Memorandum

To:	Bill Ross, President Ross & Associates
From:	John Spencer on behalf of Spokane and Idaho Dischargers and Avista
Date:	November 15, 2005
Subject:	Proposed Scenario Associated with the Spokane River and Lake Spokane (Long Lake Reservoir) TMDL Implementation Plan

I. Introduction

This proposed scenario for resolution of the Spokane River and Lake Spokane (Long Lake Reservoir) TMDL is submitted on behalf of the following Washington and Idaho Dischargers: City of Spokane, Spokane County, City of Spokane Valley, Liberty Lake Sewer District, City of Coeur d'Alene, Inland Empire Paper Company, Kaiser Aluminum (collectively "the dischargers") and Avista. Cumulatively, this proposal provides hundreds of millions of dollars worth of measures to significantly improve the water quality of the Spokane River above, in and downstream of the Long Lake Reservoir. We believe that a watershed-based approach, involving a coalition of industrial and municipal dischargers from two states, as well as the licensee of the Spokane River Hydroelectric Project, is virtually unprecedented in terms of commitments to treatment, re-use, conservation, and non-point source controls and would be more timely and effective than a unilateral TMDL imposed by the Department of Ecology ("Ecology"). Our proposed solution addresses the three questions outlined in your memorandum of September 28, 2005 entitled "Draft Framework for the Development of Scenarios."

Our scenario offers an approach whereby the dischargers agree to remove phosphorous from the River, and Avista agrees to improve dissolved oxygen ("DO") levels downstream of the Long Lake Dam and contribute to sediment reduction efforts, which is an approach consistent with the discussions we have had during our negotiations thus far. Of course, the dischargers and Avista must be assured that this highly capital-intensive plan will also resolve any issues associated with existing and future impaired water listings and TMDLs for pollutants associated with the phosphorous load (including nutrient loading, chemicals directly related to phosphorous treatment, DO, BOD, CBOD and ammonia). It is not feasible to commit the hundreds of millions of public ratepayer and private investment dollars to remove phosphorous, only to find that additional resources are later expected to address other parameters or constituents of concern in the same waterbody. In other words, this settlement must resolve all the water quality issues in the Spokane River and Long Lake Reservoir for these dischargers and Avista.[1] We propose to

[1] Avista is participating in this proposal as part of the collaborative process and intends that the measures required of Avista in this TMDL with regard to DO and sediment will satisfy its

implement the plan through Interlocal Agreements among the dischargers and a Memorandum of Understanding among the dischargers and Avista, EPA, the Washington State Department of Ecology, and the Idaho Department of Environmental Quality.

II. Proposed Scenario

A. Overview:

We offer to implement a TMDL, in two ten-year phases. During the first phase, the dischargers will implement phosphorous removal technology that goes beyond the performance of any comparably sized treatment facility anywhere in the country. The vast majority of implementation measures will occur in the first ten-year phase (Phase I), during which the dischargers will implement filtration technology, re-use, conservation, and non-point source control, as well as monitor to evaluate the effectiveness of these measures. During the same phase, Avista will implement a DO enhancement program at Long Lake Dam to increase DO levels downstream of the Long Lake Reservoir, and will contribute to additional sediment-related non-point source control measures. The dischargers will also develop individual re-use plans and will monitor water quality parameters, in cooperation with Ecology and Avista, to generate data that will be used to evaluate the effectiveness of the Phase I measures in reducing phosphorous loading, raising DO levels, and improving the biological health of the River's aquatic resources.

During the second ten-year period (Phase II) the adaptive management component of the scenario will be implemented, which will include an evaluation of the effectiveness of the Phase I measures; a review of the appropriateness (based on the biological health of aquatic resources) of the original TMDL phosphorous target and related numeric water quality criteria; and, if necessary, implementation of additional measures to endeavor to meet the original or revised TMDL target for phosphorous and/or related numeric water quality criteria.

Our two-phased approach is designed to first implement those measures that we know will significantly reduce phosphorous in the River and improve DO levels downstream of the Reservoir. Over a reasonable period of time, we will implement other measures that will further benefit the River. Together, the Phase I and Phase II measures will provide reasonable assurance that water quality standards will be met.

