July 29, 1999

Response To Comments

Draft NPDES Permit for: City of Pocatello, Idaho Water Pollution Control Plant NPDES No.: ID-002178-4

On April 9, 1999, the Environmental Protection Agency (EPA) reissued a draft national pollutant discharge elimination system (NPDES) permit for the City of Pocatello wastewater treatment facility. The facility provides secondary treatment of wastewater prior to discharge to the Portneuf River. The permit also authorizes treated sewage sludge to be distributed on the land at specified locations. The public comment period for the draft permit extended from April 9 to May 10, 1999. Per a request from the City, the comment period was extended two weeks to May 24, 1999.

EPA received comments from the City of Pocatello in a letter to Robert Robichaud of the EPA, from Brent Hokanson, Water Pollution Control Department, dated May 24, 1999. No other comments were received. This document represents EPA's response to comments received during the comment period. The comments are summarized below followed by EPA's response. The italicized text is direct quotation from the letter. Additional information from the commenter beyond that summarized in this document is available in the City's May 24 letter.

Comments 1 and 2. Fecal Coliform Bacteria Limitations

The City recommends the following:

- 1. *Retain the Average Weekly and Average Monthly effluent limits for fecal coliform bacteria, but remove the daily maximum limit for fecal coliform bacteria.*
- 2. Remove the current permit's seasonal differentiation in fecal coliform bacteria and retain the current permit's monthly limit of 100/100 ml and average weekly limit of 200/100 ml.

Response: EPA regulations at 40 CFR § 122.44(d)(1) require the development of water quality-based limits designed to ensure that water quality standards are met. The state water quality standards (WQSs) limit fecal coliform bacteria for waters protected for secondary contact recreation. Waters are not to contain fecal coliform bacteria in concentrations exceeding 800/100 ml at any time, and a geometric mean of 200/100 ml based on a minimum of 5 samples taken over a thirty day period (IDAPA 16.01.02.250.01.b.). The state WQSs also include a technology-based requirement that the effluent shall not exceed a weekly geometric mean of 200/100 ml based on a minimum of five samples. The daily limit is directly required in order to meet state

water quality standards, therefore, the final permit will contain the daily limitations of 800/100ml.

The existing designated use classification protects this segment of the Portneuf River for secondary contact recreation. This segment of the river also has a "future use" designation for primary contact recreation. Under the WQSs, primary contact recreation requires a more stringent summer season fecal coliform criteria than the secondary contact criteria. EPA does not issue permit limitations based on a future use designation of the Idaho WQSs. The draft permit contained a limitation derived from primary contact recreation as a result of a State of Idaho DEQ recommendation to include the seasonal limitation. The final permit will not contain the summer season limitation. The limit would be included in the final permit if the State provided a Clean Water Act Section 401 certification that requires the limitation in the permit along with a justification that a limitation is required by state WQSs. The final permit will contain fecal coliform bacteria limits of 200, 200, and 800/100 ml for average monthly, average weekly and daily maximum respectively based on ID WQSs (both technology-based and protection for secondary contact recreation) as discussed in the fact sheet for the draft permit.

Comments 3 and 4. Chlorine Limitations

- 3. The City recommends that Footnote 2 in Table 1 be modified to reflect the analytical limitations that exist below 50 μ g/L. Our position is that the method detection limit (MDL) for Total Residual Chlorine given in the Footnote should be changed from 10 to 50 μ g/L.
- 4. Pocatello requests that it be given time to come into compliance with the effluent limit for chlorine. It is reasonable for EPA to allow adequate time for the WPC Plant to plan, budget, install, and debug a control system to maintain compliance with the limitations. We request that the compliance schedule section (1.C) of the draft permit be modified into two parts, an "Ammonia Compliance" section and a "Chlorine Compliance" Schedule. We propose that 1 January 2001 would be an appropriate date for the WPC Plant to come into full compliance with the Chlorine effluent limitations of Table 1.

Response: EPA Region 10 requires all permittees with low total residual chlorine (TRC) limitations to use test methods that achieve a method detection limit (MDL) of 10 μ g/L. This is particularly important for the Pocatello permit that contains a monthly average of 25 μ g/L and a daily maximum of 58 μ g/L for TRC. The final permit will retain the requirement that the permittee use a method which achieves a detection limit of 10 μ g/L.

