



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

SEP 20 2012

OFFICE OF  
WATER AND  
WATERSHEDS

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. Chad Stanger, Public Works Director  
City of Idaho Falls  
P.O. Box 50220  
Idaho Falls, ID 83405

Re: City of Idaho Falls Wastewater Treatment Plant  
NPDES Permit No.: ID0021261

Dear Mr. Stanger:

We are reissuing a National Pollutant Discharge Elimination System (NPDES) permit for the City of Idaho Falls wastewater treatment plant. The enclosed document authorizes the facility to discharge to the Snake River. Also enclosed is the U.S. Environmental Protection Agency's response to the comments received on the draft permit during the public notice period.

This letter serves as service of notice under 40 CFR §124.19(a). The service of notice date for this permit, in accordance with 40 CFR §124.19(a) and 40 CFR 124.20, is September 28, 2012. The permit will become effective on the date indicated in the permit unless a timely appeal meeting the requirements of 40 CFR §124.19 is received by the Environmental Appeals Board. Information about the administrative appeal process may be obtained on-line at <http://www.epa.gov/eab> or by contacting the Clerk of the Environmental Appeals Board at (202) 233-0122.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael A. Bussell".

Michael A. Bussell, Director  
Office of Water and Watersheds

Enclosures

cc: Mr. Erick Neher, Regional Administrator, Idaho Department of Environmental Quality, Idaho Falls Regional Office  
Mr. Troy Saffle, Water Quality Manager, Idaho Department of Environmental Quality, Idaho Falls Regional Office  
Mr. Justin Hayes, Program Director, Idaho Conservation League

United States Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

**Authorization to Discharge Under the  
National Pollutant Discharge Elimination System**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act",

**The City of Idaho Falls  
P.O. Box 50220  
Idaho Falls, ID 83405**

is authorized to discharge from the water pollution control plant located at 4055 Glen Koester Road in Idaho Falls, Idaho, at the following location(s):

<b>Outfall</b>	<b>Receiving Water</b>	<b>Latitude</b>	<b>Longitude</b>
001	Snake River	43° 27' 45"	112° 4' 15"

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective November 1, 2012.

This permit and the authorization to discharge shall expire at midnight, October 31, 2017.

The permittee shall reapply for a permit reissuance on or before May 4, 2017 if the permittee intends to continue operations and discharges at the facility beyond the term of this permit.

Signed this 20th day of September 2012.

  
\_\_\_\_\_  
Michael A. Bussell, Director  
Office of Water and Watersheds

## Schedule of Submissions

The following is a summary of some of the items the permittee must complete and/or submit to EPA during the term of this permit:

Item	Due Date
1. Discharge Monitoring Reports (DMR)	DMRs are due monthly and must be postmarked on or before the 15 <sup>th</sup> day of the month following the monitoring month. (See III.B.)
2. Quality Assurance Plan (QAP)	The permittee must provide EPA and the Idaho Department of Environmental Quality (IDEQ) with written notification that the Plan has been developed and implemented by December 31, 2012. The Plan must be kept on site and made available to EPA and IDEQ upon request. (See II.C.)
3. Operation and Maintenance (O&M) Plan	The permittee must provide EPA and IDEQ with written notification that the Plan has been developed and implemented by April 30, 2013. The Plan must be kept on site and made available to EPA and IDEQ upon request. (See II.B.)
4. NPDES Application Renewal	The application must be submitted on or before May 4, 2017. (See V.B.)
5. Surface Water Monitoring Reports	The reports must be submitted with the March, June, September and December DMRs. (See I.D.6.)
6. Twenty-Four Hour Notice of Noncompliance Reporting	The permittee must report certain occurrences of noncompliance by telephone within 24 hours from the time the permittee becomes aware of the circumstances. (See III.G and I.B.2.)
7. Local Limits Evaluation	By November 1, 2013, the permittee must submit to EPA a local limits evaluation for certain pollutants pursuant to 40 CFR 403.5(c)(1). (See II.A.5.)
8. Annual Pretreatment Report	The Report must be submitted to the pretreatment coordinator no later than September 1 <sup>st</sup> of each calendar year. (See II.A.9.)
9. Emergency Response and Public Notification Plan	The permittee must develop and implement an overflow emergency response and public notification plan. The permittee must submit written notice to EPA and IDEQ that the plan has been developed and implemented by April 30, 2013. (See II.E.)
10. Initial Investigation TRE Workplan	Prior to initiation of the toxicity testing required by this permit, the permittee must submit to EPA a copy of the permittee's initial investigation TRE workplan. (See I.C.5.)

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## I. Limitations and Monitoring Requirements

### A. Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from Outfall 001 to the Snake River, within the limits and subject to the conditions set forth herein. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

### B. Effluent Limitations and Monitoring

- The permittee must limit and monitor discharges from outfall 001 as specified in Table 1, below. All figures represent maximum effluent limits unless otherwise indicated. The permittee must comply with the effluent limits in the tables at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

Parameter	Effluent Limitations				Monitoring Requirements		
	Units	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit	Sample Location	Sample Frequency	Sample Type
Flow	mgd	Report	—	Report	Influent or Effluent	continuous	recording
Temperature	°C	Report	—	Report	Effluent	daily	grab
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	30	45	—	Influent & Effluent	3/week	24-hour composite
	lb/day	4250	6380	—			
	% removal	85% (min.)	—	—	% removal	1/month	calculation
Total Suspended Solids (TSS)	mg/L	30	45	—	Influent & Effluent	3/week	24-hour composite
	lb/day	4250	6380	—			
	% removal	85% (min.)	—	—	% removal	1/month	calculation
E. Coli Bacteria <sup>1,2</sup>	#/100 ml	126 (geometric mean)	—	406 (instantaneous maximum)	Effluent	5/month	grab
pH	s.u.	6.5 – 9.0 at all times			Effluent	daily	grab
Total Residual Chlorine <sup>2</sup>	µg/L	90	—	200	Effluent	daily	grab
	lb/day	12.8	—	28.4			
Total Ammonia as N (June – September) <sup>2</sup>	mg/L	3.8	—	14.1	Effluent	daily	24-hour composite
	lb/day	539	—	1999			
Total Ammonia as N (October – May) <sup>2</sup>	mg/L	3.4	—	12.3	Effluent	daily	24-hour composite
	lb/day	482	—	1744			
Total Phosphorus as P	mg/L	Report	Report	—	Effluent	3/week	24-hour composite
	lb/day	391	586	—			
	lb/day	Annual Average Limit: 236 lb/day <sup>3</sup>					
Alkalinity, Total	mg/L as CaCO <sub>3</sub>	Report	—	Report	Effluent	1/month	24-hour composite
Arsenic, Total	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Cadmium, Total Recoverable	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite

Table 1: Effluent Limitations and Monitoring Requirements							
Parameter	Effluent Limitations			Monitoring Requirements			
	Units	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit	Sample Location	Sample Frequency	Sample Type
Chromium VI, Dissolved	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Chromium, Total	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Cyanide	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	See I.B.10.
Copper	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Dissolved Oxygen	mg/L	Report	—	Report	Effluent	1/month	grab
Hardness	mg/L as CaCO <sub>3</sub>	Report	—	Report	Effluent	1/month	24-hour composite
Lead	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Mercury	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Nickel	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Nitrate + Nitrite	mg/L	Report	—	Report	Effluent	1/month	24-hour composite
Oil and Grease	mg/L	Report	—	Report	Effluent	1/month	grab
Orthophosphate, Total as P	µg/L	Report	—	Report	Effluent	1/month	24-hour composite
Silver	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Total Dissolved Solids	mg/L	Report	—	Report	Effluent	1/month	24-hour composite
Total Kjeldahl Nitrogen	mg/L	Report	—	Report	Effluent	1/month	24-hour composite
Whole Effluent Toxicity, Chronic <sup>4</sup>	TU <sub>c</sub> <sup>4</sup>	Report	—	Report	Effluent	2/year <sup>4</sup>	24-hour composite
Zinc	µg/L	Report	—	Report	Influent & Effluent	2/year <sup>3</sup>	24-hour composite
Expanded Effluent Testing	See I.B.9.				Effluent	3x/5 years	24-hour composite

1. The average monthly E. Coli bacteria counts must not exceed a geometric mean of 126/100 ml based on a minimum of five samples taken every 3-7 days within a calendar month. See Part VI for a definition of geometric mean.

2. Reporting is required within 24 hours of a maximum daily limit or instantaneous maximum limit violation. See I.B.2. and III.G.

3. See I.B.11.

4. See I.C.

5. See I.B.12.

- The permittee must report within 24 hours any violation of the maximum daily limits or instantaneous maximum limits for the following pollutants: E. coli, total residual chlorine, and total ammonia as N. Violations of all other effluent limits are to be reported at the time that discharge monitoring reports are submitted (See III.B and III.H).
- The permittee must not discharge floating, suspended, or submerged matter of any kind in amounts causing nuisance or objectionable conditions or that may impair designated beneficial uses of the receiving water.

4. Removal Requirements for BOD<sub>5</sub> and TSS: The monthly average effluent concentration must not exceed 15 percent of the monthly average influent concentration. Percent removal of BOD<sub>5</sub> and TSS must be reported on the Discharge Monitoring Reports (DMRs). For each parameter, the monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month. Influent and effluent samples must be taken over approximately the same time period.
5. The permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
6. Minimum Levels. For all effluent monitoring, the permittee must use methods that can achieve a minimum level (ML) less than the effluent limitation. For parameters that do not have effluent limitations, the permittee must use methods that can achieve MLs less than or equal to those specified in Table 2, below. For parameters for which no effluent limit applies and no ML is specified in Table 2, the permittee may use any EPA-approved method for analysis.
7. For purposes of reporting on the DMR for a single sample, if a value is less than the method detection limit (MDL), the permittee must report "less than {numeric value of the MDL}" and if a value is less than the ML, the permittee must report "less than {numeric value of the ML}."

Parameter	Units	Maximum ML
Arsenic	µg/L	10
Cadmium	µg/L	0.25
Chromium VI	µg/L	10
Chromium, Total	µg/L	25
Copper	µg/L	1
Lead	µg/L	0.5
Mercury	µg/L	0.01
Nickel	µg/L	15
Nitrate + Nitrite as N	µg/L	100
Orthophosphate	µg/L	100
Silver	µg/L	0.3
Total Kjeldahl Nitrogen	µg/L	100
Zinc	µg/L	30

8. For purposes of calculating monthly averages, except for E. coli, zero may be assigned for values less than the MDL, and the {numeric value of the MDL} may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a value is equal to or greater than the ML, the permittee must report and use the actual value.
9. The permittee must perform the effluent testing required by Part D of NPDES application Form 2A (EPA Form 3510-2A, revised 1-99). The permittee must submit the results of this testing with its application for renewal of this NPDES

permit (see Part V.B). To the extent that effluent monitoring required by other conditions of this permit satisfies this requirement, these samples may be used to satisfy the requirements of this paragraph.

10. Influent and effluent sampling for cyanide must be conducted as follows. Eight discrete grab samples must be collected over a 24-hour period. Each grab sample must be at least 100 ml. Each sample must be checked for the presence of chlorine and/or sulfides prior to preserving and compositing. If chlorine and/or sulfides are detected, the sample must be treated to remove any trace of these parameters. After testing and treating for the interference compounds, the pH of each sample must be adjusted, using sodium hydroxide, to 12.0 standard units. Each sample can then be composited into a larger container which has been chilled to  $\leq 6$  degrees Celsius, to allow for one analysis for the day.
11. Influent and effluent sampling frequency for metals, arsenic, and cyanide: For arsenic, cadmium, chromium, cyanide, lead, mercury, nickel, silver and zinc, sampling must be conducted twice per year, once during the month of June and once during the month of December. For each twice-per-year sampling event, the permittee must collect three 24-hour composite samples within a calendar week. The permittee must report the results of sampling for these parameters on the June and December DMRs and in the pretreatment annual report required by Part II.A.9 of this permit.
12. Annual average limit for total phosphorus:
  - a) The annual average total phosphorus load must not exceed 236 lb/day.
  - b) The annual average total phosphorus load must be calculated as the sum of all daily discharges measured for total phosphorus during a calendar year, divided by the number of daily discharges measured for total phosphorus during that year.
  - c) The annual average total phosphorus load must be reported on the December DMR, regardless of whether a discharge of pollutants occurs during the month of December.

### **C. Whole Effluent Toxicity Testing Requirements**

The permittee must conduct chronic toxicity tests on effluent samples from outfall 001. Testing must be conducted in accordance with subsections 1 through 7, below.

1. Toxicity testing must be conducted on 24-hour composite samples of effluent. In addition, a split of each sample collected must be analyzed for the chemical and physical parameters required in Part I.B, above, with a required sampling frequency of monthly or more frequently, using the sample type required in Part I.B. For parameters for which grab samples are required in Part I.B, grab samples must be taken during the same 24-hour period as the 24-hour composite sample used for the toxicity tests. When the timing of sample collection coincides with that of the sampling required in Part I.B, analysis of the split sample will fulfill the requirements of Part I.B as well.

## 2. Chronic Test Species and Methods

- a) For outfall 001, chronic tests must be conducted twice per year, once during the period from April 1 through October 31, and once during the period from November 1 through March 31.
- b) The permittee must conduct the following two chronic toxicity tests on each sample, using the species and protocols in Table 3:

<b>Freshwater Acute Toxicity Tests</b>	<b>Species</b>	<b>Method</b>
Fathead minnow larval survival and growth test (method 1000.0)	<i>Pimephales promelas</i>	EPA-821-R-02-013
Daphnid survival and reproduction test (method 1002.0)	<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013

- c) The presence of chronic toxicity must be determined as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002.
- d) Results must be reported in  $TU_c$  (chronic toxic units), which is defined as follows:
  - (i) For survival endpoints,  $TU_c = 100/NOEC$ .
  - (ii) For all other test endpoints,  $TU_c = 100/IC_{25}$ .
  - (iii)  $IC_{25}$  means "25% inhibition concentration." The  $IC_{25}$  is a point estimate of the toxicant concentration, expressed in percent effluent, that causes a 25% reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).
  - (iv)  $NOEC$  means "no observed effect concentration." The  $NOEC$  is the highest concentration of toxicant, expressed in percent effluent, to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of effluent in which the values for the observed responses are not statistically significantly different from the controls).

## 3. Quality Assurance

- a) The toxicity testing on each organism must include a series of five test dilutions and a control. The dilution series must include the receiving water concentration (RWC), which is the dilution associated with the chronic toxicity trigger, two dilutions above the RWC, and two dilutions below the RWC. The RWC is 7.0% effluent.
- b) All quality assurance criteria and statistical analyses used for chronic tests and reference toxicant tests must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to*

*Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002, and individual test protocols.

- c) In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures must be followed:
  - (i) If organisms are not cultured in-house, concurrent testing with reference toxicants must be conducted. If organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests must be conducted using the same test conditions as the effluent toxicity tests.
  - (ii) If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the permittee must re-sample and re-test within 14 days of receipt of the test results.
  - (iii) Control and dilution water must be receiving water or lab water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water, must also be used. Receiving water may be used as control and dilution water upon notification of EPA and IDEQ. In no case shall water that has not met test acceptability criteria be used for either dilution or control.