B. Phase I (2006-2016)[2]: During Phase I, the dischargers will implement the following measures, which are those measures that the are capable of being implemented on the shortest timeframe and are most likely to lead to immediate phosphorus reductions:

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obligations under, and be implemented as part of, its Section 401 Clean Water Act Certification for the new federal license of its Spokane River Hydroelectric Project.

[2] Phase I (2006-2016) is based on the expectation that the settlement will not be finalized until 2006.

1. Municipal Conservation:

   (a) During the first five (5) years of Phase I, the City of Spokane, Spokane County, City of Spokane Valley, Liberty Lake Sewer District, and Coeur d'Alene (hereafter "municipal conservation agencies) will implement an in-home water conservation program, which targets an in-home water use reduction of between 5-15%. This targeted reduction is dependent on the mix of existing homes that were built before and after the 1991 building code implementation.

   (b) The municipal conservation agencies' in-home water conservation program will be modeled after the LOTT program that exists as of this date.

   (c) The municipal conservation agencies will also promote outdoor water conservation. The municipal conservation program is one of the measures identified in this proposal that will be implemented as a method to reduce the gap between the actual phosphorous discharged from the municipal dischargers' facilities and the draft TMDL goal.

2. Municipal Treatment Technology: Initially, during Phase I, the City of Spokane, Spokane County, Liberty Lake Sewer District, and City of Coeur d' Alene, (hereafter "municipal dischargers") will conduct pilot and engineering studies to determine the optimum feasible final filtration technology for phosphorous removal at each plant individually. The pilot and engineering studies will be used to establish an interim average seasonal (April-October) phosphorous concentration effluent limit for the municipal discharger's NPDES permits. The interim average seasonal limit shall be calculated based on representative performance data, calculated at the 95^{th} percentile, taking into account the variability of the plant influent and operating conditions. Following completion of the pilot and engineering studies and establishment of an interim average seasonal phosphorous effluent limit for the municipal dischargers, by the end of Phase I, the municipal dischargers will implement final filtration treatment technology for their individual wastewater treatment plants. When river flow exceeds 25,000 cfs, flows into the City of Spokane's Riverside Park Water Reclamation Facility increases to the point that filtration systems are not effective. Therefore, final filtration will not be required for the City of Spokane when river flows exceed 25,000 cfs.

   (a) The NPDES permit for each municipal discharger identified in paragraph II.B.2 above will contain a ten (10) year compliance schedule to allow for the earliest feasible installation of filtration technology, allowing sufficient time for the dischargers to design, permit, and construct the final filtration treatment works. Ecology will agree to use its best efforts to expedite processing of any authorizations, approvals, and/or licenses that may be required for the final filtration technology.

(b) After the treatment technology is installed, the municipal dischargers will take all reasonable steps to optimize operation of their filtration treatment works in order to reduce phosphorous loading to the Spokane River.

(c) By the end of the 10-year compliance schedule, the NPDES permit for each municipal discharger identified in II.B.2 above will contain a final average seasonal phosphorous effluent concentration limit stated in micrograms per liter, subject to the 25,000 cfs exception described above. The final average seasonal phosphorous effluent limit will be based on representative, performance monitoring data collected during the compliance schedule period, which is calculated at the 95th percentile, taking into account the variability of plant influent and operating conditions. The final phosphorous effluent limit will be the only compliance effluent limitation for purposes of the TMDL that will be contained in the dischargers' NPDES permits.

3. Industrial Treatment Technology:

(a) During the first year of Phase I, Kaiser Aluminum will conduct pilot and engineering studies with regard to filtration treatment technology. Upon completion of these studies, an interim seasonal average phosphorous concentration effluent limit will be established for Kaiser's discharges to the Spokane River, excluding any groundwater remediation program flows. Within five (5) years from the date of establishing the interim average seasonal phosphorous limit, Kaiser will install the selected filtration treatment works. Within five (5) years after the date of start-up or at the end of a 10-year compliance schedule, whichever first occurs, Kaiser's NPDES permit will contain a final average seasonal phosphorous concentration effluent limit based on representative, performance monitoring data collected during the compliance schedule period, calculated at the 95th percentile, taking into account the variability of plant influent and operating conditions. Kaiser Aluminum's groundwater remediation program will be removed from this TMDL as a source of phosphorous.