EPA recognizes the analytical limitations present when measuring TRC limitations at levels near the MDL. To account for these limitations, EPA Region 10 has implemented a policy of establishing a "minimum level", a value greater than the MDL, to serve as the level at which compliance is measured. The minimum level for TRC for this permit is 100 μ g/L and thus is the level at which compliance for the limitations is determined. The permit footnote language will be

amended to reflect that compliance for both the daily maximum and the average monthly limitation are measured against the compliance level of 100 μ g/L. The footnote in the permit will clarify how to interpret daily values for use in determining the monthly average value. Values below the MDL of 10 μ g/L will be assumed to equal zero while values measured that are above 10 μ g/L will be used in determining the monthly average.

EPA concurs with the request that a compliance schedule be established for TRC and that January 1, 2001, would be appropriate in this case. The final permit will reflect this date and is dependent on receipt of a CWA Section 401 certification from the Idaho DEQ. The existing permit limitations of 0.5 mg/L or 500 μ g/L for total residual chlorine will be retained through December 31, 2000.

Comment 5. pH Effluent Limitation

The City's position is that the technology-based minimum pH limitation for POTW's is consistent with protection of Idaho water quality standards under conditions present in the Portneuf River. Therefore we recommend that the existing effluent pH limit of 6.0 to 9.0 not be changed.

Response: EPA is in agreement with the City's analysis that under critical flow conditions the technology-based limit of 6.0 pH would maintain a minimum in-stream pH of 6.5 thus achieving the minimum condition required by the State of Idaho water quality criteria. Due to past plant performance, the buffering capacity of the river, and the analysis presented in the comment letter from the city, the existing effluent pH limit of 6.0 to 9.0 pH units will be retained in the final permit. Since inclusion of the 6.0 pH involves the use of a mixing zone, inclusion of this limitation in the permit is dependent on receiving a State of Idaho CWA Section 401 certification.

Comments 6, 7 and 8. Ammonia Effluent Limitations

With respect to the Ammonia Effluent Limit, the City requests that EPA consider the following:

- 6. Ammonia effluent limit based on a daily load (lbs/day) instead of concentration.
- 7. Anticipate revision to the ammonia limit as additional information becomes available from the Portneuf River study.
- 8. Change Footnote 3 to specify that facility will be in compliance with Total Ammonia Limit on 1 July 2004 instead of 1 January 2004 (see Compliance Schedule, below).

Response: Mass-based effluent limits are required by NPDES regulations at 40 CFR 122.45(f). The regulations are silent on whether concentration limits are required. The EPA's *Technical*

Support Document for Water Quality-based Toxics Control (TSD) discusses where concentration limits are appropriate in addition to mass limits. The guidance states that mass-based effluent limits alone may not assure attainment of water quality standards in waters with low dilution (defined as less than 100:1 dilution). In these waters, the quantity of effluent discharges may have a strong effect on the instream dilution and therefore upon the receiving water concentration. The TSD and EPA Region 10 policy is that permit limits should be expressed in terms of both mass and concentration, with exceptions for pollutants that cannot be expressed by mass (pH, temperature, radiation) or if a TMDL specifies that wasteload allocations be implemented in specific terms (See Region 10 Memorandum "Mass and Concentration Limits in NPDES Permits Region 10 Guidance for NPDES Permit Writers", May 14, 1999). Since the city's effluent has a low dilution ratio with the Portneuf River during critical flow conditions (10:1 dilution), the concentration limit will be retained along with the mass limit consistent with EPA guidance and Region 10 policy.

EPA is aware that the City is collecting additional ambient data to more precisely assess the mixing zone in the Portneuf River. EPA cannot commit to any future revision of the ammonia limitations of the permit, however, EPA will assess a permit modification request submitted by the City. When developing a modification request, the City should be aware that EPA guidance recommends establishing a maximum daily limitation for toxic pollutants in water quality permitting (See *U.S. EPA NPDES Permit Writers' Manual*, December 1996).

See comment 22 below for EPA's response to the request to modify the ammonia compliance schedule.

Comment 9. Copper Effluent Limitations

The City recommends that the monitoring requirement for copper be retained in the permit, but that the effluent limit contained in the draft permit be deleted.

