving water flows.

In addition, please explain why these flow tiers are necessary in U.S. Silver's NPDES permit. DEQ and EPA granted U.S. Silver a 10-year or 12-year compliance schedule, depending on the status of Idaho's copper BLM criteria, to implement wastewater treatment technology necessary to achieving the proposed effluent limits, moving U.S. Silver beyond its current basic treatment facility. With installation of new wastewater treatment facilities at its outfalls, we would expect that these facilities will be tuned to treat for the most stringent effluent limitations, making tiered limitations no longer necessary. If that's the case, we request EPA strike the tiered limitations and require the most stringent effluent limitations based on U.S. Silver's installation of new wastewater treatment

technology. If EPA declines to strike the tiered limitations, we request EPA explain the basis for its decision.

**Response:** IDAPA 58.01.02.400.05 allows DEQ to authorize the use of tiered limitations for conventional and toxic pollutants for waters exhibiting unidirectional flow. DEQ authorized flow tiers in the CWA § 401 Certification. As described in the CWA § 401 Certification, US Silver does not have water treatment other than settlement of solids. When dilution is available it can be used at the discretion of DEQ to assist meeting effluent limits. See DEQ Response to Comment # 5 in Attachment B. EPA has reviewed the CWA § 401 Certification and has determined that it meets the provisions of the CWA, including state water quality standards.

**14.Comment:** It is unclear why EPA assumes no upstream toxicity in calculating WET monitoring trigger values. Does EPA have a reasonable basis underlying this assumption? Please provide this basis, if so. Otherwise, EPA should incorporate upstream toxicity into its calculation of WET monitoring triggers because Lake Creek and the SFCdA River are impaired for cadmium, lead, and zinc (Lake Creek is impaired for unknown reasons but metals are suspected). We request EPA reissue WET triggers based on incorporating upstream toxicity based on existing monitoring data or a reasonable estimation of upstream toxicity greater than 0.

**Response:** EPA has no upstream data for toxicity and assumed zero in the calculation. The metals contributing to the impairment have no mixing zones authorized and thus have end of pipe effluent limitations which addresses the toxicity caused by these metals.

**15.Comment:** Second, EPA incorrectly calculated the first four Chronic Toxicity Triggers for Outfall 002 at Table 4 in the draft permit. The triggers should read as follows:

Outfall	Flow Tier	Chronic Toxicity Trigger, TUc
002 Effluent Flow of 1.88 cfs	<60.4 (at the 1Q10 of 59)	8.85
	≥60.4 to <63	9.03
	≥63 to <87	9.38
	≥87 to <135	12.57
	≥1135	151.93

**Response:** The commentor is correct. The correct values for the triggers and the receiving water concentration (RWC) for Outfall 002 are listed below and included in the final permit.

Flow Tier	Triggers	RWC
<60.4 (at the 1Q10 of 59)	8.85	11%
≥60.4 to <63	9.03	11%
≥63 to <87	9.38	11%
≥87 to <135	12.57	8%
≥1135	151.93	1%

These triggers are either less than or the same as those proposed in the draft permit.

**16. Comment:** ICL requests EPA clarify and further explain its analysis of Idaho's site specific criteria for cadmium, lead, and zinc and further explain how EPA calculated these hardness based criteria. At page 23 of the Fact Sheet, EPA states that Idaho's Water Quality Standards require these hardness based criteria to be based on the hardness of the receiving water. EPA then directs Fact Sheet readers to Appendix C for more explanation. Appendix C at pages 68-69 goes on to explain EPA's calculation of hardness, but we found EPA's reasoning in this section lacking and difficult to follow.

**Response:** Appendix C of the Fact Sheet (at page 51) explains the hardness used in calculating the effluent limitations for hardness-based metals. It says:

The WQS at IDAPA 58.01.02.210.03(c)(ii) state: "The hardness values used for calculating aquatic life criteria for metals at design discharge conditions shall be representative of the ambient hardnesses for a receiving water that occur at the design discharge conditions given in Subsection 210.03.b."

This requirement has been interpreted as applying the hardness at the design discharge conditions to a criterion (1Q10 for an acute criterion and the 7Q10 for the chronic) to calculate an end-of-pipe criterion and applying a mixed hardness to calculate a criterion for a parameter with an authorized mixing zone.

For cadmium, lead and zinc, the ambient hardness at the critical flows were calculated from the equations shown on the hardness versus ambient flow graphs in the Fact Sheet. These hardnesses were used to determine the criteria for these parameters. Since a mixing zone was proposed for copper, these hardnesses were used in the mass balance equation to determine hardness at the edge of the mixing zone (a mixed hardness). Since the Copper BLM criteria was approved by EPA on May 2, 2019, the hardness-based copper criteria no longer apply and there is no mixed hardness used to determine any effluent limitations in the final permit.

**17. Comment:** Despite EPA's statement earlier in the Fact Sheet that criteria for cadmium, lead, and zinc are to be based on the hardness of the receiving water, EPA, in Appendix C, calculates hardness based on a "mixed hardness scenario." "Mixed hardness" is not a term used in Idaho's Water Quality Standards as far as we can tell. So, it is unclear how and why EPA reached the conclusion that calculating the hardness in the receiving water involves calculating mixed hardness based on effluent flow, effluent hardness, and downstream flow. Generally, the water quality conditions of receiving water have nothing to do with effluent or the water quality conditions downstream from an effluent discharge.

**Response:** In the DEQ Response to Comment #6 in Attachment B, DEQ explains that mixed hardness would be used if a mixing zone was authorized for a hardness-based parameter reflecting the hardness at the edge of the mixing zone. Since no hardness-based parameter in the final permit has an authorized mixing zone, the mixed hardness originally calculated for copper is no longer applicable. Thus, this comment is moot. See also Response to Comment # 16.