#### 4. Reporting

- a) The permittee must submit the results of the toxicity tests with the DMRs. Toxicity tests taken from April 1 through October 31 must be reported on the December DMR. Toxicity tests taken from November 1 through March 31 must be reported on the May DMR.
  - b) The report of toxicity test results must include all relevant information outlined in Section 10, Report Preparation, of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002. In addition to toxicity test results, the permittee must report: dates of sample collection and initiation of each test; flow rate at the time of sample collection; and the results of the monitoring required in Part I.B of this permit, for parameters with a required monitoring frequency of once per month or more frequently.
5. Preparation of initial investigation toxicity reduction evaluation (TRE) workplan: Prior to initiation of the toxicity testing required by this permit, the permittee must submit to EPA a copy of the permittee's initial investigation TRE workplan. This plan shall describe the steps the permittee intends to follow in the event that chronic toxicity is detected above 14.3 TUc, and must include at a minimum:
- a) A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, treatment system efficiency;

- b) A description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility; and
  - c) If a toxicity identification evaluation (TIE) is necessary, who will conduct it (i.e., in-house or other).
  - d) The initial investigation TRE workplan must be sent to the following address:
    - US EPA Region 10
    - Attn: NPDES WET Coordinator
    - 1200 Sixth Avenue
    - Suite 900 OWW-130
    - Seattle, WA 98101-3140
6. Accelerated testing: If chronic toxicity is detected above 14.3 TUc, the permittee must comply with the following:
- a) The permittee must implement the initial investigation TRE workplan within 48-hours of the permittee's receipt of the toxicity results demonstrating the exceedance.
  - b) The permittee must conduct six more bi-weekly (every two weeks) chronic toxicity tests, over a 12-week period. This accelerated testing shall be initiated within 10 calendar days of receipt of the test results indicating the initial exceedance.
  - c) The permittee must notify EPA of the exceedance in writing at the address in Part I.C.5.d, above, within 5 calendar days of receipt of the test results indicating the exceedance. The notification must include the following information:
    - (i) A status report on any actions required by the permit, with a schedule for actions not yet completed.
    - (ii) A description of any additional actions the permittee has taken or will take to investigate and correct the cause(s) of the toxicity.
    - (iii) Where no actions have been taken, a discussion of the reasons for not taking action.
  - d) If implementation of the initial investigation workplan clearly identifies the source of toxicity to the satisfaction of EPA (e.g., a temporary plant upset), and none of the six accelerated chronic toxicity tests required under Part I.C.6.b. are above 14.3 TUc, the permittee may return to the regular chronic toxicity testing cycle specified in Part I.C.2.a.
7. Toxicity Reduction Evaluation (TRE)
- a) If implementation of the initial investigation workplan does not clearly identify the source of toxicity to the satisfaction of EPA, or any of the six accelerated chronic toxicity tests indicate toxicity above 14.3 TUc, then the permittee must begin implementation of the toxicity reduction evaluation (TRE) requirements below. Implementation of the TRE requirements shall

begin within 10 calendar days of receipt of the accelerated chronic toxicity testing results demonstrating the exceedance.

- b) In accordance with the permittee's initial investigation workplan and EPA manual EPA 833-B-99-002 (*Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*), the permittee must develop as expeditiously as possible a more detailed TRE workplan, which includes:
  - (i) Further actions to investigate and identify the cause of toxicity;
  - (ii) Actions the permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and
  - (iii) A schedule for these actions.
- c) The permittee may initiate a TIE as part of the overall TRE process described in the EPA acute and chronic TIE manuals EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
- d) If a TIE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

#### **D. Surface Water Monitoring**

The permittee must conduct surface water monitoring. Surface water monitoring must start by January 30, 2013 and continue for as long as this permit is in effect. The program must meet the following requirements:

1. Monitoring stations must be established in the Snake River at the following locations:
  - a) Above the influence of the facility's discharge, at 43° 28' 5.8" N, 112° 3' 46.3" W.
  - b) Below the facility's discharge, at 43° 25' 17.4" N, 112° 6' 11.5" W.
2. To the extent practicable, surface water sample collection must occur on the same day as effluent sample collection.
3. Copper must be analyzed as dissolved metal.
4. Samples must be analyzed for the parameters listed in Table 4 and must achieve MDLs that are equivalent to or less than those listed in Table 4. The permittee may request different MDLs. The request must be in writing and must be approved by the Director of the Office of Water and Watersheds.
5. Quality assurance/quality control plans for all the monitoring must be documented in the Quality Assurance Plan required under Part II.B., "Quality Assurance Plan".
6. Surface water sampling results for all parameters except temperature and pH must be summarized on the March, June, September and December DMRs. Surface water sampling results for temperature and pH must be summarized on each monthly DMR. In addition, surface water monitoring reports summarizing each

sampling event, shall be submitted to EPA and IDEQ with the March, June, September and December DMRs. At a minimum, the reports must include the following:

- a) Dates of sample collection and analyses.
- b) Results of sample analysis.
- c) Relevant quality assurance/quality control (QA/QC) information.

Parameter (units)	Sample Locations	Sample Frequency	Sample Type	Maximum MDL
Alkalinity (mg/L as CaCO <sub>3</sub> )	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	—
Copper, Dissolved	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	1 µg/L
Dissolved Oxygen	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	—
Hardness	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	—
Mercury, Total	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	0.01 µg/L (ML)
Nitrate as N	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	10 µg/L
Nitrite as N	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	10 µg/L
Orthophosphate as P	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	10 µg/L
pH (s.u.)	Upstream and Downstream	Weekly	Grab	—
Temperature, (°C)	Upstream and Downstream	Continuous	Recording	—
Total Ammonia as N	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	10 µg/L
Total Kjeldahl Nitrogen	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	100 µg/L
Total Phosphorus as P	Upstream and Downstream	1/quarter <sup>1</sup>	Grab	10 µg/L
Notes:				
1. Quarters are defined as January – March, April – June, July – September, and October – December.				

## II. Special Conditions

### A. Pretreatment Requirements

#### 1. Implementation

The permittee must implement its pretreatment program in accordance with the legal authorities, policies, procedures, staffing levels and financial provisions described in its original approved pretreatment program submission entitled *Industrial Pretreatment Program for the City of Idaho Falls, Idaho*, November 22, 1983, any program amendments submitted thereafter and approved by EPA, and the general pretreatment regulations (40 CFR 403) and any amendments thereof. At a minimum, the permittee must carry out the following activities:

- a) Enforce prohibitive discharge standards as set forth in 40 CFR 403.5(a) and (b), categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Act (where applicable), and local limitations and BMPs developed by the permittee in accordance with 40 CFR 403.5(c), whichever are more stringent and are applicable to non-domestic users discharging wastewater into the permittee's collection system. Locally derived limitations must be defined as pretreatment standards under Section 307(d) of the Act.

- b) Implement and enforce the requirements of the most recent and EPA-approved portions of local law and regulations (e.g. municipal code, sewer use ordinance) addressing the regulation of non-domestic users.
- c) Update its inventory of non-domestic users at a frequency and diligence adequate to ensure proper identification of non-domestic users subject to pretreatment standards, but no less than once per year. The permittee must notify these users of applicable pretreatment standards in accordance with 40 CFR 403.8(f)(2)(iii).
- d) Issue, reissue, and modify, in a timely manner, industrial wastewater discharge permits to at least all Significant Industrial Users (SIUs) and categorical industrial users. These documents must contain, at a minimum, conditions identified in 40 CFR 403.8(f)(1)(iii), including Best Management Practices, if applicable. The permittee must follow the methods described in its implementation procedures for issuance of individual permits.
- e) Develop and maintain a data management system designed to track the status of the permittee's non-domestic user inventory, non-domestic user discharge characteristics, and their compliance with applicable pretreatment standards and requirements. The permittee must retain all records relating to its pretreatment program activities for a minimum of three years, as required by 40 CFR 403.12(o), and must make such records available to EPA upon request. The permittee must also provide public access to information considered effluent data under 40 CFR 2.
- f) Establish, where necessary, legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements in 40 CFR Part 403 by industrial users within these jurisdictions. These legally binding agreements must identify the agency responsible for the various pretreatment implementation and enforcement activities in the contributing jurisdiction and outline the specific roles, responsibilities and pretreatment activities of each jurisdiction.
- g) Carry out inspections, surveillance, and monitoring of non-domestic users to determine compliance with applicable pretreatment standards and requirements. A complete inspection of all SIUs and sampling of all SIUs' effluent must be conducted at least annually.
- h) Require SIUs to conduct wastewater sampling as specified in 40 CFR 403.12(e) or (h). Frequency of wastewater sampling by the SIUs must be appropriate for the character and volume of the wastewater but no less than twice per year. Sample collection and analysis must be performed in accordance with 40 CFR 403.12(b)(5)(ii) through (v) and 40 CFR 136. In cases where the Pretreatment Standard requires compliance with a Best Management Practice or pollution prevention alternative, the permittee must require the User to submit documentation to determine compliance with the Standard. If the permittee elects to conduct all non-domestic user monitoring for any SIU instead of requiring self-monitoring, the permittee must conduct

sampling in accordance with the requirements of this paragraph, and the requirements of 40 CFR 403.12(g)(2).

- i) Enforce and obtain remedies for any industrial user noncompliance with applicable pretreatment standards and requirements. This must include timely and appropriate reviews of industrial reports to identify all violations of the user's permit, the local ordinance, and federal pretreatment standards and requirements. Once violations have been uncovered, the permittee must take timely and appropriate action to address the noncompliance. The permittee's enforcement actions must follow its EPA-approved enforcement response procedures.
  - j) Publish, at least annually, in a newspaper or newspapers of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW, a list of all non-domestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(viii).
  - k) Maintain adequate staff, funds and equipment to implement its pretreatment program.
  - l) Conduct an analysis annually to determine whether influent pollutant loadings are approaching the maximum allowable headworks loadings calculated in the permittee's most recent local limits calculations. Any local limits found to be inadequate by this analysis must be revised. The permittee may be required to revise existing local limits or develop new limits if deemed necessary by EPA.
2. Spill Prevention and Slug Discharges

The permittee must implement an accidental spill prevention program to reduce and prevent spills and slug discharges of pollutants from non-domestic users.

- a) Control mechanisms for SIUs must contain requirements to control slug discharges if determined by the POTW to be necessary [40 CFR 403.8(f)(1)(iii)(B)(6)].
- b) SIUs must be evaluated for the need for a plan or other action to control slug discharges within 1 year of being designated an SIU. For IUs designated as significant prior to November 14, 2005, this evaluation must be conducted by October 14, 2006 [40 CFR 403.8(f)(2)(vi)].
- c) SIUs must notify the POTW immediately of any changes at their facilities affecting the potential for a slug discharge [40 CFR 403.8(f)(2)(vi)].

3. Enforcement Requirement

Whenever EPA finds, on the basis of any available information, that the owner or operator of any source is introducing a pollutant into the POTW in violation of national pretreatment standards, including prohibited discharges, local limits, or categorical standards, or has caused interference or pass through, EPA may notify the owner or operator of the POTW of such violation. If, within 30 days after such notification has been sent by EPA to the POTW, the POTW fails to commence appropriate enforcement action to correct the violation, EPA may take

appropriate enforcement action under the authority provided in section 309(f) of the Clean Water Act.

4. Modification of the Pretreatment Program

If the permittee elects to modify any components of its pretreatment program, it must comply with the requirements of 40 CFR 403.18. No substantial program modification, as defined in 40 CFR 403.18(b), may be implemented prior to receiving written authorization from EPA.

5. Local Limits Evaluation for Copper, Ammonia and Phosphorus

Within one year of the effective date of this permit, the permittee must submit to EPA a complete local limits evaluation pursuant to 40 CFR 403.5(c)(1). The study must take into account effluent limits, water quality in the receiving stream, inhibition levels for biological processes in the treatment plant, and sludge quality goals. The study must address copper. The permittee must also address total ammonia as N and total phosphorus as P if the POTW accepts non-domestic discharges of those pollutants. Submitted results of the study must include proposed local limits, maximum allowable headworks loadings, all supporting calculations, and all assumptions.

6. Control of Undesirable Pollutants

The permittee must not allow introduction of the following pollutants into the publicly owned treatment works (POTW):

- a) Pollutants which will create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 °F or 60 °C using the test methods specified in 40 CFR 261.21;
- b) Pollutants which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0 standard units, unless the POTW is designed to accommodate such discharges;
- c) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW (including the collection system) resulting in interference;
- d) Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;
- e) Heat in amounts which inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 °C (104 °F) unless the Regional Administrator, upon request of the POTW, approves alternate temperature limits;
- f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
- g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

- h) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

7. Requirements for Industrial Users

The permittee must require any industrial user of its treatment works to comply with any applicable requirements in 40 CFR 403 through 471.

8. Sludge Sampling Requirements

- a) Parameters: The permittee must sample sludge for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, percent solids, selenium and zinc.
- b) Sampling must be conducted twice per year.
- c) Sludge samples must be grab samples.
- d) Sludge samples must be taken as the sludge leaves the dewatering device or digesters.
- e) Sludge Reporting: Metals concentrations in sludge must be reported in mg/kg, dry weight. Analytical results for each day's samples must be reported separately. Sample results must be submitted with the pretreatment annual report required in paragraph 9, below.

9. Pretreatment Report

- a) The permittee must submit an annual report pursuant to 40 CFR 403.12(i) that describes the permittee's program activities over the July 1<sup>st</sup> – June 30<sup>th</sup> report year. This report must be submitted to the following address no later than September 1<sup>st</sup> of each year:

Pretreatment Coordinator  
US EPA Region 10  
1200 Sixth Avenue  
Suite 900 M/S OWW-130  
Seattle, WA 98101-3140

- b) The pretreatment report must be compiled following the Region 10 Annual Report Guidance. At a minimum, the report must include:
  - (i) An updated non-domestic user inventory, including those facilities that are no longer discharging (with explanation), and new dischargers, appropriately categorized and characterized. Categorical users should have the applicable category noted as well as cases where more stringent local limits apply instead of the categorical standard.
  - (ii) Results of wastewater and sludge sampling at the POTW as specified in Parts I.B and II.A.8 (above).
  - (iii) Calculations of removal rates for each pollutant monitored at both the influent and effluent for each day of sampling.
  - (iv) An analysis and discussion of whether the existing local limitations in the permittee's sewer use ordinance continue to be appropriate to

prevent treatment plant interference and pass through of pollutants that could affect water quality or sludge quality. This should include a comparison between influent loadings and the most recent relevant maximum allowable headworks loadings calculated for the treatment plant.

- (v) Status of program implementation, including:
  - (a) Any planned modifications to the pretreatment program that have been approved by EPA, including staffing and funding updates.
  - (b) A description of any interference, upset, or NPDES permit violations experienced at the POTW which were directly or indirectly attributable to non-domestic users, including:
    - (i) Date & time of the incident
    - (ii) Description of the effect on the POTW's operation
    - (iii) Effects on the POTW's effluent and biosolids quality
    - (iv) Identification of suspected or known sources of the discharge causing the upset
    - (v) Steps taken to remedy the situation and to prevent recurrence
  - (c) Listing of non-domestic users inspected and/or monitored during the report year with dates and an indication compliance status.
  - (d) Listing of non-domestic users planned for inspection and/or monitoring for the coming year along with associated frequencies.
  - (e) Listing of non-domestic users whose permits have been issued, reissued, or modified during the report year along with current permit expiration dates.
  - (f) Listing of non-domestic users notified of promulgated pretreatment standards and/or local standards during the report year as required in 40 CFR 403.8(f)(2)(iii).
  - (g) Listing of non-domestic users notified of promulgated pretreatment standards or applicable local standards who are on compliance schedules. The listing must include the final date of compliance for each facility.
- (vi) Status of enforcement activities including:
  - (a) Listing of non-domestic users who failed to comply with applicable pretreatment standards and requirements, including:
    - (i) Summary of the violation(s).
    - (ii) Enforcement action taken or planned by the permittee.
    - (iii) Present compliance status as of the date of preparation of the pretreatment report.

