

RESPONSE TO COMMENTS

City of Aberdeen Wastewater Treatment Plant NPDES Permit WA0024384 January 14, 2015

On July 1, 2015, the U.S. Environmental Protection Agency (EPA) issued a public notice for the reissuance of the City of Aberdeen Wastewater Treatment Plant (WWTP) National Pollutant Discharge Elimination System (NPDES) Permit No. ID0020176.

The comments resulted in a limited reopening on September 30, 2015 for the following changes in the draft permit:

- Revised final water quality based effluent limits for total phosphorus
- Inclusion of a longer compliance schedule to achieve the final total phosphorus limits
- A minor correction to a footnote regarding compliance with the chlorine effluent limit.

This Response to Comments provides a summary of significant comments and provides corresponding EPA responses.

Comments on the July 1, 2015 comment period were received from the following:

Justin Hayes, Program Director, Idaho Conservation League (ICL)

James P. Mullen, PE, Vice President/Project Manager, Keller associates at the City of Aberdeen's request (City).

One comment was received on the September 30, 2015 comment period.

Comments on July 1, 2015 Public Notice

1. Comment (ICL): Effluent Limits Typo

We note that the final total phosphorus limits derived in Part C of the fact sheet at pages 26-27 are reported to be AML = 6.98 lbs/day and AWL = 13.3 lbs/day and an annual average limit of 4.5 lbs/day. Modestly rounded versions of these effluent limits are also stated in the text on page 13 of the factsheet. However, Table 1 in the factsheet and Table 1 in the draft NPDES permit report significantly different numbers for the AML and AWL. The average annual limit of 4.5 lbs/day is accurately reported in these tables though. It appears that there is a typo in the factsheet and the draft permit that needs to be corrected.

Effluent Limits Not Consistent With TMDL WLA

Irrespective of the typo neither of these conflicting effluent limits seems to be consistent with the total phosphorus waste load allocations (WLA) establishing in the 2012 American Falls TMDL.

The germane TMDL, Table ES-2a, Executive Summary page XX, and the factsheet, page 11, report that the annual waste load allotment for the Aberdeen WWTP is 0.16 tons/year.

0.16 tons/yr equals 320 lbs/yr (0.16 tons/yr x 2000 lbs/ton = 320 lbs/yr)

320 lbs/yr translates into 0.877 lbs/day (320 lbs/yr/365 days/yr = 0.877 lbs/day)

The draft NPDES fact sheet at Part C calculates and proposes total phosphorus AML = 6.98 lbs/day and AWL = 13.3 lbs/day and an annual average limit of 4.5 lbs/day. These limits are not consistent with the TMDL WLA for this facility.

Response: The EPA agrees there is a typo and the limits in the draft permit public noticed on July 1, 2015 are not consistent with the TMDL WLA for this facility. The EPA recalculated the effluent limitations consistent with the TMDL WLA and reopened the public comment period on September 30, 2015. As shown in the fact sheet the recalculation is repeated here:

Calculating the Average Monthly Limit

$$\frac{0.16 \text{ tons/yr} \times 2000 \text{ lb/ton}}{365 \text{ days/yr}} = 0.876 \text{ lb/day (annual average)}$$

Assume LTA = 0.876 lb/day

$$\text{AML} = \text{LTA} \times \exp[z\sigma_n - 0.5\sigma_n^2] \quad (\text{from Table 5-2 of the TSD})$$

Where:

CV = coefficient of variation = 0.6 (a default value for < 10 effluent samples, since no samples are available under the current permit after the upgrade)

n = 4 (number of samples in a month)

$$\sigma_4^2 = \ln((\text{CV}^2/n)+1) = \ln((0.6^2/4) + 1) = 0.0862$$

$$\sigma_4 = 0.294$$

z_a = percentile exceedance probability for AML (95%) = 1.645

$$\text{AML} = 0.876 \times \exp[(1.645 \times 0.294) - (0.5 \times 0.0862)] = 1.36 \text{ lb/day}$$