The primary reason for deleting the limitation is that the data used by EPA to calculate the facility's potential to cause a water quality exceedance was reported incorrectly to EPA. The city is researching plant and laboratory records to further examine the data.

Response: On June 18, 1999, the City sent a memorandum to EPA (from Brent Hokanson, Water Pollution Control Department, to Mike Lidgard, EPA) which provided additional information on the copper data. In the fact sheet accompanying the draft permit, EPA used 30 data points from monitoring conducted over the last 5 years. Four of the sample results were between 75-94 μ g/L and the remaining 26 values were all in the range of 10-20 μ g/L. The City reviewed the lab reports for the 4 high values and it appears that the samples were either mislabeled or that the values were incorrectly reported on the data sheets. When the city collects samples for metals testing, samples are drawn at various locations throughout the facility: "raw" influent, primary, and final effluent. Historic data shows, as expected, copper levels decrease as

the samples move through the treatment process. On the four high days, however, sample results were improperly assigned to sample location or samples were mislabeled. In two cases, for example, raw plant influent was listed as 14 and 13 μ g/L while the corresponding plant effluent was recorded as 92 and 94 μ g/L respectively. Similar mismatches are apparent on the other two days. The quantity measured for the samples appears to be correct, though mistakenly assigned. The data for the four days has been correctly assigned and the effluent for the four previous high days actually range from 13-14 μ g/L.

Correction of the 4 data points results in the following summary statistics for the copper data base:

Mean (μ g/L)	15.2
Maximum (μ g/L)	21
Standard Deviation (μ g/L)	2.6
Coefficient of Variation	0.17
N (no. of samples)	30
Reasonable Potential Multiplier	1.3
Maximum Projected	
Effluent Concentration (μ g/L)	27

Following the procedure used in Appendix B of the fact sheet with the recalculated statistics above yields a maximum receiving water concentration of $11.2 \ \mu g/L$ under critical receiving water conditions. Since this value is below the acute and chronic WQS criteria, there is no reasonable potential to contribute to an exceedance of the criteria and no need for a copper limitation.

The effluent copper limit will be removed from the final permit but monthly monitoring of copper in the effluent will be retained to confirm copper effluent concentrations. After one year of monthly effluent monitoring the permit will revert to the semi-annual monitoring required by the pretreatment section of the permit.

Comment 10, 11. Temperature and pH Monitoring

With regard to pH and temperature the City requests that:

- 10 The daily monitoring requirement be changed to 5/week
- 11. A footnote be added that acknowledges that the City has the flexibility to use continuous monitoring equipment.

Response: EPA will make changes to the final permit to address monitoring frequency and the use of continuous monitoring equipment as requested by the permittee.

Comment 12. WET Testing, Monitoring Requirement

Therefore the City requests that the routine monitoring requirement for WET testing be semi annual.

Response: There are permits in Region 10 of comparable size to the City of Pocatello that have quarterly whole effluent toxicity (WET) testing requirements. However, EPA recognizes that the final permit will contain new effluent limitations for parameters that will involve compliance schedules and likely changes to the facility. With consideration of both the size of the Pocatello facility together with the phasing in of new effluent limitations, EPA will require semi-annual testing in the final permit versus the quarterly testing as specified in the draft permit prior to the date when all final effluent limitations are effective. After the compliance date for the new ammonia limits, the permit will revert to quarterly testing.

Comment 13. WET Testing, Accelerated Testing

The City requests that the condition of the permit that requires accelerated WET testing be modified so that the trigger for accelerated WET testing is not required until after the nitrification upgrade to the Pocatello WPC Plant becomes operational.

Response: Accelerated testing is a requirement to conduct six additional WET test series should a chronic toxicity testing threshold be exceeded. The permittee comments that WET testing above routine sem-annual testing during the period when the facility is coming into compliance with new limitations is an unnecessary expense. The facility will be required to meet a new chlorine limitation in 2001 and a new water quality-based ammonia limitation in 2004. EPA agrees with the permittee that, in this case, semi-annual testing during the first four years of the permit is adequate to gather baseline toxicity information on the discharge. The accelerated testing requirements will be applicable after the final compliance data for the new ammonia limitation. The final permit will reflect this change in the accelerated testing section.