(b) Inland Empire Paper Company, based on extensive state of the art phosphorous pilot plant studies, proposes to install filtration technology to achieve 100 ug/L average seasonal phosphorous concentration interim effluent limit based on current raw plant processing material input for phosphorous within five (5) years from the date of the re-issuance of Inland Empire Paper's NPDES permit. Inland Empire Paper Company's NPDES permit will contain a compliance schedule during this five (5) year period to provide sufficient time to design, permit, and construct filtration technology. The final average seasonal phosphorous concentration effluent limit will be based on representative, performance-monitoring data collected during the compliance schedule period, which is calculated at the 95th percentile, taking into account variability of plant

influent and operating conditions. Inland Empire Paper shall have a ten (10) year compliance schedule within which to achieve the final effluent limitation.

4. Phosphorous removal studies: Scientific literature documenting that approximately 80% of the phosphorous discharged from the paper manufacturing mill treatment systems is bioavailable and 20% is not available for biological uptake. Published reports also indicate that filtration technology removes well over 95% of bio-available phosphorous from paper manufacturing mill effluent. Similarly, questions have been raised regarding the bioavailability of phosphorous remaining in municipal effluent following chemical and physical filtration treatment. For these reasons, the dischargers agree to study the bioavailability of filtration effluent to determine the pounds of bioavailable phosphorous from point and non-point sources. The results of this study will be taken into account when the information becomes available or at the end of Phase I, whichever first occurs, to determine further action to achieve water quality standards.

5. Re-Use:

(a) Municipal Re-Use: During Phase I, the City of Spokane, Spokane County, Liberty Lake Sewer District, and Coeur d'Alene will develop individual water re-use facility plans for use of the final filtration water.

(i) Spokane County, in updating its wastewater treatment facility plan, will include water reclamation and re-use as an important component. This facility plan will identify a long-term strategy to optimize the use of water as an alternative to direct withdrawals from the Spokane Aquifer. The plan will set forth a sequence of water re-use development projects that will optimize the use of reclaimed water within, but not limited to, a five-mile radius of the reclamation works, subject to the spending cap identified in the General Terms below. Ecology will not unreasonably withhold its approval of Spokane County's facility plan.

(ii) The City of Spokane will implement a demonstration re-use project for the Downriver Golf Course as a demonstration of the feasibility of water re-use where public access is not restricted.

(iii) Municipal water re-use will occur during Phase II because re-use requires water that has been treated with final effluent filtration. However, should any municipality complete re-use projects during Phase I, that discharger will receive credit for the amount of phosphorous removed by that project.

(b) Industrial Re-Use: During Phase I, Inland Empire Paper Company will continue to complete water audits, which were started in 2004, and have already netted an approximate one million gallon per day effluent reduction. Inland Empire Paper Company will continue to implement internal re-use programs within five (5) years from signature of all parties

to this proposed settlement. Target reductions will be established by the results of the internal audit.

(c) During Phase I, Ecology will evaluate and identify obstacles that exist in state regulations and policies with regard to re-use and will use its best efforts to remove those obstacles, while continuing to preserve and protect the environment.

6. Non-Point Source Control:

(a) During the first two years of Phase I, the City of Spokane, Spokane County, the City of Spokane Valley, Liberty Lake Sewer District, and Coeur d'Alene, (hereafter "municipal non-point source control agencies") will fund one-third of a $1 Million non-point source planning program (1/3 dischargers + 1/3 federal funds + 1/3 state funds) for the Spokane River interstate watershed. The program will be created and implemented by the non-point source control municipal dischargers and, where applicable, in conjunction with the Spokane County Conservation District, and will be administered through legal mechanisms appropriate for municipalities. The plan will be amended as additional projects become available or as projects fail to become viable. The plan will delineate those projects to be funded by the municipal non-point source agencies, the estimated dollars to fund those projects, and the credit each municipal non-point agency will receive for those projects.