Calculating the Average Weekly Limit

The AWL is calculated from the following relationship with the AML (from Table 5-3 of the TSD):

$$\text{AWL} = \frac{\exp[z_m\sigma - 0.5\sigma^2]}{\exp[z_a\sigma_4 - 0.5\sigma_4^2]} \times \text{AML}$$

Where CV = 0.6, the default value, as above

$$\sigma^2 = \ln(\text{CV}^2 + 1) = \ln(0.6^2 + 1) = 0.307$$

$$\sigma = 0.554$$

z_m = percentile exceedance probability for AWL (99%) = 2.326

z_a = percentile exceedance probability for AML (95%) = 1.645

$$\text{AWL} = \frac{\exp[(2.326 \times 0.554) - (0.5 \times 0.307)]}{\exp[(1.645 \times 0.294) - (0.5 \times 0.0862)]} \times 1.36 \text{ lb/day}$$

$$\text{AWL} = 2.68 \text{ lb/day}$$

IDEQ agreed that the recalculated effluent limits are consistent with the TMDL as stated in the final 401 Certification dated December 22, 2015:

“The EPA-approved *American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis* (May 20102) establishes wasteload allocations for Total Suspended Solids (TSS) and Total Phosphorus (TP) in Hazard Creek/Little Hole Draw. These wasteload allocations are designed to ensure Hazard Creek/ Little Hole Draw and American Falls Reservoir will achieve the water quality necessary to support its existing and designated beneficial uses and comply with applicable numeric and narrative criteria. The effluent limitations and associated requirements contained in the City of Aberdeen permit are set at levels that comply with these wasteload allocations.”

2. Comment (ICL): Effluent Limits Not Consistent With TMDL WLA

In other NPDES permits the EPA has utilized an annual average daily limit as a means of providing AWL and AML flexibility for facilities while remaining consistent with TMDL annual WLAs.

In this instance, if the facility complies with the annual average limit of 4.5 lbs/day, the total TP discharge would equal 1,642.5 lbs. (i.e. 4.5 lbs/day x 356 days/yr = 1,642.5 lbs/yr)

This annual limit of 1,642.5 lbs/yr TP is not consistent with the 320 lbs/yr as developed in the American Falls TMDL WLA for Aberdeen.

EPA needs to issue TP limits for this facility that are consistent with the TMDL WLA.

Response: See Response to Comment 1. An error was made in the calculation of the long term average. The long term average was calculated as 4.5 lbs/day. The corrected long term average is 0.876 lbs/day.

3. Comment (ICL): Is this a new facility?

This facility has been expanded since the last NPDES permit was written. The prior NPDES permit was for a facility with a design flow of 0.6 million gallons/day The draft is for a facility with a design flow of 0.82 million gallons/day. Are there implications related to issuing a new permit for a new facility vs. re-issuing a permit to an existing facility?

Response: The POTW is an existing source increasing its design capacity. Increasing the capacity of an existing source does not result in a new source and does not require a new permit for a new facility. The increase in capacity includes upgrades to the treatment system. With the increase in design capacity the facility is still required to meet the Secondary Treatment Effluent Limits in 40 CFR 133.102.

4. Comment (ICL): Industrial Users

The fact sheet at page 7 states that “[t]here are no significant industrial users.” Then the fact sheet reports that 35% of the daily flow and up to 90% of the BOD₅ and TSS loadings to the WWTP come from industrial users during certain times of the year.

Without more detailed information on the three potato processing facilities that discharge to the WWTP it is hard to understand how at least one of these facilities does not qualify as a “significant facility” per 40 CFR 403.3 (i.e. >25,000 gpd or >5% POTW capacity for BOD₅. If

the WWTP receives wastewater from a 'significant facility' then it would appear that the WWTP needs to develop a Local Pretreatment Plan and contain measures related to industrial pretreatment.