- (b) Listing of those users in significant noncompliance during the report year as defined in 40 CFR 403.8(f)(2)(viii) and a copy of the newspaper publication of those users' names.
- (c) EPA may require more frequent reporting on those users who are determined to be in significant noncompliance.

## **B. Operation and Maintenance Plan**

In addition to the requirements specified in Part IV.E of this permit (Proper Operation and Maintenance), by April 30, 2013, the permittee must provide written notice to EPA and IDEQ that an operations and maintenance (O&M) plan for the current wastewater treatment facility has been developed and implemented. The plan must be retained on site and made available on request to EPA and IDEQ. Any changes occurring in the operation of the plant shall be reflected within the Operation and Maintenance plan.

## **C. Quality Assurance Plan (QAP)**

The permittee must develop and implement a quality assurance plan (QAP) for all monitoring required by this permit. The permittee must submit written notice to EPA and IDEQ that the Plan has been developed and implemented by December 31, 2013. Any existing QAPs may be modified for compliance with this section.

1. The QAP must be designed to assist in planning for the collection and analysis of effluent and receiving water samples in support of the permit and in explaining data anomalies when they occur.
2. Throughout all sample collection and analysis activities, the permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in *EPA Requirements for Quality Assurance Project Plans (EPA/QA/R-5)* and *Guidance for Quality Assurance Project Plans (EPA/QA/G-5)*. The QAP must be prepared in the format that is specified in these documents.
3. At a minimum, the QAP must include the following:
  - a) Details on the number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements.
  - b) Map(s) indicating the location of each sampling point.
  - c) Qualification and training of personnel.
  - d) Name(s), address(es) and telephone number(s) of the laboratories used by or proposed to be used by the permittee.
4. The permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.

5. Copies of the QAP must be kept on site and made available to EPA and/or IDEQ upon request.

#### **D. Design Flow Requirement**

The design flow for the permitted facility is an annual average flow of 17 mgd. Each month, the permittee shall compute an annual average value for flow entering the facility based on the previous twelve months' data. If the average annual value exceeds 85% of 17 mgd (14.5 mgd), the permittee must develop a facility plan and schedule within one year from the date of the first exceedance. The plan must include the permittee's strategy for continuing to maintain compliance with effluent limits and must be made available to EPA, IDEQ, or an authorized representative upon request.

#### **E. Emergency Response and Public Notification Plan**

1. The permittee must develop and implement an overflow emergency response and public notification plan that identifies measures to protect public health from overflows that may endanger health and unanticipated bypasses or upsets that exceed any effluent limitation in the permit. At a minimum, the plan must include mechanisms to:
  - a) Ensure that the permittee is aware (to the greatest extent possible) of all overflows from portions of the collection system over which the permittee has ownership or operational control and unanticipated bypass or upset that exceed any effluent limitation in the permit;
  - b) Ensure appropriate responses including assurance that reports of an overflow or of an unanticipated bypass or upset that exceed any effluent limitation in the permit are immediately dispatched to appropriate personnel for investigation and response;
  - c) Ensure immediate notification to the public, health agencies, and other affected public entities (including public water systems). The overflow response plan must identify the public health and other officials who will receive immediate notification;
  - d) Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained; and
  - e) Provide emergency operations.
2. The permittee must submit written notice to EPA and IDEQ that the plan has been developed and implemented by April 30, 2013. Any existing emergency response and public notification plan may be modified for compliance with this section.

### III. Monitoring, Recording and Reporting Requirements

#### A. Representative Sampling (Routine and Non-Routine Discharges)

Samples and measurements must be representative of the volume and nature of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples at the appropriate outfall whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited in Part I.B. of this permit that are likely to be affected by the discharge.

The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with Part III.C (“Monitoring Procedures”). The permittee must report all additional monitoring in accordance with Part III.D (“Additional Monitoring by Permittee”).

#### B. Reporting of Monitoring Results

The permittee must either submit monitoring data and other reports in paper form, or must report electronically using NetDMR, a web-based tool that allows permittees to electronically submit DMRs and other required reports via a secure internet connection. Specific requirements regarding submittal of data and reports in paper form and submittal using NetDMR are described below.

##### 1. Paper Copy Submissions

The permittee must summarize monitoring results each month on the Discharge Monitoring Report (DMR) form (EPA No. 3320-1) or equivalent. The permittee must submit reports monthly, postmarked by the 15<sup>th</sup> day of the following month. The permittee must sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E. of this permit (“Signatory Requirements”). The permittee must submit the legible originals of these documents to the Director, Office of Compliance and Enforcement, with copies to IDEQ at the following addresses:

US EPA Region 10  
Attn: ICIS Data Entry Team  
1200 Sixth Avenue, Suite 900  
OCE-133  
Seattle, Washington 98101-3140

Idaho Department of Environmental Quality  
900 N. Skyline, Suite B  
Idaho Falls, ID 83402

##### 2. Electronic submissions

Monitoring data must be submitted electronically to EPA no later than the 15th of the month following the completed reporting period. All reports required under this permit must be submitted to EPA as a legible electronic attachment to the DMR. The permittee must sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E. of this permit ("Signatory Requirements"). Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit paper copies of DMRs or other reports to EPA and IDEQ.

The permittee may use NetDMR after requesting and receiving permission from US EPA Region 10. NetDMR is accessed from <http://www.epa.gov/netdmr>.

### **C. Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless another method is required under 40 CFR subchapters N or O, or other test procedures have been specified in this permit or approved by EPA as an alternate test procedure under 40 CFR 136.5.

### **D. Additional Monitoring by Permittee**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR.

Upon request by EPA, the permittee must submit results of any other sampling, regardless of the test method used.

### **E. Records Contents**

Records of monitoring information must include:

1. the date, exact place, and time of sampling or measurements;
2. the name(s) of the individual(s) who performed the sampling or measurements;
3. the date(s) analyses were performed;
4. the names of the individual(s) who performed the analyses;
5. the analytical techniques or methods used; and
6. the results of such analyses.

### **F. Retention of Records**

The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of DMRs, a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least five years from the

date of the sample, measurement, report or application. This period may be extended by request of EPA or IDEQ at any time.

### **G. Twenty-four Hour Notice of Noncompliance Reporting**

1. The permittee must report the following occurrences of noncompliance by telephone within 24 hours from the time the permittee becomes aware of the circumstances:
  - a) any noncompliance that may endanger health or the environment;
  - b) any unanticipated bypass that exceeds any effluent limitation in the permit (See Part IV.F., "Bypass of Treatment Facilities");
  - c) any upset that exceeds any effluent limitation in the permit (See Part IV.G., "Upset Conditions"); or
  - d) any violation of a maximum daily discharge limitation for applicable pollutants identified by Part I.B.2.
  - e) any overflow prior to the treatment works over which the permittee has ownership or has operational control. An overflow is any spill, release or diversion of municipal sewage including:
    - (i) an overflow that results in a discharge to waters of the United States; and
    - (ii) an overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral) that does not reach waters of the United States.
2. The permittee must also provide a written submission within five days of the time that the permittee becomes aware of any event required to be reported under subpart 1 above. The written submission must contain:
  - a) a description of the noncompliance and its cause;
  - b) the period of noncompliance, including exact dates and times;
  - c) the estimated time noncompliance is expected to continue if it has not been corrected; and
  - d) steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
  - e) if the noncompliance involves an overflow, the written submission must contain:
    - (i) The location of the overflow;
    - (ii) The receiving water (if there is one);
    - (iii) An estimate of the volume of the overflow;
    - (iv) A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);

- (v) The estimated date and time when the overflow began and stopped or will be stopped;
  - (vi) The cause or suspected cause of the overflow;
  - (vii) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
  - (viii) An estimate of the number of persons who came into contact with wastewater from the overflow; and
  - (ix) Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.
3. The Director of the Office of Compliance and Enforcement may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.
  4. Reports must be submitted to the addresses in Part III.B (“Reporting of Monitoring Results”).

#### **H. Other Noncompliance Reporting**

The permittee must report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Part III.B (“Reporting of Monitoring Results”) are submitted. The reports must contain the information listed in Part III.G.2 of this permit (“Twenty-four Hour Notice of Noncompliance Reporting”).

#### **I. Public Notification**

The permittee must immediately notify the public, health agencies and other affected entities (e.g., public water systems) of any overflow which the permittee owns or has operational control; or any unanticipated bypass or upset that exceeds any effluent limitation in the permit in accordance with the notification procedures developed in accordance with Part III.G.

#### **J. Notice of New Introduction of Toxic Pollutants**

The permittee must notify the Director of the Office of Water and Watersheds and IDEQ in writing of:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Act if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For the purposes of this section, adequate notice must include information on:
  - a) The quality and quantity of effluent to be introduced into the POTW, and

- b) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
4. The permittee must notify the Director of the Office of Water and Watersheds at the following address:

US EPA Region 10  
Attn: NPDES Permits Unit Manager  
1200 Sixth Avenue  
Suite 900 M/S OWW-130  
Seattle, WA 98101-3140

## **IV. Compliance Responsibilities**

### **A. Duty to Comply**

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

### **B. Penalties for Violations of Permit Conditions**

1. Civil and Administrative Penalties. Pursuant to 40 CFR Part 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$37,500 per day for each violation).
2. Administrative Penalties. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500). Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$177,500).

### 3. Criminal Penalties:

- a) **Negligent Violations.** The Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.
- b) **Knowing Violations.** Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- c) **Knowing Endangerment.** Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- d) **False Statements.** The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

**C. Need To Halt or Reduce Activity not a Defense**

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.

**D. Duty to Mitigate**

The permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**E. Proper Operation and Maintenance**

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**F. Bypass of Treatment Facilities**

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.
2. Notice.
  - a) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior written notice, if possible at least 10 days before the date of the bypass.
  - b) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required under Part III.G ("Twenty-four Hour Notice of Noncompliance Reporting").
3. Prohibition of bypass.
  - a) Bypass is prohibited, and the Director of the Office of Compliance and Enforcement may take enforcement action against the permittee for a bypass, unless:
    - (i) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have

been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

- (iii) The permittee submitted notices as required under paragraph 2 of this Part.
- b) The Director of the Office of Compliance and Enforcement may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this Part.

### **G. Upset Conditions**

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - b) The permitted facility was at the time being properly operated;
  - c) The permittee submitted notice of the upset as required under Part III.G, "Twenty-four Hour Notice of Noncompliance Reporting;" and
  - d) The permittee complied with any remedial measures required under Part IV.D, "Duty to Mitigate."
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

### **H. Toxic Pollutants**

The permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

### **I. Planned Changes**

The permittee must give written notice to the Director of the Office of Water and Watersheds as specified in Part III.I.4. and IDEQ as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this permit.
3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application site.

#### **J. Anticipated Noncompliance**

The permittee must give written advance notice to the Director of the Office of Compliance and Enforcement and IDEQ of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

#### **K. Reopener**

This permit may be reopened to include any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the Act. The Director may modify or revoke and reissue the permit if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

### **V. General Provisions**

#### **A. Permit Actions**

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR 122.62, 122.64, or 124.5. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

#### **B. Duty to Reapply**

If the permittee intends to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. In accordance with 40 CFR 122.21(d), and unless permission for the application to be submitted at a later date has been granted by the Regional Administrator, the permittee must submit a new application on or before May 4, 2017.

#### **C. Duty to Provide Information**

The permittee must furnish to EPA and IDEQ, within the time specified in the request, any information that EPA or IDEQ may request to determine whether cause

exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee must also furnish to EPA or IDEQ, upon request, copies of records required to be kept by this permit.

#### **D. Other Information**

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or any report to EPA or IDEQ, it must promptly submit the omitted facts or corrected information in writing.

#### **E. Signatory Requirements**

All applications, reports or information submitted to EPA and IDEQ must be signed and certified as follows.

1. All permit applications must be signed as follows:
  - a) For a corporation: by a responsible corporate officer.
  - b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
  - c) For a municipality, state, federal, Indian tribe, or other public agency: by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by EPA or IDEQ must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a) The authorization is made in writing by a person described above;
  - b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
  - c) The written authorization is submitted to the Director of the Office of Compliance and Enforcement and IDEQ.
3. Changes to authorization. If an authorization under Part V.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.E.2 must be submitted to the Director of the Office of Compliance and Enforcement and IDEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this Part must make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system

designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

#### **F. Availability of Reports**

In accordance with 40 CFR 2, information submitted to EPA pursuant to this permit may be claimed as confidential by the permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 2, Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

#### **G. Inspection and Entry**

The permittee must allow the Director of the Office of Compliance and Enforcement, EPA Region 10; IDEQ; or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

#### **H. Property Rights**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of federal, tribal, state or local laws or regulations.

## I. Transfers

This permit is not transferable to any person except after written notice to the Director of the Office of Water and Watersheds as specified in part III.I.4. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory).

## J. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

## VI. Definitions

1. "Act" means the Clean Water Act.
2. "Administrator" means the Administrator of the EPA, or an authorized representative.
3. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
4. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
5. "Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Composite" – see "24-hour composite".
8. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

9. "Director of the Office of Compliance and Enforcement" means the Director of the Office of Compliance and Enforcement, EPA Region 10, or an authorized representative.
10. "Director of the Office of Water and Watersheds" means the Director of the Office of Water and Watersheds, EPA Region 10, or an authorized representative.
11. "DMR" means discharge monitoring report.
12. "EPA" means the United States Environmental Protection Agency.
13. "Geometric Mean" means the  $n^{\text{th}}$  root of a product of  $n$  factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.
14. "Grab" sample is an individual sample collected over a period of time not exceeding 15 minutes.
15. "IDEQ" means the Idaho Department of Environmental Quality.
16. "Interference" is defined in 40 CFR 403.3.
17. "Interim Minimum Level (IML)" is used when a method-specific "Minimum Level (ML)" has not been published by EPA. The IML is equal to 3.18 times the method-specified "Method Detection Limit (MDL)".
18. "LC50" means the concentration of toxicant (e.g., effluent) which is lethal to 50 percent of the test organisms exposed in the time period prescribed by the test.
19. "Maximum daily discharge limitation" means the highest allowable "daily discharge."
20. "Method Detection Limit (MDL)" means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.
21. "Minimum Level (ML)" means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.
22. "NPDES" means National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits . . . under sections 307, 402, 318, and 405 of the CWA.
23. "Pass Through" means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
24. "QA/QC" means quality assurance/quality control.

25. "Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.
26. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
27. "Significant Industrial User" means all industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)). Upon a finding that an industrial user meeting above the criteria has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority (as defined in 40 CFR 403.12(a)) may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.
28. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
29. "24-hour composite" sample means a combination of at least 8 discrete sample aliquots of at least 100 milliliters, collected over periodic intervals from the same location, during the operating hours of a facility over a 24 hour period. The composite must be flow proportional. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

# Response to Comments on the 2010 and 2012 Draft NPDES Permits for the City of Idaho Falls

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US Environmental Protection Agency  
Region 10  
NPDES Permits Unit  
September 2012

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## Overview

EPA issued for public comment a draft National Pollutant Discharge Elimination System (NPDES) permit for a publicly owned treatment works (POTW) owned and operated the City of Idaho Falls, Idaho (City) on October 5, 2010. The public comment period was scheduled to close on November 4, 2010. In response to a request from the City, the comment period was extended until December 10, 2010.