Comment 14. WET Testing, TRE Workplan

Pocatello requests that the requirement for a WET Testing TRE workplan 180 days after permit issuance be changed to read 30 days after toxicity, as defined in paragraph E.2, is detected.

Response: EPA will amend the section addressing the toxicity reduction evaluation (TRE) plan to require the development and initiation of a TRE within 30 days after chronic toxicity is detected. EPA will delete the draft permit section I.E.4. Initial Investigation TRE Plan Requirements since accelerated testing and TRE initiation will only apply after the ammonia compliance date.

Comment 15-21. Monitoring Requirements

15. We request that the monitoring frequency in the WPC Plant effluent for hardness, copper and E. coli be changed from of 1/week to 1/month.

Response: The copper monitoring frequency has been adjusted as discussed above to once a month for one year and semi-annually thereafter. Since there is no E. coli limitation at this time a frequency of once per month will be adequate to characterize the effluent. Hardness data is being gathered as part of the one year monitoring program to gather further information about the effluent, primarily for nutrients. Since hardness is important in the evaluation of the impact of the effluent on receiving water metals concentration, and since the monitoring is for a one year period, the weekly monitoring frequency will be retained for hardness.

Regarding Table 2 of the draft Permit. the City notes the following:

16. *note footnote misnumbering typo -- there are two 2's*

Response: EPA will correct the footnote numbering in the final permit.

17. TRC detection limit should be changed from 10 μ g/L to 50 μ g/L.

Response: EPA requires permittees in Region 10 with TRC limitations in the range of those in the City of Pocatello permit to use a method which achieves a detection limit of $10 \mu g/L$.

18. Therefore, we request that DO monitoring shown in Table 2 be changed from 5/week to 1/week.

Response: Given the projected lack of an impact on the receiving water DO levels as discussed in the fact sheet, and the facility size, the final permit will require DO monitoring of 1/week.

19. A footnote be added that acknowledges that the City has the flexibility to use continuous monitoring equipment for DO.

Response: A footnote will be added to Table 2 to allow the permittee to install continuous monitoring equipment for this parameter.

20. The City requests that the Monitoring Requirement for ammonia be changed to 1/week until the compliance date is met.

Response: EPA agrees with this comment that during the period prior to the ammonia compliance date, the required monitoring frequency may be 1/week. The final permit will reflect this frequency. Following the final compliance date, the monitoring frequency will revert to the draft permit proposal of 5 days/week.

21. The City recommends that the 1 grab/24 hr period sampling regime in the current

permit be retained for sludge monitoring.

Response: EPA agrees with the commenter that at the Pocatello facility, where the "digester functions as a big 30-day compositor", that a grab sample will be adequate. Section I.F.2. of the permit will be edited to reflect this change from the draft permit language. Furthermore, the location of the sludge sample will also be clarified in the final permit. Sludge grab samples should be pulled from where the sludge exits the treatment process, prior to mixing with sludge of different age in drying beds or in storage.

Comment 22. Ammonia Compliance Schedule

The City requests: that with respect to the nitrification facility the 1 January 2004 date be changed from "compliance" to "operational," and that full compliance of the ammonia standard be required no later than 1 July 2004. Please remove the requirement for an Annual Report of Progress (Part C.2).

Response: The permit will only include an enforceable compliance date after which the facility must meet the ammonia limitations and will not include a facility operational date. It is the responsibility of the permittee to determine an operation date which ensures adequate time to get a new system operational and "debugged" prior to the enforceable compliance date. As stated in the fact sheet, EPA wants to establish a date which allows a reasonable time for the facility to come into compliance with the new limitations while also allowing EPA opportunity to evaluate compliance prior to the permit expiration date. Evaluation of the ammonia limitation and the WET testing results prior to permit expiration is also a consideration is selecting an ammonia compliance date. The expiration date of the permit is now targeted for August- September 2004, therefore, EPA will amend the ammonia compliance date to March 1, 2004. This date partially meet's the city's request for additional time while still meeting EPA needs stated above.

Annual reports of progress is required by federal regulation at 40 CFR 122.47(a)(4). Reports are due following each interim date, and the time between each interim date is not to exceed one year (40 CFR 122.47(a)(3)(i)).