**18. Comment:** We are concerned that EPA's calculations of hardness and, correspondingly, EPA's calculations of the cadmium, lead, and zinc criteria may be flawed because EPA based these criteria on mixed hardness. We request EPA further explain its interpretation of Idaho's site specific criteria for cadmium, lead, and zinc and clarify why it is appropriate

to calculate hardness based on “mixed hardness.” To the extent EPA erred in interpreting Idaho’s Water Quality Standards, we further request EPA update its calculation of effluent limits accordingly.

**Response:** EPA did not utilize a mixed hardness to determine the applicable criteria for cadmium, lead and zinc. See Response to Comments # 16 and # 17.

19.**Comment:** We are concerned about potential seepage from Lake Creek Pond 3 and the Osburn tailings impoundment, and we request EPA and DEQ require seepage testing for both facilities no later than three years from the date this permit issued. We are troubled to read that the seepage study in 2011 could not determine the seepage rate for Pond 3. And, we request EPA and DEQ provide the seepage rate for the Osburn tailings impoundment. We also request EPA and DEQ discuss whether these facilities are lined, and, if so, provide the type of liner used by the Pond 3 and the tailings impoundment.

EPA continues to struggle with seepage and groundwater interaction below the unlined Central Impoundment Area (“CIA”) in Smelterville. The seepage and groundwater interaction below the CIA is a significant source of degradation to the SFCdA River, and it is critical EPA and DEQ ensure this is not the case for U.S. Silver’s wastewater holding and containment facilities.

**Response:** The seepage study for Lake Creek Pond 3 and the Osburn tailings impoundment was conducted under the 2007 permit. The results for Pond 3 were indeterminable and de minimus for the tailings impoundment. US Silver did not apply for permit coverage for any seepage discharges; therefore, the permit does not apply to discharges other than those from the designated outfalls. Please see DEQ Response to Comment # 7 in Attachment B.

20.**Comment:** In general, we request EPA and DEQ use their discretion to ensure the most protective effluent limits and monitoring requirements are required in U.S. Silver’s NPDES permit and 401 Certification. We continue to be alarmed by the low priority DEQ has given to developing a metals TMDL for the SFCdA River and its tributaries, even though these water bodies have been identified as impaired for cadmium, lead, and zinc since at least 1998.

We are concerned that the SFCdA River has very little assimilative capacity for the metals pollution U.S. Silver’s facility discharges into the river. And, although we are encouraged to see more stringent effluent limits in the draft NPDES permit, it remains concerning that in some cases the proposed effluent limits are still much higher than the effluent limits proposed for U.S. Silver in 2001, before the metals TMDL was rescinded.

Despite the risks to human health from metals pollution from U.S. Silver’s facility and others along the SFCdA River, DEQ believes pursuing a metals TMDL would be fruitless because it does not have the support of the mining interests. See Attachment 1. To be sure, further limiting U.S. Silver’s metals discharges alone will not, in itself, restore clean water to the Coeur d’Alene Basin or even the SFCdA River, but given degrading conditions in Lake Coeur d’Alene downstream, it’s critical EPA and DEQ use their discretion to further protect the water bodies in the Coeur d’Alene Basin.

**Response:** The comment is noted. However, effluent limitations in the final permit must ensure that EPA approved WQS are met. The basis for the effluent limits is set forth in the

Fact Sheet. A new metals TMDL has not been submitted to, and thus has not been approved by, EPA; therefore, EPA has no basis to implement the WLAs set forth in the previous TMDL which is not in effect.

21. **Comment:** The EPA should not grant the use of mixing zones in U.S. Silver's NPDES permit.

In the Coeur d'Alene Basin setting in particular, the use of mixing zones should be avoided because they facilitate the release of additional pollutants and can create potential barriers to fish movement. Depending on the outcome Idaho's BLM copper criteria and the implications it has on mixing zones in this NPDES permit and 401 Certification, we request EPA and DEQ decline to use mixing zones for Lake Creek and the SFCdA River.

If the mixing zones proposed in the draft permit are maintained, we request DEQ further discuss the analysis it used to justify its decision to permit the mixing zones for copper, mercury, arsenic, and antimony. First, the draft permit and 401 Certification, in places, suggest mixing zones apply to both Lake Creek and the SFCdA River, but Table 9 of the 401 Certification indicates they only apply to Lake Creek. Please clarify this. Second, we request EPA and DEQ discuss how the proposed mixing zones ensure the following:

- The mixing zone is to be located so it does not cause unreasonable interference with or danger to existing beneficial uses; and
- The mixing zone is to be no closer to the ten (10) year, seven (7) day low-flow shoreline than fifteen percent (15%) of the stream width.

See IDAPA 58.01.02.060.01.b. and e.iii. (2014).

**Response:** There is no mixing zone for copper in the final permit. There was no reasonable potential for antimony to exceed water quality criteria at the end of pipe so no mixing zone authorization was necessary. The mixing zone authorized at Outfall 001 resulted in lower effluent concentration limitations than in the previous permit for mercury. The same is true for Outfall 002 except for the Tier 5 concentration effluent limitations which are the same as the previous permit. See DEQ Response to Comment # 9 in Attachment B for information on the mixing zone for Outfall 002.