On February 15, 2012, EPA reopened the public comment period and accepted comments on those aspects of the revised draft permit that differed from the 2010 draft permit. Significant changes in the revised draft permit included revisions to the proposed effluent limits for total phosphorus, ammonia, and chlorine, changes to the dilution series and the accelerated testing trigger for whole effluent toxicity (WET), and changes to the receiving water monitoring requirements.<sup>1</sup> The comment period for the revised draft permit closed on March 16, 2012.

EPA received comments on both versions of the draft permit from the City and from the Idaho Conservation League (ICL). This document provides EPA's response to the comments received on both versions of the draft NPDES permit for the City of Idaho Falls.

## Ammonia Effluent Limits

### *Comment #1*

The City stated in comments on the 2010 draft permit that the ammonia limits were based on out-dated ammonia criteria that have since been superseded by IDEQ and approved by EPA. The City noted that, in the 2010 fact sheet, EPA cited antibacksliding as the reason the limits have not been updated. The City stated that antibacksliding does not prevent removal of ammonia limits or less stringent ammonia limits based on the current Idaho criteria for the following reasons:

- The City stated that it has not been able to comply with the limits in the current permit, and, as documented in annual compliance reports to EPA, additionally would not be able to immediately meet less stringent limits based on the current Idaho criteria.
- The City stated that antibacksliding does not prevent removal or relaxation of limits in all cases, because there are exceptions to antibacksliding that EPA did not consider or discuss in the Fact Sheet. The City stated that the exception under CWA sections 402(o)(1) and 303(d)(4)(B) pertaining to attainment waters clearly applies to the Idaho Falls situation. The City stated that the Snake River near Idaho Falls is considered an attainment water, as demonstrated by the antidegradation analysis conducted by IDEQ in its draft certification dated June 3, 2010 and accepted by EPA for the 2010 draft permit. In the case of attainment waters, permit limits can be made less stringent as long as the limits are consistent with the State's antidegradation policy. In this particular case for ammonia limits, new or increased discharge of ammonia would not occur. In fact, even new, less restrictive limits based on the current Idaho criteria would still require some additional improvements in ammonia treatment and effluent quality compared to current effluent quality. Thus, there would be no lowering of water quality with these less restrictive limits. The City stated that this

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<sup>1</sup> A complete list of the changed conditions in the 2012 draft permit can be found in the 2012 fact sheet at Page 2.

conclusion is consistent with the logic and findings of the antidegradation review that has already been developed for the 2010 Draft Permit.

- The City stated that this same logic for the antibacksliding exception that the City outlines for ammonia limits is in fact consistent with the logic in the EPA Fact Sheet for this Draft Permit for the transition from fecal coliform limits to E. coli limits, which also was prompted by a change in Idaho Water Quality Standards criteria for bacteria. For bacteria, EPA also cites the antibacksliding exception pertinent to attainment waters and related consistency with Idaho's antidegradation policy.
- The City stated that a 10% mixing zone is more stringent than typical and necessary, and the City would not have reasonable potential for ammonia if a larger mixing zone were used.

### ***Response #1***

This comment was addressed in part by revisions to the ammonia effluent limits proposed in the 2012 draft permit, which were less stringent than those in proposed in the 2010 draft permit as well as those in the 2001 final permit.

As explained in the 2012 fact sheet, EPA applied the antibacksliding exception in (CWA Section 303(d)(4)(B)) to allow less-stringent ammonia limits in the revised draft permit.<sup>2</sup> This antibacksliding exception is applicable to the revised draft permit because the revised ammonia effluent limits are based in large part on a provision of Idaho's antidegradation implementation methods (Idaho Code Section 39-3603(2)(c)). This specific provision provides that if a discharge results in degradation of a high quality waterbody but the degradation is found to be insignificant, then no further Tier II antidegradation review is required. This provision was adopted by the State of Idaho in March 2011 and approved by EPA on August 18, 2011. It was therefore not in effect when the 2010 draft permit was issued. As explained in Appendices B, D, and E of the 2012 fact sheet, although the revised ammonia limits proposed in the 2012 draft permit will result in water quality degradation with respect to ammonia, that level of degradation was found by the State of Idaho in its CWA Section 401 certification to be insignificant, so no further tier 2 antidegradation analysis is required. Therefore the 303(d)(4)(B) exception to antibacksliding is applicable to the 2012 draft permit, as well as the final permit.

The City appears to argue that relaxation of the ammonia limits would not actually allow a lowering of water quality if the antidegradation analysis was based on the City's current discharge, which frequently exceeds its 2001 permit limits. Although not clearly articulated, the City seems to argue that if the ammonia limits could be relaxed to any load and/or concentration less than the actual effluent loads and/or concentrations, that relaxation would not result an increase in their actual discharge, which would not lower water quality and therefore comply with the State's antidegradation policy.

EPA disagrees that the ammonia limits could be relaxed to reflect existing effluent loads and/or concentrations without allowing lower water quality. Idaho's antidegradation implementation methods provide that, "for a reissued permit or license, the calculated change (in water quality) will be the difference in water quality that would result from the activity or discharge as authorized in the current permit or license and the water quality that would result from the activity or discharge as proposed in the reissued permit or license" (IDAPA 58.01.02.052.04.a).

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<sup>2</sup> This is the same anti-backsliding exception referenced by the City in its comments on the 2010 draft permit.

The implementation methods further provide that “for pollutants that are currently limited, current discharge quality shall be based on limits in the current permit or license,” and that “future discharge quality shall be based on proposed permit limits” (IDAPA 58.01.02.052.04.a.i – ii). Thus, Idaho’s antidegradation implementation methods clearly require that the permit’s *effluent limits*, as opposed to the actual level of discharge, must be used to define both the current and future discharge quality.

The City’s position would provide an incentive for permittees to violate their effluent limits, and then use these violations as a basis to relax effluent limits in reissued permits. This would be an illogical outcome, and is clearly not the intent of either the antibacksliding provisions of the Clean Water Act or the State of Idaho’s antidegradation policy.

The City’s reference to the fecal coliform antibacksliding and antidegradation analysis in the 2010 fact sheet does not support their assertion that the ammonia limits can be relaxed. The City notes that EPA used the antibacksliding exception in section 303(d)(4)(B) to allow fecal coliform limits to be removed from the permit. However, the fecal coliform limits could be deleted without allowing lower water quality because there are other limits in the permit for bacteria, which maintain and protect the existing level of water quality with respect to bacteria and their effect on beneficial uses. As stated in the 2010 Fact Sheet on Page 13,

*E. coli is a better indicator of bacteria levels that may cause gastro-intestinal distress in swimmers, and the new E. coli limits provide the same level of protection for the beneficial use of primary contact recreation as was provided by the fecal coliform effluent limits in the previous permit. Therefore, the change from fecal coliform limits to E. coli limits will not allow lower water quality relative to the 2001 permit. Because the change from fecal coliform limits to E. coli limits will not allow lower water quality relative to the 2001 permit, this change is consistent with Idaho’s antidegradation policy (IDAPA 58.01.02.051).*

Thus, the basis for deleting the fecal coliform limits in the draft permit was that there were other limits in the permit (for *E. coli*) which would prevent lowering of water quality relative to the 2001 permit, and deleting the fecal coliform limits was therefore consistent with Idaho’s antidegradation policy and, in turn, allowed under CWA Section 303(d)(4)(B). This is not the case for modifying ammonia limits.

The City states that EPA has removed ammonia limits from other WWTP permits when reasonable potential evaluations have shown no need for the limits using the updated criteria and appropriate mixing zones. The City states that, if a larger mixing zone were used, the discharge would not have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia. As explained below, the City of Idaho Falls discharge would, in fact, have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia, even if a larger mixing zone were used in the reasonable potential analysis. Thus, EPA could not remove ammonia effluent limits from the permit, even if the removal of the ammonia limits would not violate antidegradation requirements.

As stated in the Fact Sheet, on Page D-3, for ammonia, “EPA has used maximum daily limits in the 2001 permit as the maximum projected effluent concentrations. The previous permit’s effluent limits are used in this manner because, in general, the anti-backsliding provisions of the Clean Water Act (Section 402(o)) require that water quality-based effluent limits in reissued permits be at least as stringent as the effluent limits in the previous permit. If a discharge at the

maximum limits in the previous permit would not result in excursions above water quality standards, then the previous permit's effluent limits may be retained." Thus, the finding of "no reasonable potential" for ammonia, in Table D-2 of the 2010 fact sheet, is a finding that the 2001 permit's *effluent limits* are protective of water quality. In other words, Table D-2 of the 2010 fact sheet demonstrates that the City of Idaho Falls discharge does not have the reasonable potential to cause or contribute to excursions above water quality criteria for ammonia *if* the discharge were in compliance with the 2001 permit's effluent limits. It is *not* a finding that the historic *discharge*, which has not been in consistent compliance with effluent limits, does not have the reasonable potential to cause or contribute to excursions above water quality criteria for ammonia.

In order to find that the facility did not have reasonable potential for ammonia, and in turn remove the ammonia limits from the permit, EPA would need to demonstrate that the actual levels of ammonia discharge would not cause or contribute to excursions above water quality criteria for ammonia. EPA has re-calculated the reasonable potential analysis for ammonia, using the procedures in Section 3.3 of the *Technical Support Document for Water Quality-based Toxics Control*, using a 25% mixing zone and the facility's actual effluent ammonia data and has found that the discharge would have the reasonable potential to cause or contribute to excursions above water quality standards for ammonia, even with the larger mixing zone (see Table 1, below).

<b>Table 1: City of Idaho Falls Ammonia RPTE using Effluent Data and 25% Mixing Zone</b>		
<b>Dilution Factors</b>	Acute	Chronic Ammonia
	12.1	18.5
Probability Basis		0.99
Z-score of Probability Basis		2.33
Maximum Reported Effluent Conc.		25.37
Number of samples (n)		1827
Coefficient of Variation		0.931
$\sigma^2$		0.624
$\sigma$		0.790
Percentile of Largest Value		0.997
Z-Score of Percentile of Largest Value		2.805
C <sub>99</sub>		4.598
C <sub>n</sub>		6.709
Reasonable Potential Multiplier (RPM)		0.69
<b>Maximum Projected Effluent Conc.</b>		<b>17.4</b>
Ambient Concentration		0.00
Maximum Acute Receiving Water Concentration (RWC)		1.43
Maximum Chronic RWC		0.94
Acute Aquatic Life Criterion		1.77
Chronic Aquatic Life Criterion		0.72
<b>Reasonable Potential?</b>		<b>YES</b>

### **Comment #2**

The City stated in its comments on the 2010 draft permit that, if ammonia limits are retained, even the less stringent limits based on the updated criteria, a schedule of compliance will be needed to provide time to comply.

In its comments on the 2012 draft permit, the City stated that it understood “that its compliance obligations with respect to the ammonia limits in this Draft and Final Permit have been defined and determined in accordance with the EPA Compliance Order dated December 13, 2011.”

## **Response #2**

Compliance schedules are allowed for effluent limitations based on standards adopted after July 1, 1977 only if the state has clearly indicated in its water quality standards or implementing regulations that it intends to allow them (see the *US EPA NPDES Permit Writers' Manual* at Section 9.1.3). Compliance schedules are also governed by federal regulations at 40 CFR 122.47.

The compliance schedule authorizing provision in Idaho’s water quality standards reads as follows: “Discharge permits for point sources may incorporate compliance schedules which allow a discharger to phase in, over time, compliance with water quality-based effluent limitations when new limitations are in the permit for the first time” (IDAPA 58.01.02.400.03).

While the ammonia limits in the City of Idaho Falls permit are “new” in the sense that the limits are different from those in the 2001 permit, the ammonia effluent limits in the reissued permit are less stringent than those in the 2001 permit. The State of Idaho did not authorize a compliance schedule for ammonia limits in its Clean Water Act Section 401 certification of this permit.

One of the factors relevant to the appropriateness of a compliance schedule under 40 CFR 122.47 is “how much time the discharger had to meet the WQBEL under prior permit(s)” (see the *US EPA NPDES Permit Writers' Manual* at Section 9.1.3). The City of Idaho Falls was given a compliance schedule of nearly five years, under its 2001 permit, to meet the same ammonia limits that have been continued forward in this permit, and those limits have now been in effect for six years following the expiration of that compliance schedule. Therefore, the City has already had eleven years to achieve compliance with the ammonia limits in the 2001 permit, and thus it would not be appropriate to authorize a second compliance schedule to meet less-stringent limits.

Therefore, neither federal regulations (40 CFR 122.47) nor the Idaho Water Quality Standards (IDAPA 58.01.02.400.03) allow for a schedule of compliance for ammonia effluent limits in this case.

## **Comment #3**

ICL stated that, even if Idaho’s insignificance threshold in its antidegradation implementation methods was lawful, the analysis that was provided to determine that the decrease in assimilative capacity resulting from the increased ammonia effluent limits was less than 10% is seriously flawed.

ICL stated that the revised factsheet for the 2012 draft NPDES permit contains an “Insignificance Analysis for Revised Ammonia Limits,” which purports to follow the procedures outlined in Idaho’s antidegradation rules to calculate the “baseline condition” – a step necessary to determine if the increased degradation will utilize more than 10% of the receiving water’s remaining assimilative capacity. ICL stated that a key aspect in this analysis is identifying all upstream sources of the pollutant (in this case ammonia) and assuming that each of these sources is discharging the pollutant at their permitted limits.

ICL stated that, in this instance, the upstream WWTPs at St. Anthony and Rexburg were identified and their discharges were input into a model to determine baseline conditions – and then “insignificance.” ICL stated that the model that was developed to justify the proposed increased ammonia effluent limits failed to include ammonia discharges from numerous other upstream WWTPs, including Ashton, Driggs, Rigby, Ririe and Roberts. ICL stated that the Roberts, Rigby, Ririe and Ashton WWTPs do not any have effluent limits for ammonia in their current NPDES permits, and St. Anthony’s WWTP does not have an ammonia limit during the period from November to May. ICL stated that the Driggs WWTP’s NPDES permit contains both ‘interim’ and ‘final’ limits, and that the ‘interim’ limits would need to be used for modeling ‘baseline conditions’ since these are the limits currently in affect. ICL stated that these additional WWTPs need to be factored in.

ICL also stated that downstream ammonia sources must also be considered when setting the “baseline condition” in this instance because the increase in ammonia from the Idaho Falls WWTP will travel downstream and interact with ammonia from downstream sources, causing further degradation of water quality in these downstream areas. In this instance, the ammonia discharges from the downstream WWTP at Shelley must be taken into account.

ICL stated that it believes the inclusion of the ammonia discharges from these other WWTPs will alter the findings of this “Insignificance Analysis” and demonstrate that the proposed increased ammonia effluent limit will result in an unacceptable degradation of water quality and is not consistent with Idaho’s antidegradation rules or EPA’s antidegradation obligations. Thus, the proposed increased ammonia limits run afoul of the Clean Water Act’s anti-backsliding provision.

### ***Response #3***

#### **Overview**

This comment concerns the application of a provision of Idaho State law which is part of Idaho’s EPA-approved antidegradation implementation methods. The relevant provision is Idaho Code Section 39-3603(2)(c), which states that IDEQ “shall consider the size and character of an activity or discharge or the magnitude of its effect on the receiving stream and shall determine whether it is insignificant. If an activity or discharge is determined to be insignificant, then no further Tier II analysis for other source controls, alternatives analysis or socioeconomic justification is required.” The provision further states that IDEQ “shall determine insignificance when the proposed change in an activity or discharge, from conditions as of July 1, 2011, will not cumulatively decrease assimilative capacity by more than ten percent (10%).” Assimilative capacity is calculated as the difference between the criterion level and the ambient level of a pollutant (IDEQ 2011).