Comment 23. Pretreatment

Unless EPA can provide a rationale for why the lower detection limits are appropriate for the Pocatello WPC Plant, in the interest of cost-effectiveness, we request that the detection limits be changed to the higher detection limits.

Response: One goal of the influent, effluent, and sludge sampling is to support the local limits calculation. When many or all of the data used is below the detection limits, assumptions must be made in the calculations regarding the actual value of metal present. The possible assumptions include: values are at the detection limit, values are one-half the detection limit, or no metal is present. Lowering the detection limit increases the likelihood of quantifying the amount of the metal present. This lessens the need to make assumptions regarding metal concentration and

increases the confidence of the local limit calculation. Therefore, as permits are reissued in Region 10, EPA is requiring permittees to analyze at the lowest method detection limit of the currently approved EPA methods. An exception to this requirement would be for metals that are being detected currently with higher detection limits. At the Pocatello facility, both copper and zinc are being detected with current test methods, therefore, copper method detection limit (MDL) will remain at 5 μ g/l as proposed in the draft and the zinc MDL will be at the current MDL being used by the city, 1 μ g/l. The final permit will require the lower detection limits as proposed in the draft permit for the other eight parameters. For mercury and cyanide, the city is already using methods that reach the detection limits required by the final permit. Therefore, of the ten parameters required to be tested by the pretreatment requirements, the final permit will result in the permittee having to use methods which achieve lower detection limits than existing practice for six parameters.

EPA recognizes the additional cost cited in the comment for lower MDLs for metals (\$15 per analysis to \$35). EPA feels the additional cost is warranted given the fact that the analysis is done at a relatively low frequency (twice per year) and the test will provide more useful results.

Comments 24 and 25. Biosolids

24. We suggest that the agency simplify the permit by replacing the biosolids language with the following language patterned after recently issued NPDES permits within the Region:

All biosolids shall be managed in accordance with 40 CFR 503 and the current biosolids management plan approved by the [agency/department]. The biosolids management plan shall be kept current and remain on file with the permit. No substantial changes shall be made in solids management activities that significantly differ from the operations specified under the approved plan without prior written notice and approval of the [agency/department].

Response: Forty CFR § 503.3, provides that the requirements of 503 may be implemented through a permit issued in accordance with 40 CFR §§ 122 and 124 or they may be directly enforced. In permits issued by EPA, Region 10 is choosing to regulate the 503 regulations through a permit, rather than as self-implementing.

25 The City requests that all references to seasonal differentiation in agronomic rates for application to biosolids be removed from the draft permit.

Response: The draft permit contained a statement that application of biosolids in the fall shall be based on plant-available nitrogen uptake prior to the winter dormant season. EPA Part 503 Implementation Guidance states that biosolids should not be applied in the fall or winter for spring-planted crops. The concern is leaching losses that can occur due to rainfall, erosion ,

irrigation, or other events prior to plant uptake.

Section III-C of the permittee's <u>Biosolids Management Plan - 1998</u> (page 5) indicates the permittee considered minimizing impacts on ground and surface waters. It asserts in a general way that the permittee considered depth-to-groundwater, soil permeability, evaporation, precipitation and leaching of surface waters. Specific information given is that groundwater "...is generally about 50 feet beneath the surface." A statement is made that agronomic rate is confirmed by soil testing. Also, the state submitted information indicating that winter soil temperatures will delay mineralization of organic nitrogen applied in the fall. Appendix F, Agronomic Rate, calculates the nitrogen needed for a wheat crop at the start of the growing season. In order to be in compliance with Part 503, the permittee should have information supporting the management plan on file.

EPA has modified the language of the restriction on fall application to allow such application where the permittee can, by better documenting their analysis, demonstrate that mobile forms of fall or winter-applied nitrogen will be retained in the surface soil. This analysis will be conducted during the first year of this permit. Soil testing is required to confirm the general results of the analysis - which may be different than normal agronomic soil testing. The results of the analysis need not be submitted to EPA, and the amount and timing of leachate soil testing is left to the judgement of a qualified professional. A copy of the analysis must be kept on file for inspection.

Even if the permittee has such documentation on file for its current sites, the permit condition should remain to ensure such analysis is conducted at future sites.