# Attachment A

Average dissolved cadmium load leaving the study reach minus load entering study reach from tributaries is 4.8 pounds per day. Discrepancy between load entering and leaving the reach is the result of rounding

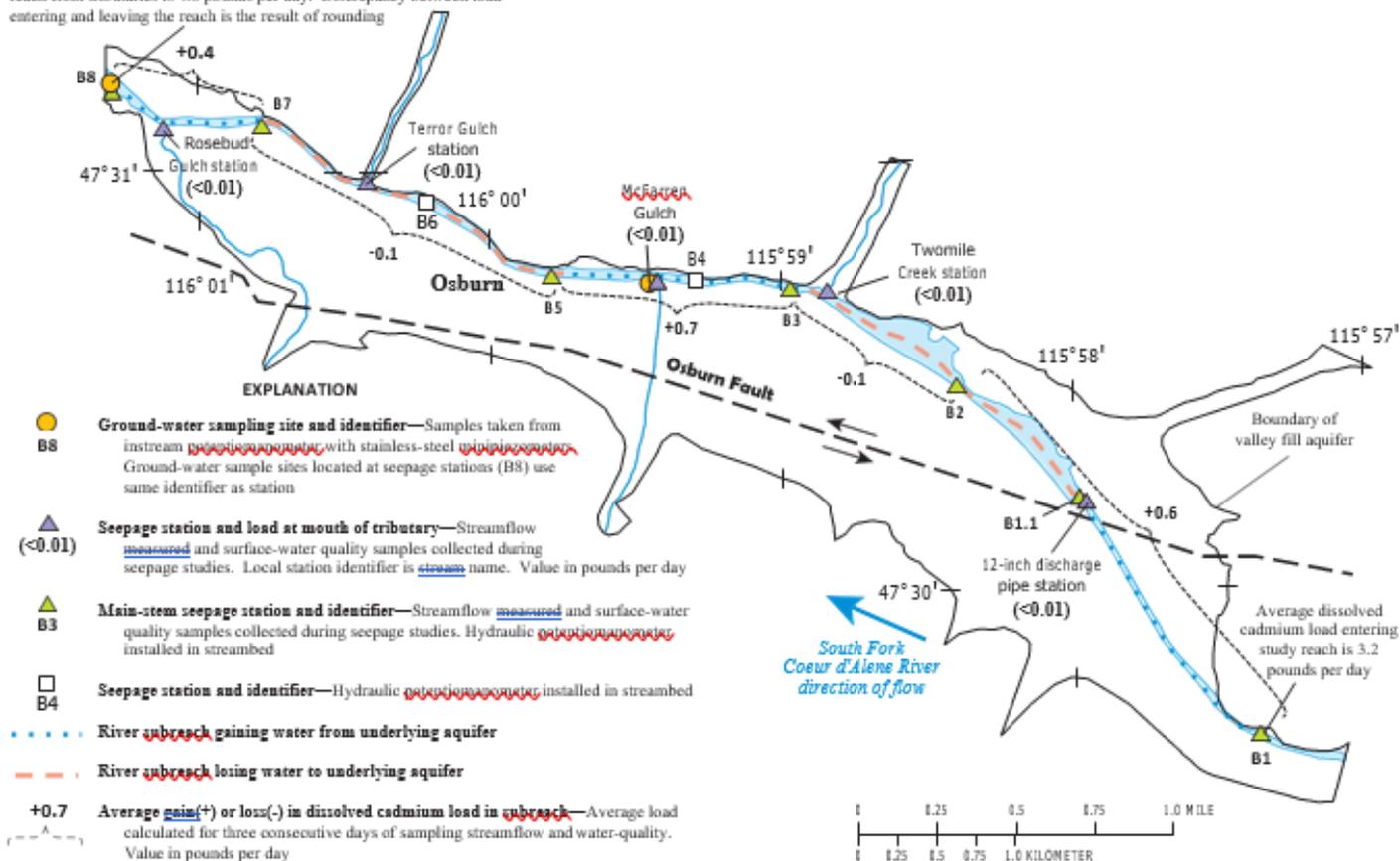


Figure 17. Location of gaining and losing ~~subreaches~~ and average gains and losses in dissolved cadmium loads for the South Fork Coeur d'Alene River near Osburn, Idaho, July 27–29, 1999. (Location of study reach shown in figure 1)

Average dissolved zinc load leaving the study reach minus load entering study reach from tributaries is 1,130 pounds per day. Discrepancy between load entering and leaving the reach is the result of rounding