Response: The comment is correct. Aberdeen receives wastewater from three significant industrial users (SIUs).

- Pleasant Valley Potato, Inc., discharging potato wash water (approximately 38,920 gpd in process wastewater)
- Sun River of Idaho, Inc., discharges potato wash water (approximately 43,868 in process wastewater);
- Idaho Select, Inc. discharges potato wash water (61,740 gpd in process wastewater);

Although three SIUs discharge to the facility, the City is not required to establish a Pretreatment Program. The comment is referring to the need for a Pretreatment Program.

The EPA Permit Writers Manual states:

“CWA section 402(b)(8) requires that certain POTWs receiving pollutants from significant industrial sources (subject to CWA section 307(b) standards) establish a pretreatment program to ensure compliance with these standards. The implementing regulations at § 403.8(a) state that:

Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (mgd) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards will be required to establish a POTW pretreatment program unless the NPDES state exercises its option to assume local responsibilities as provided in § 403.10(e).

As specified in § 403.8(a), the Regional Administrator or Director of an authorized state may require a POTW with a design flow of 5 mgd or less to develop a POTW pretreatment program. Program development could be determined to be necessary to prevent interference with or pass through of the POTW based on the nature, or volume, of the industrial influent, a history of treatment process upsets and violations of POTW effluent limitation(s), and contamination of municipal sludge.”

EPA is not requiring Aberdeen to develop a pretreatment program for the following reasons:

1. Aberdeen discharges at 0.82 mgd that is less than the 5 mgd trigger for a pretreatment program.
2. The Aberdeen Treatment Plant has violated an effluent limitation only once, for *E. Coli*. Potato washing generates TSS and BOD₅. The source of *E.Coli* is probably from domestic wastewater not the three industrial users.
3. In the absence of an approved pretreatment program, EPA serves as the Control Authority for the SIUs.
4. Regardless of whether a facility has an approved pretreatment program, the General Pretreatment Regulations apply to all nondomestic sources introducing pollutants into a POTW. The POTW Permit Condition II.D. prohibits the Permittee from authorizing

discharges which may violate the national specific prohibitions of the General Pretreatment Program.

5. Condition II.D. Requires Aberdeen to develop a legally enforceable municipal code to authorize or enable the POTW to apply and enforce the requirements of sections 307 (b) and (c) and 402(b)(8) and (9) of the Act. The draft legal authority must be submitted to EPA for review and comment within 180 days of the effective date of the permit, to ensure that it complies with the minimum requirements of 40 CFR 403.8(f)(1). The legal authority must be adopted and enforced by the POTW.

The permit is not changed.

5. Comment (City): DRAFT PERMIT

Page 6. Table 1 Change monthly and weekly phosphorus limits, respectively, from 10.9 lbs/day to 7.0 lbs/day, and from 20.6 lbs/day to 13.3 lbs/day to match the Fact Sheet calculation.

Page 7. I.B.8(a). Change “4.25 lbs/day” to 4.5 lbs/day” **to match Table 1 and the Fact Sheet calculations.**

Response: See Response to Comments 1 and 2.

6. **Comment (City):** As noted in the Fact Sheet, the City recently completed significant upgrades to their waste water treatment plant based on facilities planning that was begun in 2006, Substantial completion of the 5.8 million project was in July 2015. The City increased their sewer rates by nearly 300% to fund the project. Unfortunately, the City’s largest employer closed their potato processing plant last fall. This affects not only the area population but also the city’s tax base. Further plant upgrades in the next five years will impose an additional hardship on the City.

In order to provide upgrades to meet the proposed phosphorus limits, the City will first need to complete an updated facilities plan, acquire the necessary funds, complete the design, and bid and construct the facilities. In our experience this process requires more than the 4 years and 11 months proposed in the draft permit compliance schedule (for Aberdeen’s recent project the process took 9 years) Several other Idaho communities with more resources than Aberdeen (including Star, Weiser, Boise, Caldwell, Meridian and Nampa) have received compliance schedules of up to 9 years and 11 months to accomplish their upgrades for new effluent phosphorus limits. A similar schedule is justified for the City of Aberdeen.