IDEQ has published draft guidance explaining its antidegradation policy and implementation methods (found in IDAPA 58.01.02.051 and 58.01.02.052, and Section 39-3603 of the Idaho Code). The draft guidance is entitled *Idaho Antidegradation Implementation Procedure* (“Draft Antidegradation Guidance”), and was published on August 5, 2011. The Draft Antidegradation Guidance provides recommendations on how the State of Idaho’s antidegradation provisions should be applied. IDEQ has found in its antidegradation review of this permit that the degradation resulting from the less-stringent ammonia limits is insignificant, thus, the effluent limits are consistent with Idaho’s antidegradation policy, even though no Tier II analysis for

other source controls, alternatives analysis or socioeconomic justification was performed. This finding was based on an analysis performed by CH2MHILL on behalf of the permittee and provided to IDEQ and EPA. The analysis is included in the 2012 fact sheet as Appendix E.

This comment raises concerns regarding the application of this provision to the ammonia limits in the Idaho Falls permit. Specifically, ICL asserts that the insignificance analysis did not adequately consider other ammonia sources' impact upon the assimilative capacity of the Snake River, and that the insignificance analysis should have used modeling in order to consider the ammonia discharges from numerous upstream WWTPs that were not mentioned in the insignificance analysis, including Ashton, Driggs, Rigby, Ririe and Roberts. The consideration of other sources is important when applying this provision, because this is necessary to accurately calculate the remaining assimilative capacity, and, in turn, the amount of degradation that would be considered "insignificant."

As explained below, EPA agrees with IDEQ's finding that the calculation of the remaining assimilative capacity in this case was accurate and consistent with Idaho's antidegradation methods in State of Idaho statutes and regulations, as well as the Draft Antidegradation Guidance.

### **Determining Upstream Water Quality**

Idaho's antidegradation implementation methods regulations state that "receiving water quality will be the quality measured, or modeled as appropriate, immediately above the discharge for flowing waters..." (IDAPA 58.01.02.052.04.b). The Draft Antidegradation Guidance provides recommendations regarding when modeling is necessary to determine the upstream receiving water quality in addition to or in lieu of measurements. The Draft Antidegradation Guidance also provides recommendations on specifically how to use measurements to determine the upstream water quality. In this case, the determination of upstream water quality was based upon measurements instead of modeling, although modeling was used to verify the appropriateness of using measurements. As explained below, this was appropriate based on the Draft Antidegradation Guidance.

### **Basis for Using Measured Upstream Water Quality in lieu of Modeling**

#### Measurements Were Used in a Manner Consistent with the IDEQ's Draft Antidegradation Guidance

The upstream water quality, shown in the significance analysis at Exhibit 1, (Appendix E) is calculated based on the 95<sup>th</sup> percentile ammonia concentration measured immediately upstream from the City's discharge. The Draft Antidegradation Guidance states that IDEQ will use the 95<sup>th</sup> percentile of upstream measurements when evaluating water quality for pollutants subject to acute and chronic aquatic life criteria, unless there are fewer than 12 data points available, in which case DEQ will use the maximum value observed during critical conditions (Page 23). In this case, there were at least 30 measurements available, so the 95<sup>th</sup> percentile was used (see the insignificance analysis at Page 3).

#### Upstream Sources with Effluent Limits Would Not Change the Upstream Ammonia Concentration by Discharging at Their Effluent Limits

As ICL stated in its comment, the insignificance analysis modeled the potential impact of the St. Anthony and Rexburg WWTPs discharging at their effluent limits, and concluded that "even at

fully permitted limits, ammonia contributed by the St. Anthony and Rexburg WWTFs is present in negligible concentrations by the time it reaches Idaho Falls.” The insignificance analysis therefore concluded that the upstream water quality for ammonia, which was based on measurements, would not change if St. Anthony and Rexburg were to discharge at their permitted limits instead of their actual discharge levels. IDEQ’s draft Antidegradation Guidance does not require modeling to assess upstream water quality when there are sufficient in-stream measurement data, as is the case here. Furthermore, modeling shows that the upstream discharges would not affect the validity of that measurement data. ICL notes that the City of St. Anthony’s permit (#ID0020401) has seasonal ammonia limits, which only apply from June – October. For the purpose of determining if upstream WWTPs would impact the upstream ammonia concentration if they discharged at their effluent limits, the significance analysis took a conservative approach and assumed that the City of St. Anthony would discharge at its June – October average monthly effluent limit of 26 mg/L year-round.<sup>3</sup> The City of St. Anthony’s average monthly limit of 26 mg/L is close to the maximum ammonia concentration measured, which was 29.3 mg/L, according to the 2009 fact sheet for the City of St. Anthony’s draft permit (see page D-4). Thus, EPA believes the assumption that the City of St. Anthony would discharge at its June – October effluent limit year-round was reasonable.

#### Modeling is not Necessary for Upstream Sources without Effluent Limits

For those upstream sources without effluent limits for ammonia (i.e., Roberts, Rigby, Ririe and Ashton), using modeling in lieu of actual measurements is neither necessary nor practical. All of the sources named by ICL in its comment are publicly owned treatment works treating and discharging primarily domestic sewage. Ammonia is known to be a constituent of domestic sewage. Thus the discharge of ammonia is authorized by the NPDES permits for Roberts, Rigby, Ririe and Ashton, even though no effluent limits have been established.<sup>4</sup>

According to the Draft Antidegradation Guidance, the purpose of modeling upstream water quality in the context of an antidegradation analysis is to ensure that the analysis reflects “potential upstream quality, that is, the quality that would occur with other sources upstream discharging at their permitted limits” (page 24).

An effluent limit quantifies the amount of authorized discharge. However, if there are no effluent limits established for a given pollutant, and the discharge of that pollutant is nonetheless authorized, as it is for the ammonia discharged by the upstream sources named by ICL in its comment, then the authorized discharge and the actual discharge of that pollutant are indistinguishable. The discharges of ammonia from sources without ammonia effluent limits do effect the ammonia concentration upstream from Idaho Falls. However, because there is no difference between actual and authorized discharges for those sources, measurements of ammonia in the receiving water upstream from the Idaho falls discharge effectively capture the impact of any and all upstream sources that contribute to the upstream ammonia concentration and load, including all the sources named by ICL in its comments.

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<sup>3</sup> The assumption that St. Anthony would discharge at its effluent limits year-round was not stated in the insignificance analysis. However, this assumption is clear from the spreadsheet used for the modeling calculations, which is part of the administrative record for this permit.

<sup>4</sup> See memorandum dated July 1, 1994 from Robert Perciasepe, Assistant Administrator (AA) for Water, Steven A. Herman, AA for Enforcement and Jean C. Nelson, General Counsel to Regional Administrators and Regional Counsels at Page 2.

Modeling is therefore not necessary to assess the impact on water quality for sources that don't have effluent limits for ammonia.

#### Ashton, Driggs and Ririe Are Too Distant to Model

The Draft Antidegradation Guidance states, "it is suggested that when estimating the potential water quality immediately upstream of a new or increased discharge that the upstream limit for taking into account other permitted sources that may be affecting that water quality be the upstream boundary of the 4<sup>th</sup>-field HUC, i.e. subbasin, or one subbasin above if the source under evaluation is closer to the upstream rather than downstream extent of the subbasin in which it is located" (page 24). The City discharges near the downstream end of HUC 17040201 (Idaho Falls). Therefore, it would be consistent with the Draft Antidegradation Guidance to model only those sources within the same 4<sup>th</sup>-field HUC as the City.

Of the upstream sources that ICL named in its comment, only the Roberts and Rigby WWTPs are in the same 4<sup>th</sup>-field HUC as the City. As explained above, these WWTPs do not have effluent limits for ammonia, and, thus, it is not necessary to model their discharges because the actual discharge (the effect of which is adequately quantified by the in-stream ammonia measurements) is indistinguishable from the authorized discharge.

Under the Draft Antidegradation Guidance, the other sources named by ICL in its comment (Ashton, Driggs, Ririe and Shelley) would be considered too distant to model. Furthermore, Rexburg and St. Anthony, which have effluent limits for ammonia and which were actually modeled in the significance analysis for the purpose of determining if discharges of ammonia at their effluent limits would change the measured upstream concentration, would be considered too distant to model under the Draft Antidegradation Guidance as well. In this respect, the significance analysis was more conservative than the recommendations of the Draft Antidegradation Guidance.

#### Modeling Additional Sources Would Not Change the Findings of the Significance Analysis

As explained above, of the sources that ICL named in its comment, only the Roberts and Rigby WWTPs are in the same 4<sup>th</sup>-field HUC as the City and thus could be subject to modeling under the Draft Antidegradation Guidance.

The St Anthony and Rexburg WWTPs are larger than the Roberts and Rigby WWTPs,<sup>5</sup> yet, the modeling discussed in the significance analysis shows that, even if the St. Anthony and Rexburg WWTPs discharged at their effluent limits, this would not significantly change the ammonia concentration measured immediately upstream from the City of Idaho Falls' discharge. As explained above, EPA believes that modeling is unnecessary for Roberts and Rigby because they do not have effluent limits for ammonia.

Furthermore, due to their small size relative to the St. Anthony and Rexburg WWTPs, which were shown not to effect the ammonia concentration upstream from the City of Idaho Falls, even if the discharges of ammonia from the smaller Roberts and Rigby WWTPs were modeled in the significance analysis in addition to (or in lieu of) the St. Anthony and Rexburg WWTPs, this

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<sup>5</sup> The design flows of the St. Anthony and Rexburg WWTPs are 0.80 and 3.6 mgd, respectively. See the 2009 fact sheet for the St. Anthony NPDES permit (#ID0020401) at Page 7 and the 2001 fact sheet for the Rexburg NPDES permit (#ID0023817) at Page 5. The design flows of the Roberts and Rigby WWTPs are 0.1 and 0.53 mgd, respectively. See the 2003 fact sheet for the Roberts NPDES permit (#ID0026913) and other permits at Page A-16 and the 2005 fact sheet for the Rigby NPDES permit (ID0020010) at Page 7

would not significantly change the estimated ammonia concentration immediately upstream from the City's discharge, and thus would not change the findings of the significance analysis.

### **Downstream Sources Need Not Be Considered**

In addition to being in a different 4<sup>th</sup> field HUC from the City, the City of Shelley is downstream from the City. Idaho's EPA-approved antidegradation implementation methods regulations do not require the consideration of downstream sources when determining the receiving water quality for an antidegradation analysis in flowing waters (IDAPA 58.01.02.052.04.b).

### **The Significance Analysis Used Conservative Assumptions**

The significance analysis incorporates a number of conservative assumptions that would tend to exaggerate the calculated impact of the Idaho Falls' discharge and/or decrease the calculated assimilative capacity. These conservative assumptions provide additional assurance that the proposed effluent limits will not, in fact, allow "significant" degradation as defined in Idaho State law (Idaho Code Section 39-3603(2)(c)). These conservative assumptions include:

- Calculating the value of the ammonia criteria using the 95<sup>th</sup> percentile pH and 95<sup>th</sup> percentile temperature in the receiving water, which results in conservative (i.e., low) values for the ammonia water quality criteria, and, in turn, the assimilative capacity (see Exhibit 1).
- Using critical low flow conditions in the Snake River for mixing calculations (see Exhibit 3).
- Using the design flow of the City's WWTP for mixing calculations rather than the actual discharge level, which is less than the design flow (see Page 4).
- Basing both the average monthly and maximum daily limit on the more restrictive assimilative capacity calculation (see Page 8).

Finally, even though the significance analysis shows that the June – September effluent limits for Idaho Falls could be as high as 7.4 mg/L as an average monthly limit and 27.8 mg/L as a maximum daily limit (Exhibit 14), IDEQ certified more-stringent ammonia limits for that season, and those more-stringent limits have been included in the permit (3.8 mg/L average monthly and 14.1 mg/L maximum daily).

Therefore, the analysis that IDEQ used to determine that the decrease in assimilative capacity resulting from the increased ammonia effluent limits is less than 10% is technically sound.

### **Comment #4**

The City provided comments on the ammonia limits in the 2012 draft permit, and the related mixing zones.

The City stated that the mixing zone for ammonia ranges from 5 to 15%, depending on season, which are essentially back-calculated values to establish Water Quality-based Effluent Limits (WQBELs) that avoid significant degradation for ammonia. The City is concerned that the unqualified establishment of mixing zones of less than 25% for ammonia may set a precedent for future permits that will be inappropriate and potentially unnecessarily burdensome. In addition, the mixing zones for ammonia, for the summer season, lead to WQBELs that are more restrictive than appropriate for this permit. The City stated that it understands that the mixing zone allowances used for the Draft Permit are consistent with the Draft IDEQ 401 certification dated

December 28, 2011 (included as Appendix C in the Fact Sheet) and would provide similar comments to IDEQ regarding the mixing zones for ammonia.

The City recommends that the final IDEQ 401 letter and EPA Fact Sheet recognize and state that 25% (or greater if a site specific mixing zone study is done) could be an appropriate mixing zone allowance for ammonia and can be used in future permits depending on the circumstances at that time. The City also recommends that the WQBELs for ammonia not be fundamentally based on mixing zones, but instead be based on the insignificant degradation determination for ammonia, because limits based on the insignificant degradation determination are more restrictive than mixing zone based WQBELs at the standard default value of 25% for both seasons.

In the event that mixing zone allowances less than the standard 25% for ammonia limits are retained as the determinative basis for WQBELs, the City recommends that a 10% mixing zone be used for June – September, and a 15% mixing zone for October – May. The City stated that would result in limits consistent with Exhibit 14 of Appendix E.

The City stated that it concurs with the insignificant degradation based limits for the winter season (October through May), but believes that the summer season limits (for June through September) should be those derived from the river design flow for the summer season (i.e., the limits in Exhibit 14 of the memorandum in Appendix E of the Fact Sheet). DEQ and EPA appear to be in agreement with the seasonal river design flow approach (e.g., see discussion in Fact Sheet Appendix B, item B., Low Flow Conditions). Therefore, the City believes that the selected insignificant degradation limits also should be based on the seasonal approach as a simple matter of technical consistency.

#### **Response #4**

As stated in the City's comments, the mixing zones used to develop the ammonia limits in the 2012 draft permit are those authorized by the State of Idaho in its draft CWA Section 401 certification dated December 28, 2011 (Appendix C to the 2012 fact sheet). The final CWA Section 401 certification authorizes mixing zones for ammonia that are identical to those proposed in the 2011 draft certification. As stated in the Idaho WQS, "...the Department (of Environmental Quality) will determine the applicability of a mixing zone and, if applicable, its size, configuration, and location" (IDAPA 58.01.02.060.01). Thus, mixing zones must be authorized and sized by IDEQ. EPA cannot establish a mixing zone without IDEQ's authorization, nor can EPA establish a mixing zone that is larger than authorized by IDEQ.

The final CWA Section 401 certification also specifies ammonia effluent limits that are identical to those in the 2011 draft certification and the 2012 draft permit. NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, EPA cannot establish the larger mixing zones and associated less-stringent ammonia limits proposed by the City.