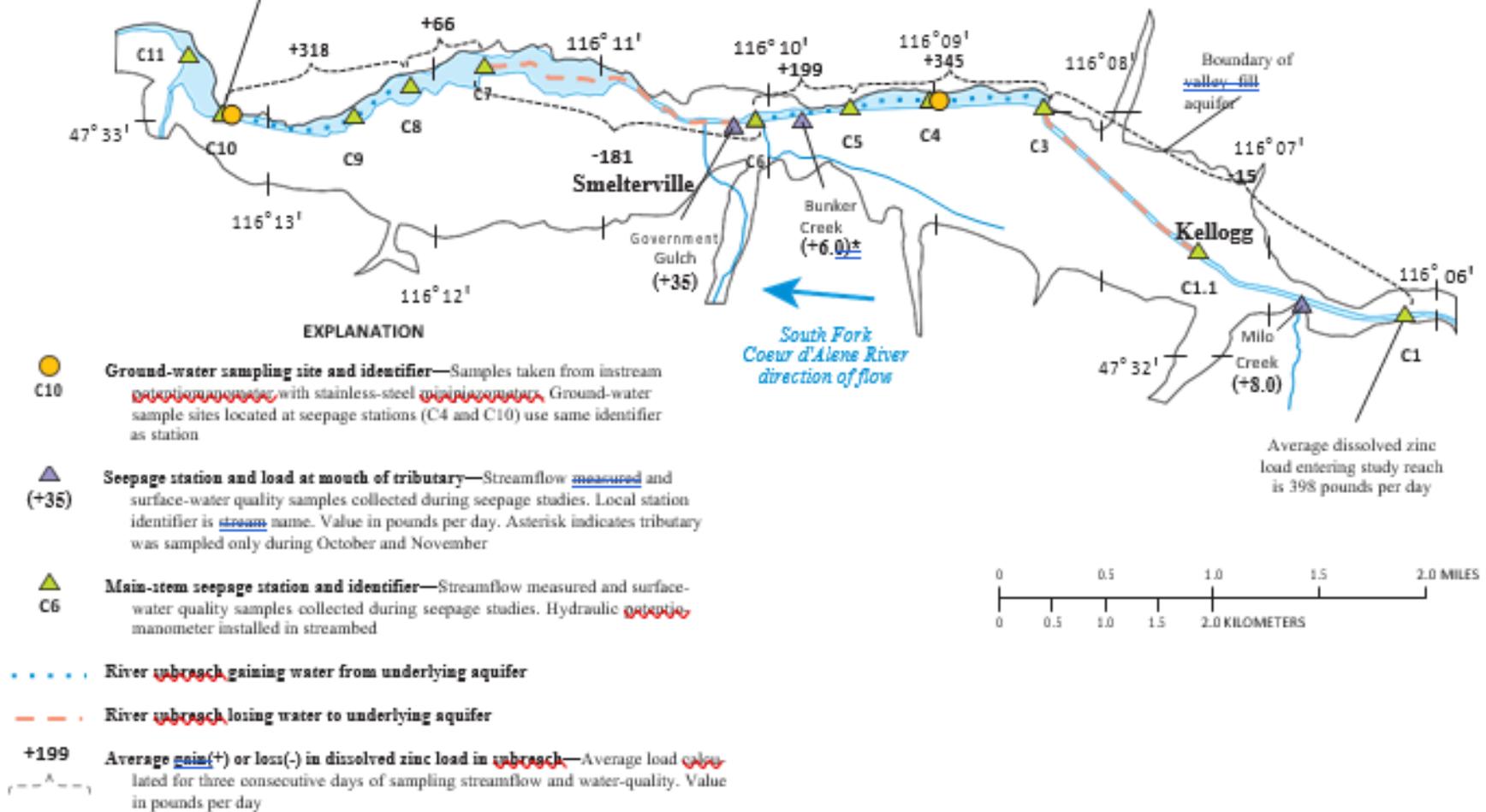


Figure 31. Location of gaining and losing subreaches and average gains and losses in dissolved zinc loads for the South Fork Coeur d'Alene River near Kellogg and Smelterville, Idaho, October 15–17, 1999. (Location of study reach shown in figure 1)

Average dissolved lead load leaving the study reach minus load entering study reach from tributaries is 7.3 pounds per day. Discrepancy between load entering and leaving the reach is the result of rounding