Comment 26. Quality Assurance Requirements

The City has not located in the draft permit an indication of when the quality assurance requirements must be met. We recommend that it be one year after permit issuance. We point out that the reference on item 4 (Section 1.B.5) is incorrect.

Response: EPA Region 10 routinely requires that quality assurance plans be submitted within 90 days after the effective date of the permit. The final permit will include a requirement to submit the plan to EPA within 90 days.

Comment 27. Design Criteria

The City wishes to point out the following with regard to this section:

- 1. The Current Design Criteria for BOD Loading is 28,000 lb, not 20,000 lb as stated in the permit.
- 2. With respect to the Design Criteria Requirement, Pocatello reached 85% of the design criteria, and realizing this, factored in future needs into its

facilities plan that was competed in 1997.Please modify the language so another plan isn't needed within a year.

Response: EPA will edit the BOD loading in the final permit as specified by the permittee. EPA also agrees that it is not necessary to trigger a facilities plan immediately when the new permit becomes effective considering that the permittee has completed a plan within the last two years. Therefore, this section will be edited in the final permit to become effective in 2001. The first month that loading shall be evaluated will be January 2001.

Comment 28. Operation and Maintenance Plan

The City's Requests that the Operations and Maintenance Plan requirement should be deleted from the Permit.

The City believes that this section is unnecessary and without basis under the CWA or implementing regulations. The City states that it's compliance record eliminates any need for additional, formal O&M reporting and record keeping. The City comments that no rationale for this requirement was included in the Fact Sheet. The City also listed CMP and pollution prevention related activities currently implemented at the facility.

Response: Section 402 of the CWA and federal regulation at 40 CFR 122.44(k) authorize EPA to require best management practices (BMPs) in the NPDES permits. Federal regulations at 40 CFR 122.41(e) also require the permittee to properly operate and maintain all facilities and systems of treatment and control at all times. BMPs are measures for controlling the generation of pollutants and their release to waterways. For municipal facilities, these measures are typically included in the facility operation and maintenance (O&M) plans. These measures are important tools for waste minimization and pollution prevention. EPA endorses pollution prevention as one of the best means of pollution control.

EPA Region 10 has recently started including the requirement that the permittee develop a plan and implement BMPs within 180 days of permit issuance as standard NPDES permit language. The City of Pocatello's draft permit includes this requirement. Different facilities within the region are at various stages of developing O&M plans. EPA Region 10 now intends to include the O&M requirement for all municipal waste water treatment facilities regardless of their history of O&M plan development.

Like many facilities in the Region, the City of Pocatello has already addressed some or all of the elements of this permit requirement. The City listed five areas in their comments which they are currently implementing which would address many of the minimum components listed in the permit. To the extent that any of these minimum components of the permit have already been addressed, the permittee need only reference the appropriate documentation/section in its O&M plan. Based on the City's comment, the Operation and Maintenance requirement in this case may

represent an inventory of existing practices and a commitment to review the plan on a regular basis. EPA purposely crafted the language of this section broadly in order to provide flexibility for permittees to address issues specific to their facilities. EPA also has a guidance manual (EPA, 1993) that may provide some assistance in the development of BMPs. EPA does not view the development and implementation of the O&M plan, along with regular review and retention of the plan on the site (versus submittal to EPA for review and approval) as unreasonable, but, as a useful tool to ensure continued sound operation and maintenance of the facility over the effective life of the NPDES permit. The O&M plan requirement will be included in the final permit as proposed.

Comment 29. Pretreatment

The City points out that the reference in Section 6 - refers to Part I.E. Is an incorrect reference, should be to pretreatment, Part I.E. refers to WET testing.

Response: EPA will correct this error in the final permit.

Comment 30. TMDL Reopener

The Fact Sheet states that the City's permit may be reopened to incorporate nutrient effluent limitations derived from the Portneuf Basin TMDL. The City has significant concerns with the TMDL as proposed by IDEQ and reserves its rights to challenge any nutrient conditions that EPA may seek to impose in the City's permit as a result of the TMDL. As mentioned in the cover letter to these comments, the City will send a letter to IDEQ within the next few days outlining those concerns and a proposed solution.

Response: EPA acknowledges receipt of this comment, however, no changes are warranted to the Reopener Provisions section of the NPDES permit.