The fact that mixing zones of certain sizes have been established by IDEQ in the CWA Section 401 certification does not mean that a larger mixing zone could not be established in the future. The mixing zone is not a condition of the permit and is therefore not subject to the anti-backsliding provisions of the Clean Water Act and federal regulations (CWA Section 402(o), 40 CFR 122.44(l)). However, any less stringent *effluent limits* that may be established based on a larger mixing zone in the future must comply with the antibacksliding provisions of the CWA

and federal regulations and with the Idaho WQS, including the State of Idaho's antidegradation policy and implementation methods.

## Monitoring and Reporting Requirements

### Comment #5

The City stated in its comments on the 2010 draft permit that the mercury testing level (Minimum Level, ML) in Table 2, page 7 of the Draft Permit is very low and will be difficult and costly for the City to achieve. In addition, the City notes this same value is identified in Table 4, but in that case as a Method Detection Level (MDL), even though an ML is supposed to be 3.18 times the MDL per EPA guidance. The City is confused by this discrepancy between the two tables, but moreover requests instead that the analytical testing levels (MDLs) used by EPA for the recent Twin Falls final permit (see Table 3 of that permit) be included for these same parameters in the Idaho Falls permit.

### Response #5

According to Section 4.1.3 of EPA's *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*, the most appropriate methods for measuring low levels of mercury concentrations in the water column are Method 1631, Revision E and Method 245.7. Table 2, below provides the minimum levels (MLs) and method detection limits (MDLs) as published in those methods.

Method	ML (ng/L)	MDL (ng/L)
1631E	0.5	0.2
245.7	5.0	1.8

Thus, for the less-sensitive of the two acceptable methods for mercury (Method 245.7), the ML is 5.0 ng/L (0.005 µg/L) and the MDL is 1.8 ng/L (0.0018 µg/L). To account for the fact that interferences may prevent attainment of the published MLs and MDLs, EPA has set the required ML for mercury at 0.01 µg/L (10 ng/L), which is twice the published ML for Method 245.7, but less than the value of the chronic aquatic life mercury criterion which is in effect for Clean Water Act purposes in Idaho (0.012 µg/L). Table 4 has been edited to specify an ML for mercury instead of an MDL, consistent with Table 2.

### Comment #6

The City stated in its comments on the 2010 draft permit that the cyanide chilling temperature in item 10 on page 8 of the Draft Permit should now be 6 degrees Celsius instead of 4 degrees, per 40 CFR 136.

### Response #6

This comment was addressed by a change to the 2012 draft permit. As explained in the 2012 fact sheet at Page 12, the cyanide preservation temperature in the 2012 draft permit as well as the final permit is  $\leq 6$  °C.

### ***Comment #7***

The City stated in its comments on the 2010 draft permit that the Discharge Monitoring Reports (DMRs) should be postmarked by the 15<sup>th</sup> of each month consistent with item 1 on page 2 of the Draft Permit. Thus, item III.B.1 on page 21 of the Draft Permit that stipulates the 10<sup>th</sup> day should be changed to be the 15<sup>th</sup> day.

The City stated in comments on the 2012 draft permit that the Discharge Monitoring Reports (DMRs) should be postmarked by the 15<sup>th</sup> of each month consistent with item 1 on page 2 of the Draft Permit. Thus, item III.B.1 on page 21 of the Draft Permit that stipulates the 10<sup>th</sup> day should be changed to be the 15<sup>th</sup> day. The City stated that the 2012 fact sheet, on page 8, notes that EPA intended to make this edit in the permit, but did not actually do so. In addition, item III.B.2. on page 21 (electronic submissions) should also be changed to state the 15<sup>th</sup> of the month rather than the 10<sup>th</sup>.

### ***Response #7***

The City is correct that EPA intended to address the City's comments on the 2010 draft permit by changing the DMR submission postmark deadline to the 15<sup>th</sup> day of the month following the monitoring month.

As explained in the 2012 fact sheet at page 14, EPA intended to change the DMR due date to the 15<sup>th</sup> day of the month following the monitoring month, which is consistent with the with both the 2001 permit and with the schedule of submissions on Page 2 of both versions of the draft permit.

This change has been made to the final permit.

### ***Comment #8***

The City stated in comments on both versions of the draft permit Section III.G.1.e.ii of the draft permit requires the City to provide 24-hour noncompliance reporting for any overflow of any volume, even for those that do not reach waters of the United States. The City requests that for overflows that do not reach waters of the U.S., the permit should set a reasonable threshold for such reportable overflows. The requirement to consider small and already managed spills that do not reach waters of the U.S. as noncompliance events worthy of 24-hour notice does not seem appropriate to the City. The City instead requests that a reportable volume of 1,000 gallons serve as the threshold for reporting for overflows that do not reach waters of the U.S. This request is supported by precedent in California, which distinguishes different "classes" of SSOs and has different reporting requirements for each class. One distinction between a Class 1 SSO (minimum 3-day reporting allowance) and Class 2 (30-day reporting period) is 1,000 gallons.

### ***Response #8***

As stated in the 2010 Fact Sheet on Page 19, 40 CFR 122.41(l)(6) requires 24-hour reporting of any noncompliance which may endanger human health or the environment. A sanitary sewer overflow (SSO) which reaches waters of the United States is a discharge which is not authorized by the permit and therefore a violation of the Clean Water Act (Section 301(a)). An SSO which does not reach waters of the United States would nonetheless constitute noncompliance with the permit because it would violate the permit conditions requiring proper operation and maintenance of the POTW (Part IV.E of the permit, 40 CFR 122.41(e)). Therefore, any SSO is a violation of the permit. EPA believes that any SSO may endanger human health or the

environment. Therefore, any SSO event is noncompliance which may endanger human health or the environment, and must be reported to EPA within 24 hours (40 CFR 122.41(1)(6)).

**Comment #9**

The City stated that the sample frequency for copper in Table 1 of the Draft Permit is once per month, whereas the frequency for the other metals is twice per year. The City requests that the copper frequency be twice per year, consistent with the other metals.

**Response #9**

EPA agrees with the City that there is no basis to require a different influent and effluent monitoring frequency for copper than for other metals such as cadmium and zinc. Therefore, the final permit requires influent and effluent monitoring for copper at the same frequency as other metals. However, the City should note that, “for each twice-per-year sampling event, the permittee must collect three 24-hour composite samples within a calendar week” (see the final permit at Part I.B.11).

**Comment #10**

The City stated that IDEQ and the City have agreed that the upstream and downstream sampling locations should be at two power plant spillways for safety and sample representative reasons. The IDEQ Draft 401 Certification Letter confirms the spillways are the agreed-upon locations on page 4 of the letter, however, the specific coordinates in the letter are not correct and should be identified in the 401 letter and on page 12 item I.D.1. in the Draft Permit as below:

Gem Lake Power Plant:

43° 25' 17.37637" N

112° 06' 11.46972" W

Lower Power Plant:

43° 28' 05.80495" N

112° 03' 46.31989" W

The City stated that, in addition, Item I.D.3 in the Draft Permit on page 12 should be deleted because the IDEQ and City have agreed that sampling should be from the spillways, not at three separate grab locations across the river.

**Response #10**

The final CWA Section 401 certification specifies the same receiving water monitoring locations as stated in the City’s comments. In the final permit, the latitudes and longitudes have been rounded to the nearest tenth of a second. NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, the final permit requires the sampling to be conducted at the upstream and downstream locations specified in the final certification.

EPA agrees that the power plant spillways should be well-mixed and thus it is not necessary to collect three grab samples across the width of the river to ensure representative sampling. Thus,

the requirement to collect three grab samples across the width of the river has been deleted from the permit.

## **Antidegradation**

### **Comment #11**

The Idaho Conservation League (ICL) stated in comments on both the 2010 and 2012 draft permits that, because the actual effluent flow rate from the Idaho Falls Wastewater Treatment Plant is less than the design flow of the plant, which was used to calculate effluent limits, the issuance of the permit with effluent limits as proposed in the draft permit will allow lower water quality, in violation of Idaho's antidegradation policy (IDAPA 58.01.02.051).

ICL stated that, for purposes of complying with Tier II antidegradation requirements, the baseline is existing water quality, not the previous effluent limits. ICL referenced a statement in EPA's *Water Quality Standards Handbook: Second Edition* (1994) that "no permit may be issued, without an antidegradation review, to a discharger to high-quality waters with effluent limits greater than actual current loadings if such loadings will cause a lowering of water quality."

ICL stated that the Idaho Falls WWTP permit must limit future discharges to pollutant load levels at or below those currently discharged at the current actual average discharge volume of 11.6 mgd. ICL states that this could be accomplished by either placing a limit directly on the effluent flow rate or by reducing the concentration limits such that the facility cannot increase current loadings.

### **Response #11**

The use of effluent limits to define the current and future discharge quality and its effect upon the receiving water quality is consistent with the State of Idaho's implementation methods regulations for its antidegradation policy. Idaho's antidegradation implementation methods have been approved by EPA under Section 303(c) of the CWA and are therefore in effect for Clean Water Act purposes (40 CFR 131.21). EPA's basis for approving these provisions is provided on pages 11 – 15 of the *Support Document, Review of Idaho's Antidegradation Implementation Methods (Idaho docket 58-0102-1001)*. Specifically, the antidegradation implementation methods provide that:

*Effect on water quality will be based on the calculated change in concentration in the receiving water as a result of a new or reissued permit or license... For a reissued permit or license, the calculated change will be the difference in water quality that would result from the activity or discharge as authorized in the current permit or license and the water quality that would result from the activity or discharge as proposed in the reissued permit or license....(IDAPA 58.01.02.052.04.a)*

*For pollutants that are currently limited, current discharge quality shall be based on limits in the current permit or license. For pollutants not currently limited, current discharge quality shall be based on available discharge quality data collected within five years of the application for a permit or license or other relevant information. (IDAPA 58.01.02.052.04.a.i)*

*Future discharge quality shall be based on proposed permit limits.... (IDAPA 58.01.02.052.04.a.ii.)*

Under Idaho's antidegradation implementation methods, the effect of a reissued permit upon water quality is based on the authorized discharge in both the current and reissued permits, and both current and future discharge quality is required to be based on the current and proposed permit limits, respectively. Thus, under Idaho state law, as long as the effluent limits in the reissued permit are at least as stringent as the effluent limits in the prior permit, there is no lowering of water quality for those pollutants that are limited in the permit and no Tier II antidegradation review is necessary for those pollutants. See also the State of Idaho's antidegradation review dated December 28, 2011, which is included in the 2012 fact sheet as Appendix D.

Furthermore, NPDES regulations require that, "in the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow," (40 CFR 122.45(b)(1)) and Idaho's antidegradation implementation methods require that the calculation of the change in water quality "will take into account dilution using appropriate mixing of the receiving water under critical conditions coupled with the design flow of the discharge" (IDAPA 58.01.02.052.04.a). Thus, the effluent limits in the permit are calculated based on the design flow of the POTW, instead of the actual flow. These limits are consistent with the requirements of Idaho's approved antidegradation implementation methods as well as federal regulations governing the calculation of effluent limits for POTWs.

### ***Comment #12***

ICL states that antidegradation review for high quality waters does allow for increased discharges, but the draft permit does not contain the analysis to support this. 40 CFR 131.12(a)(2) does allow for increase discharge into high quality waters upon meeting two conditions: First, after conducting a full public participation process. Second, upon a showing "that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." Further, this necessity analysis must demonstrate that the state and EPA will achieve "the highest statutory and regulatory requirements for all new and existing point sources and reasonable best management practices for nonpoint source pollutant controls." The EPA interprets the necessity analysis "to prohibit point source degradation as unnecessary to accommodate important economic and social development if it could be partially or completely prevented through implementation of existing State-required BMPs."

ICL states that the permit must follow a full public participation process and perform a necessity analysis. This necessity analysis must first ensure the state and EPA implement the highest regulatory requirements and reasonable BMPs before authorizing any discharge that would lower existing water quality as measured by the current loading from the Idaho Falls WWTP.

### ***Response #12***

As explained in the response to comments #3 and #11, the reissued permit will not allow lower water quality, as defined in the Idaho WQS (IDAPA 58.01.02.052.04.a, Idaho Code Section 39-3603(2)(c)). Therefore it is not necessary for the State to make a finding that allowing lower water quality is necessary to accommodate important economic and social development in the area in which the waters are located in order to reissue the permit.

### ***Comment #13***

ICL states that, to protect the receiving water from further degradation, EPA should develop effluent limits in the proposed permit that ‘lock in’ the impacts caused by the facility’s discharge at the actual level of discharge (i.e. the pollutant load received by the river). This is different than reissuing the facility’s permit at the current level of permitted discharge.

There are at least two ways of addressing this:

1) Maintain the current effluent concentration limits and limit discharge flow volume to the current actual flow discharged, or, 2) Reduce the allowable concentration limits of pollutants such that the total impact of the discharge remains the same as it is today (i.e. no additional degradation) even if the facility discharges at the total design flow of the facility. This would ‘lock-in’ current loading – but not restrict discharge volume to levels below the design flow of the facility.

Option two (above) might be superior because it would allow the City of Idaho Falls to maintain the operational flexibility needed to discharge a greater volume to accommodate community growth.

### ***Response #13***

As explained in the response to comments #3 and #11, the reissued permit does not allow lower water quality, as defined in the Idaho WQS (IDAPA 58.01.02.052.04.a, Idaho Code Section 39-3603(2)(c)). Therefore, it is not necessary to establish flow limits or more-stringent concentration effluent limits as suggested by the commenter in order to prevent lower water quality.

### ***Comment #14***

ICL states that one of the reasons why EPA is misapplying anti-degradation with regard to this issue of reissuing permits is that EPA has confused the directive to develop limits that ensure that a discharge does not cause or contribute to an excursion above a state water quality standard with the obligation to comply with anti-degradation requirements.

ICL states that EPA conducts a “reasonable potential” analysis to determine if there is a reasonable potential that a discharge will cause or contribute to an excursion above a state water quality standard. If EPA concludes that this potential exists then EPA develops a WQBEL effluent limit designed to ensure that the germane standard is not violated. If EPA determines that there is not a reasonable potential that the discharge will violate the standards, EPA does not develop a WQBEL effluent limit.

ICL states that there is, however, a need to recognize that a facility could have a discharge that does not have a reasonable potential to cause or contribute to a violation of a water quality standard but will still result in a lowering of water quality. In such an instance EPA must acknowledge that water quality will be degraded by the discharge even though no other standards will be violated. As such, EPA would need to either develop an effluent limit which assures that water quality will not be lowered in violation of the anti-degradation requirements or undertake the determination that this lowering of water quality is necessary to accommodate important economic or social development in the area.

## **Response #14**

This comment concerns potential lowering of water quality for pollutants for which effluent limits were not proposed in the draft permits.

This issue is addressed in the State of Idaho's draft antidegradation review dated December 28, 2011 (Appendix D to the 2012 fact sheet) which states that:

*With respect to those pollutants in the discharge for which there are no limits in the proposed permit, and no limits in the current permit, there is no reason to believe that these pollutants will be discharged in quantities greater than that which is allowed to be discharged under the current permit. Similarly, there is no reason to believe the effluent contains new pollutants that haven't been discharged previously. These conclusions are based upon the fact that there has been no change in the design flow, influent quality or treatment processes that would likely result in new or increased discharge of pollutants. Because the proposed permit does not allow for a new or increased water quality impact, DEQ has concluded that the proposed permit will not cause a lowering of water quality for the pollutants with no limits. As such, the proposed permit will maintain the existing high water quality in the Snake River for these pollutants.*

The State of Idaho's final antidegradation review dated August 6, 2012 reached the same conclusion as the draft, with respect to pollutants in the discharge which were not limited in the prior permit or the reissued permit.