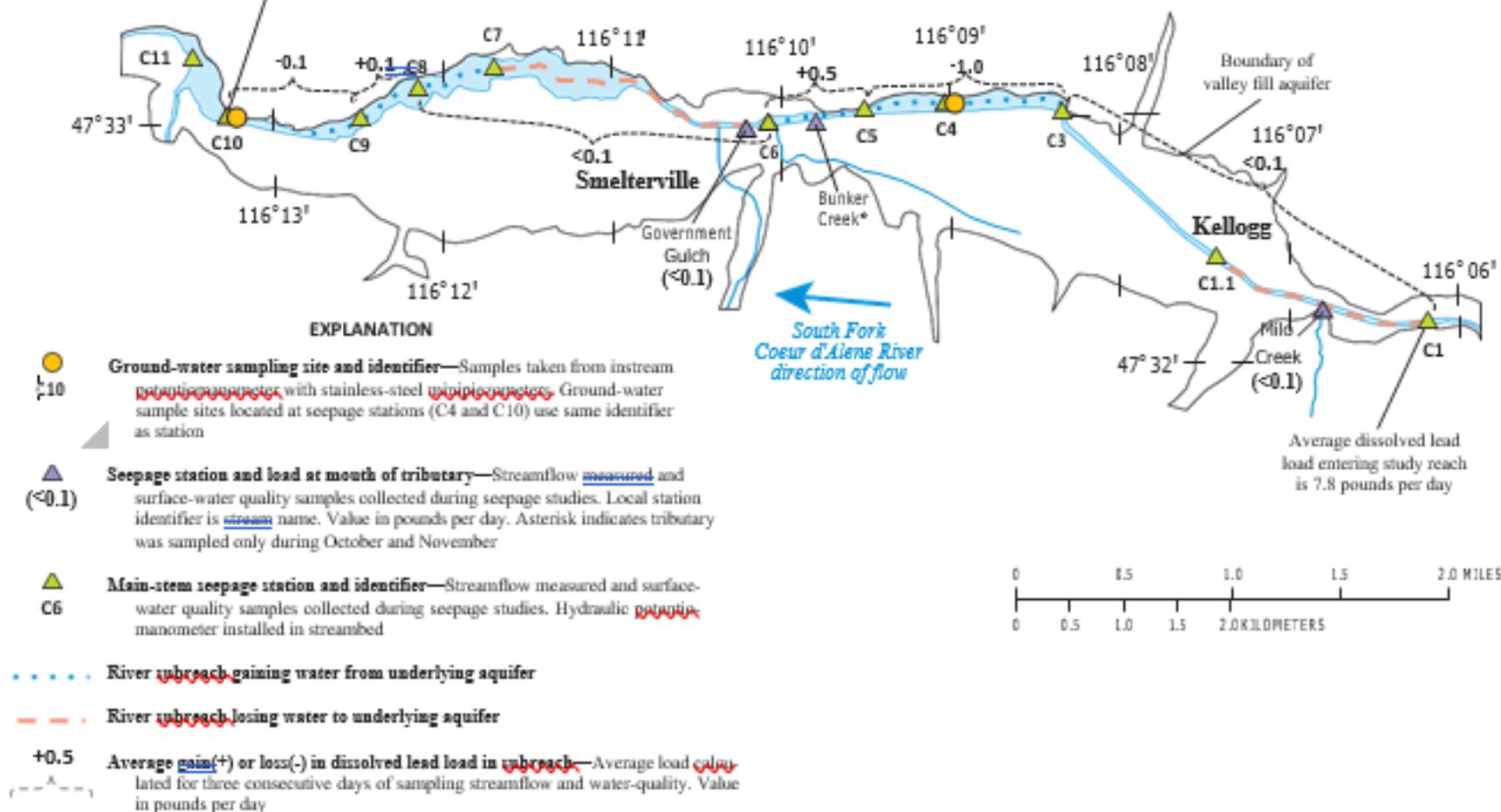


Figure 32. Location of gaining and losing subreaches and average gains and losses in dissolved lead loads for the South Fork Coeur d'Alene River near Kellogg and Smelterville, Idaho, July 27–29, 1999. (Location of study reach shown in figure 1)

## Attachment B - Idaho DEQ Response to Comments on the Draft CWA § 401 Certification

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### **Response to Comments**

Regarding Idaho DEQ's Draft §401 Water Quality Certification of  
NPDES Draft Permit # ID0000027 US Silver Coeur Galena Mine (Galena Complex)

Public Comment Period:

March 5, 2019 through April 19, 2019 for Draft Certification dated February 26, 2019

The draft 401 certification and the draft NPDES permit were advertised for public comment at the same time since one is a subset of the other. As a result, comments are received that address both permit topics and certification topics. DEQ has selected comments from the respondent that relate to 401 certification topics. EPA also develops a response to comments document addressing comments specific to their permit.

#### **ICL Comment 1**

##### **Adoption of Copper BLM Criteria**

We strongly urge the EPA delay issuing U.S. Silver's NPDES permit until after EPA issues a decision on Idaho's copper BLM criteria. The proposed BLM-based effluent limits for copper would be much more protective of the receiving waters than the limits derived from the outdated copper hardness criteria. The South Fork of the Coeur d'Alene River and Lake Creek are already exceedingly impaired by cadmium, lead, zinc, and EPA should not subject these vulnerable water bodies to copper loading at rates orders of magnitude greater than what the BLM model prescribes solely due to an administrative approval issue.

Given that EPA approval of the BLM criteria may occur in the coming weeks or months, it would be reasonable for EPA to wait for a decision on Idaho's copper BLM criteria before reissuing U.S. Silver's permit. The South Fork of the Coeur d'Alene River and Lake Creek and the communities that live near and rely on these waters should receive the benefits of the most up-to-date water quality science and research. And, we feel prioritizing science and public/environmental health by pausing the issuance of this NPDES permit until there's a final decision on the BLM criteria would align with U.S. Silver's interest to be a good corporate neighbor and member of the Silver Valley community.

In the event that the BLM criteria is not approved prior to the issuance of this permit, we request that EPA include a reopener clause in U.S. Silver's NPDES permit, authorizing EPA to reopen and modify the permit to include effluent limits and monitoring requirements based on the BLM criteria, if EPA approves them.

#### **DEQ Response to Comment 1**

The copper BLM criteria are approved and effective for this permit.

## **ICL Comment 2**

### **Continuous pH Monitoring**

We request EPA require continuous pH monitoring for all sampling locations rather than a 1/month grab sample. The proposed surface water monitoring requirements for pH in the draft NPDES permit include quarterly sampling at the upstream location and monthly sampling at the downstream location (Table 5 of Draft Permit). As noted in section 5.2 of DEQ's implementation guidance and the references cited within, the copper BLM is highly sensitive to changes in pH, and pH has significant diurnal variability:

“It is well known that pH and temperature vary cyclically throughout a single day, and these cycles can be dramatic. The BLM is highly sensitive to pH, and daily pH cycles could result in dramatic changes in the BLM-derived criteria.

Therefore, when designing monitoring programs or assessing data for derivation of BLM criteria, users should consider using continuous pH data to capture the daily variability of pH at a given site or collecting samples early in the day when temperatures and pH are generally at their lowest.

When continuous data are available, the timing of sampling should coincide with minimum daily pH values.”

(pg. 16, emphasis added).

EPA's own materials regarding the copper BLM criteria also highlight the dramatic effects of pH on BLM-derived WQC (EPA Publication #820Q16001, pg. 12). EPA's Metals Translator Guidance states: “pH may vary over several units as a result of acidic precipitation in the watershed, photosynthetic activity in the water body (lowest pH at dawn and highest pH in early afternoon coincident with peak photosynthetic activity of phytoplankton and other aquatic vegetation), or effluent discharge to the water body.” Moreover, the diurnal variability has been shown to impact the concentrations of metals in freshwater streams.

A 1/quarter or 1/month grab sample is insufficient to capture the effects of this short-term variance. Given the diurnal variability of pH, and the BLM's sensitivity to pH, continuous monitoring of pH would provide the best possible input parameters for the BLM, ultimately leading to the most accurate permit limits. This monitoring can be done relatively simply and inexpensively by probe measurement.

## **DEQ Response to Comment 2**

DEQ will determine details of the BLM monitoring locations based on analysis of existing data, knowledge of the site, DEQ rules and guidance, and any other studies or information that can assist with the BLM water chemistry data collection. Revised conditions in the 401 Certification include continuous pH monitoring for BLM data collection.

## **ICL Comment 3**

### **Temperature and Salmonid Spawning**

First, we request EPA explain why the water quality criteria for salmonid spawning were not used in the reasonable potential analysis.

