Responses to Comments in Letter 164 from Adrian Duncan, Environment Canada

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the preceding comment letter.

1. Please see Letter 160, Response to Comment 4.

2. Please see Letter 160, Response to Comment 5.

3. Please see Letter 160, Response to Comment 6.

4. Please see Letter 160, Response to Comment 7.

5. Please see Letter 160, Response to Comment 8.

6. Please see Letter 160, Response to Comment 9.

7. Please see Letter 160, Response to Comment 10.

8. Please see Letter 160, Response to Comment 11.

9. Please see Letter 160, Response to Comment 12.

10. Thank you for your comment. This correction has been made.

11. Please see Letter 160, Response to Comment 14.

12. Please see Letter 160, Response to Comment 15.

13. The comment is noted.

14. Please see Letter 160, Response to Comment 17.

15. Please see Letter 160, Response to Comment 18.

16. Please see Letter 160, Response to Comment 19.

17. Please see Letter 160, Response to Comment 20.

18. Please see Letter 160, Response to Comment 21.

19. Please see Letter 160, Response to Comment 22.

20. Please see Letter 160, Response to Comment 23.

21. Please see Letter 160, Response to Comment 24.

22. Please see Letter 160, Response to Comment 25.

23. Please see Letter 160, Response to Comment 28.

24. Please see Letter 160, Response to Comment 29.

25. Please see Letter 160, Response to Comment 30.

26. Please see Letter 160, Response to Comment 31.

27. Please see Letter 160, Response to Comment 32.

28. Please see Letter 160, Response to Comment 33.

29. Please see Letter 160, Response to Comment 34.

30. As indicated on page 1-1, S2GF will be a "merchant" plant with power produced by the facility sold wherever there is a market. BC Hydro has indicated that they have no interest in purchasing the power at the present time.

31. Please see Letter 160, Response to Comment 36.

32. Please see Letter 160, Response to Comment 38.

33. Please see General Response D, which addresses the theoretical drawdown that could occur in the U.S. and Canada as a result of increased pumping to meet the needs of the S2GF project. This response also addresses cumulative impacts that could result from the Sumas well in conjunction with large-scale pumping from wells in Canada, and potential long-term effects of pumping.

34. Please see Letter 164, Response to Comment 33 (above).

35. Please see Letter 164, Response to Comment 33 (above).

36. In the event that the overall discharge from the Sumas aquifer increases over time to exceed the rate of recharge, groundwater mining would occur. In that event, the S2GF water usage would be a minor contributor to that impact. However, based on available information, the recharge rate appears to be well in excess of current usage. As described in General Response D, the Final EIS more accurately conveys the information presented by the USGS regarding drawdown. Please see General Response G for a discussion of impacts of groundwater pumping on baseflow to streams.

37. The importance of effective spill containment is recognized with respect to protection of groundwater and surface water. The Final EIS and application identify numerous measures that would be taken to minimize the potential for a spill, to monitor for potential leaks, to contain spills within impermeable holding areas, and to provide emergency response should a spill occur.

38. Please see General Response E for a discussion of impacts from increased pumping on nitrate concentrations in wells. Based on the relatively high permeability of the aquifer, it

is unlikely that perceptible changes in the groundwater flow direction would occur as a result of the increased pumping. Similarly, the groundwater gradient is only expected to be impacted in the near-field environment of the pumping wells. While there is a possibility that these hydrologic changes could have some effect on water quality in nearby Canadian wells, there is no feasible way to predict such an impact, or whether it would result in water quality improvement or degradation, or how it might change over time as nitrate loading from Canadian sources varies.

39. See Letter 11, Response to Comment 2 and Letter 163, Response to Comment 6 for discussions regarding spill containment and emergency response.

40. As described in General Comment I, the approach to wastewater disposal has been revised. The volume of blowdown that would be generated from the facility has been greatly reduced, whereas the sanitary sewage will remain the same. All wastewater would meet the requirements for discharge to a public sewer, and wastewater released after treatment at the JAMES Treatment Plant would meet Canadian discharge requirements.

41. Comments 40 through 43 are apparently directed at the Application for Site Certification Agreement, Application 99-1, rather than the Draft EIS. The JAMES treatment facility is designed to effectively treat the type of wastewater generated by the SE2 facility, and the Fraser Valley Regional District (FVRD) has previously agreed to accept this type of waste. The SE2 wastewater stream would be combined with wastewater from the City of Sumas, diluting any temperature effects. Furthermore, due to the residence time of the effluent in the treatment facility, the temperature of the JAMES effluent would not be elevated measurably from the current condition. SE2 wastewater would constitute less than 1 percent of the wastewater treated at the JAMES facility. SE2 would be required to meet any pretreatment requirements of the FVRD for industrial dischargers.

42. See Letter 164, Response to Comment 41 (above).

43. Please see General Response I, which discusses the revised approach to wastewater disposal.

44. No known onsite contamination exists. Regardless, construction contractors normally watch for signs (e.g., discolored soil and odors) of contamination during site preparation activities and take appropriate precautionary measures if any is detected. Such measures can be listed in the construction specifications for a project.

45. Section 3.5.5.1 has been modified to include the mitigation measures that you recommend.

46. As described in the Settlement Agreement Between Washington Department of Ecology and Sumas Energy 2 (see Volume 1, Appendix G), a Performance Plan would be developed by SE2 which, in part, provides a description of the biological monitoring that must be performed, a monitoring schedule, submittal of monitoring reports, and performance standards for each aspect of the wetland mitigation plan.

47. The applicant has entered an agreement with the Washington Department of Fish and Wildlife that includes several measures to protect fish and wildlife (see Volume 1, Appendix G). Clearing restrictions during the nesting season of birds have been added to the Final EIS for consideration by the decision maker.

As described in the Settlement Agreement Between Washington Department of Fish and Wildlife and Sumas Energy 2 signed May 12, 2000 (see Volume 1, Appendix G), SE2 agrees to develop a ROW plan that includes noxious weed control measures and an erosion control plan for the proposed action.