Although the City of Idaho Falls wastewater treatment plant discharges pollutants that are not subject to effluent limits, EPA determined that those parameters are not discharged in sufficient quantities that there is reasonable potential for water quality standards to be exceeded (see the 2010 fact sheet at Appendix D). Therefore, no effluent limits have been established for these parameters. As explained in the State of Idaho's antidegradation review, "the proposed permit will maintain the existing high water quality in the Snake River for these pollutants," because "there is no reason to believe that these pollutants will be discharged in quantities greater than that which is allowed to be discharged under the current permit," and "there is no reason to believe the effluent contains new pollutants that haven't been discharged previously."

In addition, as explained in the response to comment #11, the reissued permit will not allow lower water quality for any parameter for which effluent limits have been established.

## **Comment #15**

ICL stated that Idaho's adoption of an insignificance threshold of 10% of the assimilative capacity of the receiving water, which was used in the 2012 draft permit to allow less-stringent ammonia limits without a Tier 2 antidegradation review, is an unlawful interpretation of the Clean Water Act's antidegradation requirements.

ICL stated that EPA cannot rely on Idaho's antidegradation implementation methods to correctly determine baseline conditions to identify "insignificance," for two reasons.

First, ICL stated that the implementation methods did not envision a circumstance where a discharger's actual discharge is greater than its maximum permitted discharge, which is the case for the City of Idaho Falls' ammonia discharges.

Also, ICL stated that it is not clear what “limit” on ammonia would be an acceptable number to plug into the ‘baseline condition’ model, for upstream sources that discharge ammonia but which do not have ammonia limits in their permits (e.g., the Roberts, Rigby, Ririe and Ashton WWTPs).

### **Response #15**

The finding that the revised ammonia limits in the 2012 draft permit are subject to and consistent with the State of Idaho’s antidegradation policy, and therefore comply with the anti-backsliding provisions of the Clean Water Act (CWA Section 303(d)(B)) is based on an antidegradation implementation provision in Idaho State law which states that, “if an activity or discharge is determined to be insignificant, then no further Tier II analysis for other source controls, alternatives analysis or socioeconomic justification is required,” and the Idaho Department of Environmental Quality “shall determine insignificance when the proposed change in an activity or discharge, from conditions as of July 1, 2011, will not cumulatively decrease assimilative capacity by more than ten percent (10%)” (Idaho Code Section 39-3603(2)(c)). EPA approved these provisions under CWA section 303(c) on August 18, 2011, thus, they are effective for Clean Water Act purposes (40 CFR 131.21). EPA’s basis for approving the “insignificant degradation” provision is provided on pages 9 – 11 of the *Support Document, Review of Idaho’s Antidegradation Implementation Methods (Idaho docket 58-0102-1001)*.

Under Idaho’s antidegradation implementation methods, the fact that the permitted facility’s current actual discharge is greater than its maximum permitted discharge, as defined by its effluent limits, is irrelevant to the application of the “insignificance” provision. As explained in the response to comment #11, under Idaho’s antidegradation implementation methods, the effect of a reissued permit upon water quality is based on the authorized (as opposed to actual) discharge in both the current and reissued permits, and both current and future discharge quality is required to be based on the current and proposed permit limits, respectively (IDAPA 58.01.02.052.04.a). The implementation methods do not distinguish between situations in which effluent limits are met or violated; both current and future discharge quality is based on the effluent limits, regardless of whether or not the limits have been met. The insignificance analysis was therefore conducted based on the water quality effect of the effluent limits in the City of Idaho Falls’ 2001 permit, relative to the effect of the proposed effluent limits. That is to say, the analysis calculated the difference in remaining assimilative capacity that would occur downstream from the discharge at the revised, less-stringent effluent limits, relative to the 2001 permit’s effluent limits. This is consistent with Idaho’s antidegradation implementation methods.

As ICL notes, the City frequently does not comply with the ammonia limits in the 2001 permit. Furthermore, the actual effluent ammonia loads discharged by the City are often greater than the revised, less-stringent effluent limits in the reissued permit. Specifically, the monthly average effluent ammonia load has been greater than the revised effluent limit for June – September (539 lb/day) 25% of the time between April 2006 and February 2012, and greater than the revised effluent limit for October – May (482 lb/day) 26% of the time. The maximum monthly average effluent ammonia load measured between April 2006 and February 2012 was 1,460 lb/day. Because, in this case, all of the revised effluent limits are less than the maximum load that was actually discharged, if the insignificance analysis had used the City’ actual discharges to define the current discharge quality (instead of its effluent limits) and the proposed effluent limits to

define the future discharge quality, then, the analysis would have concluded that there was *no* degradation in water quality resulting from the revised effluent limits. Thus, the use of the City's 2001 effluent limits to define the current discharge quality in lieu of the City's actual discharges was more protective of water quality in this case. As explained in the response to comment #1, for this reason, EPA does not agree that actual discharges should be used in lieu of effluent limits to define the current discharge quality in cases where the actual effluent load or concentration exceeded effluent limits.

The fact that Idaho's antidegradation implementation methods do not define how to model the contribution from upstream sources without effluent limits does not prevent the use of Idaho's antidegradation implementation methods to determine whether a proposed change in a discharge causes "significant" degradation. As explained in the response to comment #3, above, EPA believes that the method used in this case to estimate the upstream ammonia concentration, in turn, the assimilative capacity the significance of the effect of the revised limits was technically sound and protective of water quality.

## **Nutrients (Phosphorus and Nitrogen)**

### ***Comment #16***

ICL stated in its comments on the 2010 draft permit that the draft American Falls TMDL also has load allocations for nitrogen in addition to phosphorus. Discharge limits should be reviewed to determine their appropriateness with regard to TMDL constraints on nitrogen loading.

### ***Response #16***

The final TMDL for American Falls Reservoir (IDEQ, Shoshone-Bannock Tribes, and EPA 2012) states that "phosphorus is considered the most likely limiting nutrient in American Falls Reservoir" (page xviii), and "at this time, no target will be considered for nitrogen" (Page 85).

Liebig's Law of the Minimum states that plant growth is controlled not by the total of nutrients available, but by the scarcest or limiting nutrient (EPA 1972). Phosphorus is generally the limiting nutrient (i.e., the nutrient that controls primary productivity) in freshwaters, and particularly in lakes and reservoirs. This is because blue-green algae can "fix" elemental nitrogen from the air as a nutrient source or utilize nitrogen from the water column at very low concentrations, and thereby grow in a low-nitrogen environment (EPA 1999), and because freshwater lakes, reservoirs, rivers, and streams are generally supported by large watershed areas, which capture, accumulate, and mobilize large amounts of nitrogen relative to phosphorus (Paerl 2009). Eutrophication in lakes and reservoirs is generally controlled by the phosphorus concentration, even in cases of low nitrogen-to-phosphorus ratios, which would seem to suggest limitation by nitrogen, and studies have shown that reducing nitrogen inputs to lakes cannot control the growth of blue-green algae (Reynolds 2001, Schindler 1974, 1977, 2008, Smith 1982). In the American Falls Reservoir, downstream from the discharge, blue-green algae (primarily *Aphanizomenon*) represented the highest concentration of phytoplankton in the reservoir in the summer (see the final American Falls TMDL at page 226).

The ratio of nitrogen to phosphorus (N:P) in biomass is approximately 7.2:1. Therefore, an N:P concentration ratio less than 7.2 suggests that nitrogen is limiting. Alternatively, higher ratios suggest that phosphorus is limiting (Chapra 1996, EPA 1999). To determine the N:P ratio for the

Snake River near the Idaho Falls discharge, EPA used water quality data from several USGS stations in Idaho and monitoring performed by the permittee, as required by its 2001 permit. Upstream from the discharge, the N:P ratio in the Snake River is 16.3:1 based on median nitrogen and phosphorus concentrations and 12.7:1 based on average concentrations. Downstream from the discharge, the N:P ratio is 13.5:1 based on median nitrogen and phosphorus concentrations and 13.4:1 based on average concentrations.

The fact that eutrophication in freshwater, and especially lakes and reservoirs, is generally controlled by the phosphorus concentration instead of nitrogen, combined with the dominance of blue-green algae in American Falls Reservoir phytoplankton and high nitrogen-to-phosphorus ratios, suggest that phosphorus is the most likely limiting nutrient in this case. The final American Falls TMDL does not establish targets or load allocations for total nitrogen. Thus, it is not necessary to establish effluent limits for total nitrogen in addition to total phosphorus in order to protect the receiving waters from the effects of excess nutrients.

However, effluent limits for ammonia are necessary in order to ensure compliance with Idaho's numeric water quality criteria for ammonia at the edges of the State-authorized mixing zones (IDAPA 58.01.02.250.02.d.) and Idaho's antidegradation policy and implementation methods (IDAPA 58.01.02.051 – 052, Idaho Code Section 39-3603).

### ***Comment #17***

The City of Idaho Falls (City) and the Idaho Conservation League (ICL) commented on the proposed effluent limits for total phosphorus (TP) in both the 2010 draft permit and the revised (2012) draft permit.

In its comments on both versions of the draft permit, ICL stated that the TP limits would allow the City to increase its TP loading above current levels. In its comments on the 2010 draft permit, ICL stated that “because of its location immediately upstream of Ferry Butte, and its current discharge of 44 tons of phosphorus per year, the Idaho Falls WWTP is a significant factor in determining whether or not the Ferry Butte load allocation is met,” and that “the draft NPDES permit for the Idaho Falls WWTP proposes to continue to authorize the facility to discharge up to 17 mgd with an average monthly limit of 388 lbs/day. If this permitted limit were fully exercised by the facility, the facility would discharge 70.8 tons of phosphorus per year to the Snake River. Thus, the utilization of the effluent limits in the proposed draft permit would result in violating both the phosphorus load assigned to Ferry Butte and the instream target concentration of 0.05 mg/l.”

In its comments on the revised draft permit, ICL stated that the WWTP discharges an average of 208 lb/day TP, which is equivalent to 38 tons/year. ICL states that “this revised draft permit proposes a total phosphorus effluent limit of 277 lbs/day. This translates to an annual total phosphorus load to the Snake River (newly authorized by this permit) of 50.6 tons/year. The difference between the proposed permitted loading and the actual (current) loading is 12.6 tons per year of total phosphorus. Should the permit for this facility be issued with the proposed effluent limits the full use of this permit will unlawfully allow a lowering of water quality in this tier 2 waterbody; a violation of the Clean Water Act's antidegradation provisions.” ICL stated in its comments on the revised draft permit that “EPA should develop (TP) effluent limits in the proposed permit that ‘lock in’ the impacts caused by the facility's discharge at the actual level of discharge (i.e. the pollutant load received by the river).”

The City stated in its comments on both versions of the draft permit that it could not comply with the TP effluent limits proposed in the draft permits, and that a schedule of compliance would be necessary if the effluent limits proposed in the draft permits were imposed. In its comments on the 2010 draft permit, the City stated that the TP limits should provide a growth allowance in addition to the current load at a 2% annual growth rate.

The City proposed interim effluent limits for TP (which would apply during the term of a compliance schedule should one be established) in its comments on both versions of the draft permit. The City's proposed interim effluent limits for TP were 413 lb/day average monthly and 765 lb/day average weekly in its comments on the 2010 draft permit and 391 lb/day average monthly and 586 lb/day average weekly in its comments on the 2012 draft permit.

### **Response #17**

The TP limits in both the 2010 and 2012 versions of the draft permit were designed to require the City to maintain its existing TP load based on its current discharge load (i.e., current effluent TP concentrations and flow rates). The average monthly and average weekly effluent limits proposed in both versions of the draft permit would not allow the City to increase its average loading of TP.

Federal regulations require effluent limits for continuously discharging POTWs to be expressed as average monthly and average weekly discharge limitations, meaning the highest allowable arithmetic averages of discharges measured over a calendar month or a calendar week (40 CFR 122.2, 122.45(d)(2)). Because effluent discharges are not constant, an effluent limit that specifies the maximum allowable average discharge over a short period of time (e.g., a month, week, or day) must be set higher than the long-term average discharge that the limit is intended to achieve. If such a short-term effluent limit were set equal to a long-term average wasteload allocation (WLA), it would be more stringent than intended.<sup>6</sup>

These limits were calculated based on EPA's guidance on statistical methods for developing effluent limits in permits, specifically the *Technical Support Document for Water Quality-based Toxics Control* or TSD. As stated on Page 6-11 of the *US EPA NPDES Permit Writers' Manual* (EPA 2010), the water quality-based effluent limit calculation procedures in the TSD "were developed specifically to address toxic pollutants but have been appropriately used to address a number of conventional and nonconventional pollutants as well."

As explained in Section 5.2.2 of the TSD, "all permit limits...are set at the upper bounds of acceptable performance. The purpose of a permit limit is to specify an upper bound of acceptable effluent quality." In Section 5.3.1, the TSD states that "the limits must 'force' treatment plant performance, which, after considering acceptable effluent variability, will only have a low statistical probability of exceeding the (wasteload allocation) and will achieve the desired loadings."

In both versions of the draft permit, in order to require the City to maintain the current loading of TP while being consistent with federal regulations requiring average monthly and average weekly limits, EPA set the average monthly effluent limits for total phosphorus at the upper bounds of the current phosphorus loading, consistent with the recommendations of the TSD.

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<sup>6</sup> In Section 5.3.1, the TSD specifically recommends against setting a relatively short-term maximum permit limit equal to a relatively long term WLA because the limit would be overly stringent. The TSD's specific example of this is setting the maximum daily limit equal to the chronic WLA.

During the development of the draft permits, EPA worked with IDEQ to size the mixing zones such that the effluent limits, which reflect current performance, would result in compliance with Idaho's narrative criterion for excess nutrients at the edges of the mixing zones (IDAPA 58.01.02.200.06). EPA and DEQ interpreted this narrative standard as 50 µg/L TP, which is the in-stream target in the final American Falls TMDL. This TP concentration is also recommended for streams flowing into lakes or reservoirs in EPA's 304(a) criteria recommendations, (*Quality Criteria for Water 1986*). The limits in this permit are based on a consistent interpretation of DEQ's narrative standard.

Specifically, in the 2010 draft permit, as stated on Page F-3 of the 2010 fact sheet, the proposed average monthly limit (388 lb/day) was set equal to the City's 92<sup>nd</sup> percentile current phosphorus load, which is an estimate of the facility's maximum monthly average load<sup>7</sup> (see the *Municipal Nutrient Removal Technologies Reference Document* at Section 2.5.1). The 92<sup>nd</sup> percentile phosphorus load was calculated using effluent TP and flow data measured between January 1999 and September 2009; outliers were not excluded.

In the revised 2012 draft permit, the limits were based on an expanded data set, using effluent TP and flow data measured between January 1999 and October 2011, and outliers were excluded in the revised calculation. In the 2012 draft permit, instead of using the 92<sup>nd</sup> percentile to estimate the maximum monthly average loading, EPA set the effluent TP limit at the upper bound of the City's current performance using the equation shown in Table 5-2 of the TSD to calculate a ratio between the facility's long-term average discharge and the average monthly limit. This was done in part because the wasteload allocations for the Cities of Blackfoot, Shelley, and Firth in the draft American Falls TMDL are expressed as annual values (tons per year). Unlike the 92<sup>nd</sup> percentile method, the equation shown in Table 5-2 of the TSD calculates an average monthly limit from a long-term average (e.g., annual average) WLA. Thus, the TSD's method could be used to translate the annual WLAs in the American Falls TMDL into average monthly and average weekly limits, consistent with the Idaho Falls permit. As stated on Page B-11 of the 2012 fact sheet, "the ratio between the long term average discharge and the average monthly limit is 1.331:1. Dividing the average monthly TP limit of 277 lb/day by this ratio yields a long term average discharge of 208 lb/day. This is identical to the average TP loading measured between January 1999 and October 2011 (excluding outliers). Thus, the proposed effluent limits will not allow an increase in the City's long term average TP discharge, nor will they require a decrease."