(b) For a period of ten (10) years from the date that all parties sign this proposed settlement, the municipal non-point source agencies will collectively contribute $1.0 Million per year to implement the non-point source control plan. Funding beyond ten (10) years is dependent on the progress made in implementing the program, reduction of phosphorous achieved through the program, and effective management of the funds.

(c) Once the plan identified in subparagraph 6(a) above is completed, projects may be selected, implemented, funded, and completed. Consistent with the plan identified in subparagraph 6(a) above, once a project is selected for funding and completed, the municipal non-point source agency implementing the project will receive credit for the documented non-point source phosphorous reduction, however, each municipal non-point source agency will remain proportionally responsible for reducing non-point sources.

(d) Within the first three years of Phase I, the municipal non-point source agencies will propose to implement a phosphorous dishwashing detergent restriction to reduce phosphorous loading to the treatment plant and septic tanks.

(e) Within the first three years of Phase I, the municipal non-point source agencies will propose to implement a low phosphorous requirement for all residential and non-commercial lawn, landscape, and garden fertilizer uses.

(f) Any discharger that has implemented or continues to implement a Septic Tank Elimination Program or other phosphorous removal program will be acknowledged and credited for a reduction of non-point sources in the manner set forth in item II.B.6(c) above.

(g) During Phases I and II, and continuing through the term of its new federal license for the Spokane River Hydroelectric Project (anticipated to be up to 50 years), Avista will contribute $10,000 per year to the sediment-reduction portion of the non-point source control plan for the purpose of reducing erosion and downstream sedimentation in the Hangman Creek Watershed.

(h) During Phase I, Ecology, Avista and the municipal non-point source agencies will support the development and implementation of growth management plans and policies which promote centralized sewer service in the Suncrest area of Stevens County in order to reduce the effect of septic tanks on the Long Lake Reservoir. Support from the municipal non-point source agencies, Ecology and Avista will be in the form of comment letters to local, state and federal agencies upon request from Stevens County. In addition, Ecology will consider grant funding for Stevens County PUD to perform initial studies needed to plan for designing and installing centralized sewers in the Suncrest area during Phase II.

7. Monitoring Program: The dischargers, Avista, and Ecology will jointly develop a monitoring program that will be designed to evaluate the effectiveness of the Phase I measures in reducing phosphorous loading, raising DO levels, and improving the biological health of the aquatic resources of the Spokane River and Long Lake Reservoir. The monitoring program for the Spokane River and the Long Lake Reservoir will include, but not be limited to the following: (a) demonstrating compliance with the Phase I measures; (b) documenting phosphorous reduction as a result of Phase I measures; (c) sampling and analyzing sediment oxygen demand; (d) collecting data related to sediment loading including episodic events in Hangman Creek and the Little Spokane River; and (e) measuring progress toward achievement of such indicators of biological health (e.g. aquatic habitat and associated fisheries management objectives) as may be agreed upon by Ecology, the dischargers, and Avista.

8. Downstream DO: Avista will develop and implement a tailrace DO enhancement program aimed at achieving the DO standards downstream of Long Lake Dam. In accordance with the terms of its Clean Water Act Section 401 Certification and new federal license for the Spokane River Project, Avista will submit its implementation plan to Ecology and FERC for review and approval prior to implementation.

9. Trading Program: At their option, the dischargers may establish a phosphorous trading program, using the Cherry Creek Watershed (Denver, Colorado) program as a model. Under this model, the dischargers will establish a Watershed Trading

Authority, which will authorize at least two types of trades: (a) new project trades and (b) phosphorous bank sales. New trade project proponents would construct phosphorous removal projects and receive credit for phosphorous in their own projects. Phosphorous bank sales are based on purchasing or leasing trade credits from the trading bank. The credits derive from projects constructed by the Watershed Trading Authority. The Authority establishes the credit price and credits are deducted from the Credit Bank, which can be allocated for short or long-term use.

