Portland, Oregon
July 24, 2001

1. Do we want to split the Columbia and Snake up on TDG. We should pay attention to the FERC relicensing.

2. Russ from the Walla Walla District COE agreed that we have more data on the Snake. So we could split the Snake out.

3. What is the formal comment period in Oregon for the TDG TMDL? Between 30-60 days start in Oct 2001.

4. Why did EPA not do interstate TDG? State decision, states asked EPA to do temperature.

5. Would you look at Rock Island Dam as far as exceeding the standard.

6. What is diurnal variation in the river? Three to four degree variation the COE has experienced. Before and after human activities.

7. Compare low vs higher flow in different years. Look for similar flow regimes before and after human activities.

8. Compare fall and spring chinook temperature needs. CRITFC homepage a good source of information related to behavioral changes in fish due to changes in temp.

9. How much contribution do the tributaries have on the mainstem? Most of the tributaries at 5,000 cfs or less, and do not contribute significantly to a temperature change in the Columbia Mainstem. Snake river is an exception--measurable increase in temp after confluence. Willamet also contributes warm water. Clearwater river has cooling effect on Snake.

10. How linked is EPA's TMDL process with regional temperature task force criteria?

11. Anatone, Burbank USGS gauges (1930's) we should look at for temperature. However, care should be with Anatone as it is on west bank below Grande Ronde River. When Grand Ronde running hot, might unduly influence readings.

12. Is model designed to predict daily average? Model simulates daily or hourly average water temp. Can also predict highest hourly average, which is close to daily max.

13. Is existing condition for temperature comparison for tailrace and forebay?

14. Standard Deviation for which location, scroll case, tailwater, forebay? Forebay--tailwater data not continuously collected until 1995).

15. What are the frequency of temperature measurements daily/seasonal?

16. Is the model designed to daily average?

17. What is the target for data simulation?

18. The scroll case indicates cooler temperature may not be incicative of the real conditions - not conservative enough.

19. How does common filter determine which estimate to go with (measurement or process model)?

20. When will data be available from Bonneville down? Will have estimates in a couple of months, full report by end of year.

21. What is the schedule for the temperature model preliminary results. In a couple of months.

22. If stratification is evident, is one dimensional model appropriate?

23. Forebay at McNary is very difficult to work with.

24. Are modeling the tributaries for heat input, w/historic data, are you modeling up the tributaries? How can you predict tributaries contribution?

25. How can you predict human activities?

26. Will the point sources have an impact?

27. Are the tributaries having a cumulative impact on the mainstem?

28. Where are the temperature inputs coming from?

29. What is the states current thinking on where standards have to be met. This is one of three areas that need to be dealt with over next 5-6 weeks. State will be working out mixing zone issues, technical linkage issues, and implementation issues.

30. What are Tetra Techs comments on setting margins of safety at zero on TDG?

31. Is the tailrace sampling point representative of cross-sectional difference?

32. Temp effects on TDG, and what assumptions have been made with respect to

temperature?

33. How does temp impact fish ability to deal with TDG? Gas effect is independent of temp effect, though temp may stress fish, making them more susceptible to problems that arise from TDG.

34. Need to link in implementation better.

35. Gas entrainment differs according to dam operation, so how was data collected for model? Full range of operations systematically tested and recorded. Robust data set created upon which model was built.