Although EPA's intent in both versions of the draft permit was to establish effluent limits that required the City to maintain its existing loading of TP, the methods used to estimate the facility's maximum monthly average discharge rely on assumptions that are based on the POTW's past performance and effluent variability, which may or may not remain accurate in the future. For example, if, in the future, the effluent TP load becomes less variable than it has been in the past, the City could discharge a greater average loading of TP than it had in the past, and still comply with the effluent limits in the draft permit, as ICL notes in its comments. Conversely, if the effluent TP load becomes more variable, the City would have to maintain a lower long-term average discharge of TP in order to consistently comply with the effluent limits. Thus, it is possible that the City is correct that it could not consistently comply with the effluent

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<sup>7</sup> The 92<sup>nd</sup> percentile is approximately equal to the maximum monthly average because it is the loading that is achieved 11/12<sup>th</sup>s (92%) of the time.

limits proposed in the revised draft permit without a schedule of compliance. EPA has made changes to the TP effluent limits in the final permit to address both of these issues.

First, EPA has established an annual average limit for total phosphorus of 236 lb/day. This loading is equal to the average discharge measured between January 2005 and December 2011.<sup>8</sup> In its final Clean Water Act (CWA) Section 401 certification, IDEQ has authorized a mixing zone encompassing 52.5% of the critical low flow of the receiving water, which provides a dilution factor of 81.7:1.

Thus, the annual average limit is derived from the 50 µg/L interpretation of the narrative criterion as follows:

$$C_e = \text{wasteload allocation (WLA)} = D \times (C_d - C_u) + C_u$$

Where:

$C_e$  = Effluent concentration

$C_d$  = Downstream concentration (the numeric interpretation of the narrative criterion)

$C_u$  = Upstream concentration

D = Dilution Factor

In this case:

$$\begin{aligned} \text{WLA} &= 81.7 \times (0.05 \mu\text{g/L} - 0.03 \mu\text{g/L}) + 0.03 \mu\text{g/L} \\ &= 1.664 \text{ mg/L} \end{aligned}$$

This concentration-based WLA is converted to an effluent limit expressed in terms of mass (as required by 40 CFR 122.45(f)) as follows:

$$\begin{aligned} \text{Annual Avg. Limit} &= 1.664 \text{ parts per million} \times 17 \text{ million gallons/day} \times 8.34 \text{ lb/gallon} \\ &= \mathbf{236 \text{ lb/day}} \end{aligned}$$

The annual average limit is identical to the facility's current average load measured between January 2005 and December 2011. The annual average limit is somewhat less than the City's average effluent TP loading as stated in Appendix F of the 2010 fact sheet and referenced by ICL in its comments on the 2010 draft permit (239 lb/day or 44 tons/year). Therefore, the annual average limit will prevent any increase in the average load, which could have potentially occurred under the average monthly effluent limits proposed in the draft permits (e.g., if effluent variability were reduced). It is not necessary to adjust the annual average effluent limit in order to account for effluent variability, because the in-stream target concentration is an annual average (see the 2012 fact sheet at Page B-7). Therefore the WLA is also an annual average value, and thus the averaging period for the effluent limit is identical to the averaging period for the WLA. The regulation requiring average monthly and average weekly limits (40 CFR 122.45(d)(2)) does not prevent EPA from establishing additional effluent limits expressed with different averaging periods, beyond the required average monthly and average weekly limits.

To ensure consistency with federal regulations requiring effluent limits in NPDES permits for continuously discharging POTWs to be expressed as average weekly and average monthly limits (40 CFR 122.45(d)(2)), EPA has included average monthly and average weekly limits in the

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<sup>8</sup> No outliers were discarded in this calculation of the average load.

final permit, in addition to the annual average limit described above. As stated above, the City proposed interim effluent limits (which would apply during the term of a compliance schedule, should one be established) of 391 lb/day average monthly and 586 lb/day average weekly in its comments.

The City's proposed average monthly limit of 391 lb/day is equal to the 92<sup>nd</sup> percentile phosphorus load measured from January 2005 – December 2011, which is the same period of time used to calculate the 236 lb/day average load.<sup>9</sup> As explained above as well as in the 2010 fact sheet, the 92<sup>nd</sup> percentile is an estimate of the maximum monthly average discharge. The City's proposed average weekly limit is equal to the average monthly limit multiplied by 1.5, which is the same ratio between the average weekly and average monthly TP limits in both versions of the draft permit.

Therefore, EPA agrees that the average monthly and average weekly effluent limits proposed by the City in its comments on the 2012 draft permit do, in fact, represent the upper bound of the City's current TP load. Therefore, EPA has established a 391 lb/day average monthly limit and a 586 lb/day average weekly limit in the final permit, in addition to the annual average limit of 236 lb/day. These average monthly and average weekly limits will ensure that the permit complies with federal regulations requiring average monthly and average weekly discharge limitations (40 CFR 122.45(d)(2)). In addition, since the average monthly and average weekly limits are based on past performance (like the annual average limit), the average monthly and average weekly limits will ensure that the maximum discharge in any given month or week is not so much greater than the annual average limit that the City is likely to violate the annual average WLA due to a brief period of high discharge loading.

A compliance schedule is not appropriate for the any of the TP effluent limits in the final permit. As explained above, the average monthly and average weekly TP effluent limits in the final permit are identical to those proposed by the City as interim limits (which would apply immediately upon the effective date of the final permit, until the end of any compliance schedule, if a compliance schedule were to be established) in its comments on the draft permit, and these limits represent the upper bound of the City's current TP loading. Because the annual average TP limit is equal to the average TP load measured from 2005 through 2011, the City can also comply with the 236 lb/day annual average limit for TP immediately upon the effective date of the final permit.

## Mixing Zones

### ***Comment #18***

The City stated that the 2010 draft permit was developed using only 10% of the river flow for the mixing zone for all parameters evaluated except for Total Phosphorus (TP). The City stated that the use of 10% is unnecessarily restrictive compared to the 25 % which was used for the 2001 permit and has been the standard default in Idaho for years, consistent with Idaho Water Quality Standards language for mixing zones.

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<sup>9</sup> The City had stated in its comments that 391 lb/day was the 95<sup>th</sup> percentile load measured between January 2006 and February 2012. EPA has verified that this calculation is accurate. No outliers were discarded in these calculations.

The City stated that the 10% mixing zone size is justified only by reference to EPA guidance. The city stated that EPA referenced the 1991 *Technical Support Document for Water Quality-based Toxics Control*, (TSD) which says mixing zones are to be “as small as practicable.” The City stated that the TSD does not specify 10% or any other numeric percentage of river flow as being necessary or most appropriate.

The City stated that the draft IDEQ 401 certification dated June 3, 2010 (included as Appendix H in the 2010 fact sheet) authorizes the use of the mixing zones set out in the draft permit, but does not reference the 10% value specifically.

The City stated that the 10% mixing zone allowance has led to total residual chlorine (TRC) limits and Whole Effluent Toxicity (WET) testing triggers that are about two times more stringent than the current permit.

The City stated that it is the City’s understanding, based on discussions with IDEQ, that the final certification will authorize a 25% mixing zone.

### ***Response #18***

This comment was addressed by changes to the Idaho Department of Environmental Quality’s draft CWA Section 401 certification dated December 28, 2011 and reflected in the 2012 draft permit. Both the 2011 draft CWA Section 401 certification and the final CWA Section 401 certification authorized 25% mixing zones for chlorine, nitrate, chromium, copper, lead, silver, chloroform, dichlorobromomethane, and WET.

The larger, 25% mixing zone (relative to the 10% mixing zone used to develop the 2010 draft permit) allowed the 2001 permit’s effluent chlorine limits, for concentration, to be carried forward in the reissued permit. However, EPA has established mass limits for chlorine, in addition to the concentration limits, in order to be consistent with federal regulations requiring effluent limits to be expressed in terms of mass (40 CFR 122.45(f)). See the 2012 fact sheet at page B-5 – B-7.

The 25% mixing zone also resulted in a less stringent (i.e., numerically greater) WET trigger for accelerated testing and a lower receiving water concentration relative to the 2010 draft permit. See the 2012 fact sheet at page 12.

### ***Comment #19***

ICL stated in comments on the 2012 draft permit that a mixing zone was inappropriate for TP. ICL stated that the negative environmental impacts of the discharged phosphorus are not felt in the mixing zone, but rather further downstream, especially in the American Falls Reservoir. ICL stated that the reservoir acts as a sink for nutrients, and, as such, the use of a mixing zone merely masks the negative impacts caused by the discharge by giving the impression that the harm is alleviated by showing “compliance” with the 50 ug/L interpretation of the narrative standard. ICL stated that to actually alleviate the harm caused by this discharge and to comply with the American Falls TMDL, the WWTP should be required to meet an end of pipe standard of 50 ug/L for phosphorus.

### ***Response #19***

As explained in Appendix F to the 2010 fact sheet, the State of Idaho authorized a mixing zone encompassing 54% of the flow of the snake River in its draft CWA Section 401 Certification

dated June 3, 2010 (see Appendix H to the 2010 fact sheet). As explained on Page B-2 the 2012 fact sheet, the State of Idaho authorized a mixing zone for TP which encompasses 46% of the flow of the Snake River in its revised draft CWA Section 401 certification of the permit (see the draft CWA Section 401 Certification dated December 28, 2011, which is Appendix C to the 2012 fact sheet, at Pages 2 – 3). The State of Idaho’s final CWA Section 401 certification, dated August 6, 2012, authorized a 52.5% mixing zone for TP.

Concerns about water quality in the American Falls Reservoir is one of the reasons why EPA determined that effluent limits for TP were necessary for the City (see the 2012 fact sheet at Pages B-10 – B-11 and the 2010 fact sheet at Appendix F). However, EPA disagrees that it is necessary to disallow a mixing zone for TP for the City in order to protect water quality in American Falls Reservoir.

The State of Idaho has developed a TMDL for American Falls Reservoir, which does not directly apply to the City of Idaho Falls. As explained in Appendix F to the 2010 fact sheet and Appendix B to the 2012 fact sheet, the City is located upstream of the segment of the Snake River for which load and wasteload allocations are established in the final American Falls TMDL. Thus, the final American Falls TMDL does not establish wasteload allocations for the City of Idaho Falls. The final American Falls TMDL does, however, establish a load allocation of 171 tons per year TP at the USGS Shelley gauge, which is just downstream from the City’s discharge. The final TMDL states that all of the load allocations for the Snake River, including that for the Shelley gauge, “represent no increase above current loads, thus no load reductions are required” (Section 5.2.4.2). The final TMDL concludes that, in combination with the other load and wasteload allocations in the TMDL, these “no increase” load allocations for the Snake River would achieve water quality standards in the American Falls reservoir.

The City’s average effluent TP concentration measured between January 2006 and February 2012 is 2.1 mg/L, which is 42 times the 50 µg/L interpretation of the State of Idaho’s narrative nutrient criterion (IDAPA 58.01.02.200.06). Thus, disallowing a mixing zone and establishing an effluent limit of 50 µg/L TP, as suggested by the commenter, would require a 42-fold reduction in effluent TP concentrations and loads from current levels. The Shelley gauge is just downstream from the City’s discharge, thus, the current TP loading from the City’s discharge is part of the loading represented by the Shelley load allocation, which represents current loads. Thus, it is not necessary to disallow a TP mixing zone and thus require the City to substantially reduce its discharge of TP, in order to achieve the load allocation for the Shelley gauge or to achieve water quality standards in the American Falls Reservoir.

### ***Comment #20***

The City recommends that the WQBELs for TP not be fundamentally based on mixing zones, but instead be based on the current loading determination. The Final 401 Letter and Fact Sheet should also state that the current loading determination leads to more restrictive TP WQBELs than a 100% mixing zone, which are thus the controlling WQBELs for this permit.

### ***Response #20***

This comment appears to request a 100% mixing zone for TP, but recognizes that limits based solely on such a mixing zone would not maintain the City’s existing loading of TP and thus would not be established in the final permit.

The final CWA Section 401 certification specifies a TP mixing zone encompassing 52.5% of the stream flow. As stated in the Idaho WQS, "...the Department (of Environmental Quality) will determine the applicability of a mixing zone and, if applicable, its size, configuration, and location" (IDAPA 58.01.02.060.01). Thus, mixing zones must be authorized and sized by IDEQ. EPA cannot establish a mixing zone without IDEQ's authorization, nor can EPA establish a mixing zone that is larger than authorized by IDEQ. Also, NPDES permits issued by EPA must incorporate the requirements specified in a CWA Section 401 certification (40 CFR 124.53(e), 124.55(a)(2)). Therefore, EPA cannot establish a 100% mixing zone for TP.

### ***Comment #21***

The City made several comments which concern the 2010 and 2012 fact sheets, as opposed to the draft permits, as follows:

- The City stated that the 2012 fact sheet on page 10, item V.B.I., refers to "CBOD<sub>5</sub>" (meaning carbonaceous BOD<sub>5</sub>) whereas "BOD<sub>5</sub>" (meaning total BOD<sub>5</sub>) is used elsewhere in the Fact Sheet and Draft Permit. The City recommends that the Fact Sheet on page 10 be corrected to read "BOD<sub>5</sub>."
- For Ammonia, the City recommends that the EPA Fact Sheet recognize and state that 25% (or greater if a site specific mixing zone study is done) could be an appropriate mixing zone allowance for ammonia and can be used in future permits depending on the circumstances at that time.
- The City recommends that the WQBELs for Ammonia and TP not be fundamentally based on mixing zones, but instead be based on the insignificant degradation determination for Ammonia and the current loading determination for TP. The Final 401 Letter and Fact Sheet should also state that these determinations lead to more restrictive WQBELs than the use of a 25% mixing zone (for Ammonia) or the use of a 100% mixing zone (for TP) and thus are the controlling WQBELs for this permit.
- The City requests that the final fact sheet include a reference to the schedule in the Compliance Order dated December 13, 2011.

### ***Response #21***

The fact sheets are final documents that explain the conditions in the draft permits and they will not be edited.

With respect to the City's request that EPA include a reference in the "final fact sheet" to the compliance order dated December 13, 2011, EPA acknowledges that the City's compliance obligations with respect to the ammonia limits have been defined by the compliance order. One of the requirements of the compliance order is that, by October 31<sup>st</sup>, 2015 the City "shall achieve full compliance with the effluent limitations set forth in the 2001 Permit or the Reissuance Permit, whichever is in effect on this date."

EPA has responded to the issues raised by the City's comments on the statements in the 2012 fact sheet regarding mixing zones and WQBELs for ammonia in the response to comment #4.

EPA has responded to the issues raised by the City's comments on the statements on the 2012 fact sheet regarding mixing zones and WQBELs for TP in the responses to comments #17 and #20.

The City is correct that Page 10 of the 2012 fact sheet should have referred to BOD<sub>5</sub> instead of CBOD<sub>5</sub>.

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