Second, we request EPA issue temperature effluent limits for U.S. Silver’s Outfall 001. Applying the water quality criteria for salmonid spawning indicates that EPA must issue temperature effluent limits, at least for U.S. Silver’s Outfall 001. DEQ’s Beneficial Use Reconnaissance Monitoring in 2014 identified both brook trout and cutthroat trout in Lake Creek. And, according to DEQ’s 2016 Water Body Assessment Guidance, brook trout spawning and egg incubation occurs between October 1 and June 1 and cutthroat trout spawning and egg incubation occur between April 1 and July 1. Using a conservative screening analysis based on the salmonid spawning 13 degrees Celsius daily maximum, the 95<sup>th</sup> percentile of U.S. Silver’s Outfall 001 effluent temperature data between April 1 and July 1 (26.8 degrees Celsius), and the EPA-calculated 1.008 dilution factor shows U.S. Silver’s discharge into Lake Creek has the reasonable potential to cause or contribute to exceedances of the temperature criteria.

$$\text{Calculation based on: } (T_{\text{effluent 95}} - \text{Criterion}) / (\text{Criterion} + 0.3) > \text{Criterion} + \frac{\text{Criterion}}{DF}$$

Effluent Temperature Data - Outfall 001

Date	Temp	Date	Temp	Date	Temp
4/1/14	23.3	4/1/15	16.4	4/4/16	18.8
4/11/14	26.8	4/8/15	15.8	4/14/16	18.1
4/18/14	21.4	4/15/15	14.8	4/21/16	16.5
4/24/14	15.5	4/22/15	25.3	4/28/16	24.8
5/1/14	23.3	5/6/15	18.6	5/5/16	27.1
5/8/14	26.8	5/13/15	24.3	5/13/16	26.2
5/15/14	11	5/20/15	8.6	5/19/16	17.25
5/23/15	11.2	5/28/15	6	5/25/16	19.2
		6/2/15	9	6/24/16	14.7
		6/9/15	11.6	6/30/16	18.5
		6/20/15	5.3		
		6/28/15	6.2		

Third, if EPA declines to issue temperature effluent limits and determine whether U.S. Silver’s discharge to Lake Creek has a reasonable potential to cause or contribute to exceedances of the temperature criteria, we request EPA explain why the existing effluent and receiving water temperature data was insufficient for EPA to assess U.S. Silver’s compliance with the salmonid spawning existing use. In EPA’s 2007 Response to Comments in regards U.S. Silver’s current NPDES permit, EPA stated: “The permit requires temperature monitoring of the effluent and South Fork which will help answer the question as to whether temperature related impacts to aquatic life may be occurring.”

Given EPA’s statement in 2007, is it EPA’s opinion now that it did not require the correct quantity or quality of temperature monitoring in U.S. Silver’s last NPDES permit, for EPA to make a determination regarding temperature in the context of its 2019 permit? If so, EPA

must ensure it does not repeat this mistake again in U.S. Silver's 2019 permit. Salmonid species in Lake Creek should not suffer another decade because EPA failed to require U.S. Silver to collect monitoring data sufficient to make a compliance determination. Please explain how EPA's proposed temperature monitoring requirements ensure sufficient data will be collected for Idaho to make a compliance determination five years from now.

Fourth, to ensure Idaho has sufficient data to make a temperature compliance determination during the next renewal of U.S. Silver's NPDES permit, we request EPA refine the temperature monitoring requirements of the receiving water and effluent for both Outfalls 001 and 002. U.S. Silver's effluent data reveals that effluent temperature can vary dramatically, so, similar to other NPDES permits in Idaho where EPA suspects violations of temperature water quality criteria, we request EPA require U.S. Silver conduct continuous monitoring for effluent temperature from Outfall 001. At minimum, we request EPA require U.S. Silver sample effluent temperature 5 times per week (on different days) and report the monthly instantaneous maximum and weekly average.<sup>2</sup>

In addition, we request EPA amend note 5 in Table 5 of U.S. Silver's draft permit to require surface water quality monitoring to continue for the duration of the permit, even if it is administratively extended.<sup>3</sup> We are particularly concerned about this monitoring requirement because in the event this permit is administratively extended by nearly a decade as U.S. Silver's current permit was, the monitoring data collected in the first two years of the new permit will not be representative of the most current receiving water conditions.

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<sup>2</sup> EPA increased effluent temperature monitoring for the North Idaho Correctional Institution in this way to assess the reasonable potential to exceed Idaho Water Quality Standards for salmonid spawning.

<sup>3</sup> See 2017 NPDES permit and Response to Comments for the North Idaho Correctional Institution for EPA permit language requiring surface water quality monitoring to continue for the duration of the permit, even if administratively extended.

### **DEQ Response to Comment 3**

DEQ conditioned the 401 Certification so that we are able to work directly with the permittee to achieve the quality of data necessary for the assessment of temperature in this segment of the South Fork Coeur d'Alene River. To date we only have quarterly temperature data upstream of the outfalls and weekly effluent monitoring. DEQ is working on a temperature Subbasin Assessment/Total Maximum Daily Load for the South Fork Coeur d'Alene River and this effort requires high quality instream continuous temperature data and daily effluent temperature. Rather than develop effluent limits on inadequate data, we would rather use this opportunity to have Galena Complex collect continuous data so we can prepare a comprehensive accounting of temperature sources and develop meaningful wasteload allocations for point source dischargers, as necessary. We need this data as soon as possible for this TMDL effort. After any TMDL wasteload allocations are developed the necessary level of temperature monitoring will be added to the modified or renewed permit.

### **ICL Comment 4**

#### **Interim Limits for Cadmium and Mercury at Outfall 001**

We request EPA strike the interim limits for cadmium and mercury at Outfall 001 and require immediate compliance with the proposed limits because U.S. Silver effluent data demonstrates it can immediately achieve compliance with these limits at Outfall 001. U.S.