C. Phase II (2017-2027): The following Phase II measures are sequenced after the Phase I measures because either treatment technology is required prior to implementation (i.e., re-use) or because monitoring data from Phase I is necessary in order to evaluate appropriate next steps for phosphorous removal:

1. Municipal Wastewater Re-Use: During Phase II, the municipal dischargers identified in paragraph II.B.5 above will implement, where feasible, their individual water re-use plans for the use of final filtration water, provided that all necessary regulatory permits, authorizations, and approvals are obtained in a timely manner and that the re-use projects can be implemented within the cost ranges specified in the re-use plans prepared by the dischargers during Phase I and subject to the caps set forth below in the General Conditions. Any re-use projects shall be credited with phosphorous reduction to the discharger responsible for implementing the re-use project.

2. During the first year of Phase II, the dischargers identified in paragraph II.B.4 above and Avista will evaluate the effectiveness of the Phase I measures to determine the phosphorous reduction and DO enhancement that has been achieved and will also update and recalibrate the TMDL model to include information gained by the Phase I measures, including but not limited to, the following: sampling data and other data collected will be used to recalibrate the SOD component of the TMDL model; episodic events from Hangman Creek and the Little Spokane River will be incorporated into the TMDL model; and Spokane River flow conditions following issuance of the new FERC license for Avista's Spokane River hydroelectric facilities.

3. If the recalibrated TMDL model establishes that the dischargers and Avista have not met the TMDL's target, then Ecology, the dischargers and Avista shall jointly develop a Use Attainability Analysis and/or site specific criteria for waterbodies that are the subject of the TMDL (Spokane River and the Long Lake Reservoir) to determine existing and attainable uses in those waterbodies and/or the appropriate numeric and narrative criteria for supporting the designated uses. Those uses and/or criteria shall form the basis for determining additional and continued measures necessary to reduce phosphorous discharges or enhance DO, including but not limited to aeration/oxygenation in the Long Lake Reservoir and additional non-point source control, which will become part of Phase II.

4. Following adoption of the UAA or a site specific criteria, if it is necessary to enhance DO levels in Long Lake Reservoir in order to adequately support the biological health of designated aquatic life uses (as measured by the indicators of biological health to be agreed upon pursuant to II.B.7 above), the dischargers shall develop a plan and engineering recommendations to implement aeration/oxygenation program to achieve the dissolved oxygen standards in Long Lake Reservoir. Avista shall assist the dischargers in developing the plan and recommendations based on its experience with the tailrace DO enhancement program implemented during Phase I and, if requested by Ecology, shall contribute to the Lake aeration/oxygenation program in lieu of the tailrace enhancement program in an amount and manner agreed upon by the parties.

5. Monitoring: The dischargers, Avista, and Ecology will develop and implement a Phase II monitoring plan to (a) document compliance with the Phase II measures; (b) document phosphorous reduction; and (c) evaluate the progress of any aeration/oxygenation program toward achieving the DO criteria in the Long Lake Reservoir and supporting the agreed-upon biological objectives related to the criteria.

6. Trading Program: The Trading Program developed during Phase I shall continue to be available for use during Phase II.

III. General Terms

A. Spokane County and the City of Spokane limit funding for the measures outlined above in Phase II to the following spending caps:

- Spokane County: $1 Million per year for 10 years.
- City of Spokane: $1 Million per year for 10 years.

B. This scenario is offered, subject to an agreement that resolution of the phosphorous TMDL for the Spokane River and Long Lake Reservoir also resolves: (a) for the dischargers and Avista any 303(d) listing or TMDL for the following pollutants that are associated with phosphorous: nutrient loading, chemicals directly related to phosphorous treatment, DO, BOD, CBOD and ammonia and (b) for Avista, any obligations regarding DO or sediment management under Section 401 of the Clean Water Act or any other applicable law, for the term of its new FERC license for the Spokane River Hydroelectric Project.

C. This proposal assumes authorization to discharge consistent with reasonable growth projections and flows through the year 2028.

D. Hayden Area Regional Sewer Board and the City of Post Falls elected not to participate in this proposal at this time. The sponsors of this proposal expect that EPA will issue permits for both entities which reflect a phosphorous load allocation based on final

filtration from April 1 through October 31, taking into consideration that fact that these entities may land apply some or all of their wastewater during this critical period.

E. This settlement scenario is offered in the context of a facilitated negotiation and may not be used as evidence in any administrative or court proceeding over the objection of any discharger or Avista.