Page 6, Table 1 Notes 6 and 7. As noted above the City believes a longer compliance period is needed due to the realities of the planning and funding process; this is consistent with their experience on the recently completed plant upgrade project. Accordingly, change August 1, 2020 to August 1, 2025.

Page 8, I.C.1. **Change August 1, 2020 to August 1, 2025.**

Page 8, I.C.2, Table 2 **Modify Table 2 accordingly.** The City submitted a compliance schedule similar to the one proposed in the September 30, 2015 public noticed draft permit.

Response: The EPA agrees. A limited reopening of the Aberdeen draft permit on September 30 proposed to extend the compliance schedule to 9 years and 11 months.

7. **Comment (City):** *Page 9 I.D.* There is no continuous flow monitoring device currently installed on the Hazard Creek/Little Hole Draw. Flows are currently determined (using a staff gauge) at

the same time that samples are taken for the other parameters; continuous flows would not provide additional useful information. This flow monitoring station was installed with IDEQ approval as required in the previous NPDES permit. In addition, continued use of the current upstream monitoring station is necessary in order to start monitoring immediately after the effective date of the permit. Therefore, we recommend the following changes to this section.

- Change Item I.D.1 to read as follows:
 1. **The current monitoring station in the Hazard Creek/Little Hole Draw above the influence of the facility’s discharge shall be used.**
- **Delete Items D.2. and D.3:**
 - D.2. **The permittee must seek approval of the surface water monitoring stations from the IDEQ.**
 - D.3. **A failure to obtain IDEQ approval of surface water monitoring stations does not relieve the permittee of the surface water monitoring requirements of this permit.**
- **Change first line of Table 3 as follows:**

Parameter	Units	Frequency	Sample Type
Flow	mgd	1/quarter	Grab

Response: The September 30 reopening of the public notice period replaced continuous surface water flow monitoring with a grab sample once per quarter. Approval of the current monitoring station by IDEQ is required to insure it is representative and at the best location. Condition I.D.2 and I.D.3 are not changed.

Condition I.D.1. requires monitoring above the outfall and is not changed.

8. **Comment (City):** *Fact Sheet, Page 7. II.A. Service Area.* Loading from industry, second to last sentence seem high.

Response: The loading from industry came from the fact sheet for the previous permit and the application for the City of Aberdeen with three industrial with similar flows as the current three industrial users and is supported by monitoring in 2000.

The permit is unchanged.

9. **Comment (City):** *Fact Sheet, Page 7 II.A. Treatment Process* Change in second to last line from 2012 to 2015.

Response: The statement in the second to last line of page 7 states upgrades were completed in 2012. The Fact Sheet for the September 30 reopening of the draft permit for public comment stated the completion of the upgrades was in 2015.

10. **Comment (City):** *Fact Sheet, IV.C Table 1* Change monthly phosphorus limits from 10.9 lbs/ to 7.0 lbs/day, and weekly phosphorus limits from 20.6 lbs/day to 13.3 lbs/day to match the Fact sheet calculation on p27, Appendix B.

Response: See Response to Comments 1 and 2.

11. Comment (City): *Fact Sheet Page 12, IV.C Table 1 notes 4 and 5 and on page 13, IV.C second paragraph.* . Change “four years and eleven months to “nine years and eleven months.”

Response: The Fact Sheet for the September 30 reopening of the comment period stated the change in the compliance schedule to nine years and eleven months.

Comments on the September 30, 2015 limited reopening were received from the following:

Comments on September 30, 2015 Public Notice

Justin Hayes, Program Director, Idaho Conservation League (ICL)

1. Comment: ICL supports the final TP limits that are included in this version of the draft NPDES permit.

Response: Comment noted.