Silver's current permit already requires it achieve compliance with a 1.9 ug/L cadmium effluent limit, and U.S. Silver regularly records cadmium concentrations orders of magnitude below this concentration. The proposed cadmium effluent limit for Outfall 001 is not much more stringent, which is illustrated by U.S. Silver's effluent data in Appendix B of EPA's Fact Sheet, showing that U.S. Silver would not have accrued any additional compliance violations for cadmium at Outfall 001, had the proposed effluent limit been in effect during that time. And, the same reasoning applies to the proposed interim limits for mercury at Outfall 001. The concentration of mercury in discharges from Outfall 001 are regularly 0, and EPA's proposed mercury effluent limits are not much more restrictive than the current limits, again illustrated by the fact that U.S. Silver would not have accrued any additional compliance violations had the proposed mercury effluent limit been in effect during the permit term shown in U.S. Silver's effluent monitoring data.

If EPA does not strike these interim limits, we request EPA and/or DEQ provide the basis on which it determined U.S. Silver is unable to immediately achieve compliance at Outfall 001. It would be suspect to find U.S. Silver unable to immediately achieve compliance with the proposed effluent limits for cadmium and mercury at Outfall 001 because, if that were the case, US Silver is likely unable to immediately achieve the current effluent limits for these constituents, even now, over a decade since its last NPDES permit was issued.

#### **DEQ Response to Comment 4**

DEQ's interim limits for Outfall 001 authorize small increases in maximum daily limits for cadmium and small increases in mercury concentrations but retained the same mercury loading limits as the current permit. Statistical analyses done by EPA indicate the potential for Galena Complex to exceed new effluent limits for these metals, therefore, a compliance schedule was determined to be necessary. As the commenter points out, the interim limits authorized by DEQ are slightly less stringent than the final limitations. This conservative approach ensures that beneficial uses are maintained and protected.

#### **ICL Comment 5**

##### **Tiering**

Please explain the statutory and regulatory basis of the Clean Water Act that grants EPA authority to set effluent limits based on tiers of receiving water flows.

In addition, please explain why these flow tiers are necessary in U.S. Silver's NPDES permit. DEQ and EPA granted U.S. Silver a 10-year or 12-year compliance schedule, depending on the status of Idaho's copper BLM criteria, to implement wastewater treatment technology necessary to achieving the proposed effluent limits, moving U.S. Silver beyond its current basic treatment facility. With installation of new wastewater treatment facilities at its outfalls, we would expect that these facilities will be tuned to treat for the most stringent effluent limitations, making tiered limitations no longer necessary. If that's the case, we request EPA strike the tiered limitations and require the most stringent effluent limitations based on U.S. Silver's installation of new wastewater treatment technology. If EPA declines to strike the tiered limitations, we request EPA explain the basis for its decision.

### **DEQ Response to Comment 5**

IDAPA 58.01.02.400.05 authorizes DEQ to determine the use of tiered limitations for conventional and toxic pollutants for waters exhibiting unidirectional flow. As described in the 401 Draft Certification the Galena Complex does not have water treatment other than settlement of solids. When dilution is available it can be used at the discretion of DEQ to assist meeting effluent limits.

### **ICL Comment 6**

#### **Cadmium, Lead, and Zinc Criteria**

We request EPA clarify and further explain its analysis of Idaho's site specific criteria for cadmium, lead, and zinc and further explain how EPA calculated these hardness based criteria. At page 23 of the Fact Sheet, EPA states that Idaho's Water Quality Standards require these hardness based criteria to be based on the hardness of the receiving water. EPA then directs Fact Sheet readers to Appendix C for more explanation. Appendix C at pages 68-69 goes on to explain EPA's calculation of hardness, but we found EPA's reasoning in this section lacking and difficult to follow.

Despite EPA's statement earlier in the Fact Sheet that criteria for cadmium, lead, and zinc are to be based on the hardness of the receiving water, EPA, in Appendix C, calculates hardness based on a "mixed hardness scenario." "Mixed hardness" is not a term used in Idaho's Water Quality Standards as far as we can tell. So, it is unclear how and why EPA reached the conclusion that calculating the hardness in the receiving water involves calculating mixed hardness based on effluent flow, effluent hardness, and downstream flow. Generally, the water quality conditions of receiving water have nothing to do with effluent or the water quality conditions downstream from an effluent discharge.

We are concerned that EPA's calculations of hardness and, correspondingly, EPA's calculations of the cadmium, lead, and zinc criteria may be flawed because EPA based these criteria on mixed hardness. We request EPA further explain its interpretation of Idaho's site specific criteria for cadmium, lead, and zinc and clarify why it is appropriate to calculate hardness based on "mixed hardness." To the extent EPA erred in interpreting Idaho's Water Quality Standards, we further request EPA update its calculation of effluent limits accordingly.

### **DEQ Response to Comment 6**

IDAPA 58.01.02.210.03c.ii describes that hardness values used for calculating aquatic life criteria for metals shall be representative of the ambient hardnesses (e.g. 7Q10, 1Q10, etc.) for a receiving water. Ambient hardness refers to the hardness of the waterbody below any applicable mixing zone. It is critical that hardness based criteria be calculated using the fully "mixed" hardness of a waterbody since aquatic life predominantly live in the fully mixed portion of the river. Since the copper BLM was approved for use in this permit there was no use of mixed hardness.

### **ICL Comment 7**

#### **Seepage**

We are concerned about potential seepage from Lake Creek Pond 3 and the Osburn tailings impoundment, and we request EPA and DEQ require seepage testing for both facilities no later than three years from the date this permit issued. We are troubled to read that the

seepage study in 2011 could not determine the seepage rate for Pond 3. And, we request EPA and DEQ provide the seepage rate for the Osburn tailings impoundment. We also request EPA and DEQ discuss whether these facilities are lined, and, if so, provide the type of liner used by the Pond 3 and the tailings impoundment.

EPA continues to struggle with seepage and groundwater interaction below the unlined Central Impoundment Area ("CIA") in Smelterville. The seepage and groundwater interaction below the CIA is a significant source of degradation to the SFCdA River, and it is critical EPA and DEQ ensure this is not the case for U.S. Silver's wastewater holding and containment facilities.

### **DEQ Response to Comment 7**

DEQ has examined the seepage report titled, Seepage Study and Hydrological Analyses Report for US Silver NPDES Permit Number ID-000002-7 (Hydrometrics, 2011). The information in the report will be used for subbasin assessment and total maximum daily load (SBA/TMDL) development in the respective waterbodies. During the time of SBA/TMDL development DEQ may request additional information regarding seepage to ensure data is accurate and reliable.

### **ICL Comment 8**

#### **Metals TMDL Status**

In general, we request EPA and DEQ use their discretion to ensure the most protective effluent limits and monitoring requirements are required in U.S. Silver's NPDES permit and 401 Certification. We continue to be alarmed by the low priority DEQ has given to developing a metals TMDL for the SFCdA River and its tributaries, even though these water bodies have been identified as impaired for cadmium, lead, and zinc since at least 1998.

We are concerned that the SFCdA River has very little assimilative capacity for the metals pollution U.S. Silver's facility discharges into the river. And, although we are encouraged to see more stringent effluent limits in the draft NPDES permit, it remains concerning that in some cases the proposed effluent limits are still much higher than the effluent limits proposed for US Silver in 2001, before the metals TMDL was rescinded.

Despite the risks to human health from metals pollution from U.S. Silver's facility and others along the SFCdA River, DEQ believes pursuing a metals TMDL would be fruitless because it does not have the support of the mining interests. See Attachment 1. To be sure, further limiting U.S. Silver's metals discharges alone will not, in itself, restore clean water to the Coeur d'Alene Basin or even the SFCdA River, but given degrading conditions in Lake Coeur d'Alene downstream, it's critical EPA and DEQ use their discretion to further protect the water bodies in the Coeur d'Alene Basin.

### **DEQ Response to Comment 8**

In 2000, EPA and DEQ completed a metals TMDL for the South Fork Coeur d'Alene River, which EPA approved. However, in the case *Asarco v. State*, 69 P.3d 139 (Idaho, 2003), the Idaho Supreme Court later declared that TMDL void because it was not developed using rulemaking procedures. The TMDL contained wasteload allocations for all point source dischargers which were never implemented. We assume these are the limits the commenter is referring to. For example, the TMDL specifies that the Coeur/Galena Outfall 002 wasteload allocation (given in lbs/day) for cadmium, lead, and zinc were

allowed dilution with the 7Q10, 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentile flows. As the flows increase, the pollutant load was allowed to increase. The wasteload allocations for lead and zinc similarly allowed dilution using flow tiers. In contrast, the 401 Certification allows no dilution for these pollutants in the proposed permit, therefore, allowing comparatively less loading to the South Fork Coeur d'Alene River than the Coeur d'Alene Basin Metals TMDL.

Idaho Code §39-3611(4) requires that any development of TMDLs for metals in the Coeur d'Alene River Basin must go through the rulemaking process. Such a TMDL would therefore need to be approved by the Idaho Board of Environmental Quality and the Idaho Legislature, in addition to the EPA, before it could take effect. As ICL is aware, this rulemaking requirement is unique to metals TMDLs in the Coeur d'Alene River Basin; rulemaking is not required for development of any other TMDL in the state. DEQ believes that without the support of the community and mining interests in the Coeur d'Alene River Basin, a metals TMDL rule for the South Fork Coeur d'Alene River is not likely to garner the necessary approvals at this time. DEQ is therefore dedicating its limited resources to other priorities.

### **ICL Comment 9**

#### **Mixing Zones**

The EPA should not grant the use of mixing zones in U.S. Silver's NPDES permit.

In the Coeur d'Alene Basin setting in particular, the use of mixing zones should be avoided because they facilitate the release of additional pollutants and can create potential barriers to fish movement. Depending on the outcome Idaho's BLM copper criteria and the implications it has on mixing zones in this NPDES permit and 401 Certification, we request EPA and DEQ decline to use mixing zones for Lake Creek and the SFCdA River.

If the mixing zones proposed in the draft permit are maintained, we request DEQ further discuss the analysis it used to justify its decision to permit the mixing zones for copper, mercury, arsenic, and antimony. First, the draft permit and 401 Certification, in places, suggest mixing zones apply to both Lake Creek and the SFCdA River, but Table 9 of the 401 Certification indicates they only apply to Lake Creek. Please clarify this. Second, we request EPA and DEQ discuss how the proposed mixing zones ensure the following:

- The mixing zone is to be located so it does not cause unreasonable interference with or danger to existing beneficial uses; and
- The mixing zone is to be no closer to the ten (10) year, seven (7) day low-flow shoreline than fifteen percent (15%) of the stream width.

See IDAPA 58.01.02.060.01.b. and e.iii. (2014).

### **DEQ Response 9**

DEQ has corrected the error and authorized mixing zones for Outfall 002. There are no mixing zones authorized for the copper BLM limits and all reference to hardness based copper limits have been removed from the 401 Certification because it is no longer the approved method to calculate copper criteria.

The mixing zones authorized by DEQ are the same percentage or significantly smaller than those authorized in the current permit for both Outfalls. During the last permit cycle, a multi-port diffuser was added to Outfall 002 to improve mixing and location of the discharge into the South Fork Coeur d'Alene River. No mixing zones were authorized for cadmium, lead, zinc, and copper.