

3.4 WATER QUALITY

The following information has been updated in the Final EIS. Updated information was obtained from Michael Kyte’s prefiled testimony (Exhibit 27R.0) as presented to EFSEC.

3.4.2 Impacts of the Proposed Action

- On Page 3.4-12 of the Draft EIS, the following text should replace the first paragraph after the bullet point.

After treatment in the refinery wastewater treatment system, wastewater from the cogeneration facility would be discharged along with the refinery wastewater to the Strait of Georgia. The cogeneration facility would add approximately 190 gpm on average to the refinery’s effluent discharge, assuming 15 cycles of concentration in the cooling tower of non-recyclable process wastewater, to the refinery discharge. Table 3.4-5 presents a numerical analysis of the potential impact of the cogeneration facility wastewater on the refinery’s wastewater stream. The impact analysis is based on the average discharge from the refinery wastewater treatment study that was conducted in July, August, and September of 2001.

- The following table should replace Table 3.4-5 on Page 3.4-12 of the Draft EIS.

Table 3.4-5: Potential Impact of Proposed Cogeneration Facility on the Existing Refinery Wastewater Discharge to Outfall 001 in the Strait of Georgia

Parameter	Untreated Cogen Process Wastewater ¹	Treatment Efficiency	Cogen Process Wastewater after Treatment	Refinery Process Wastewater after Treatment	% Increase with Cogen Contribution (after treatment by refinery) ²
Discharge Flow (gpm)	190	0%	190	2,338	8.1%
Biochemical Oxygen Demand (BOD) lbs./day mg/l	132	98%	2.64	275	1%
Chemical Oxygen Demand (COD) lbs./day	323	96%	12.9	2,235	0.6%
Total Suspended Solids (TSS) lbs./day	98	35%	63.7	427	14.9%
Oil and Grease (lbs./day)	3	98%	0.1	115	0.1%
Total Chromium (lbs./day)	0.32 (1.45)	--	--	0	³
Temperature (°F)	93.8	--	--	82.7	<1° F
pH	6.5 - 9.5	--	--	8.0 - 8.6 Min.	NA

1 Wastewater that is “discharged” to the refinery’s wastewater treatment system.

2 Based upon treatment efficiencies documented in the BP Cherry Point Treatment Efficiency Study and Engineering Report, May 2002.

3 Not estimated – the Treatment Efficiency Study report shows that metal concentrations are reduced through the refinery wastewater treatment system.

- The following text should be added after Table 3.4-5 on Page 3.4-12 of the Draft EIS.

According to Michael Kyte, (Prefiled Testimony, Exhibit 27R.0), there is no evidence to suggest impacts on fish populations or food sources would result from the discharge of the combined refinery and cogeneration treated wastewater to the Strait of Georgia. Even if the temperature of the discharged effluent increased, the water velocity within the mixing zone would rapidly mix and dilute the treated wastewater. As a result, any substance or temperature increase would rapidly be reduced to ambient levels. In such conditions, it is unlikely that herring or salmon adults, juveniles, or larvae would be subject to higher concentrations of any substance or raised temperatures long enough to cause short-term harm. According to plume modeling conducted by Ecology, the refinery's effluent would be diluted within the zone of initial dilution (ZID) at a factor of 28:1. Outside the ZID, the effluent would be diluted at a factor of 157:1 before reaching the edge of the chronic dilution zone, where all substances or parameters must be equal to ambient conditions. Physical modeling studies conducted in 1990 using dye injected into the refinery effluent showed that the actual dilution ratio within the ZID was 144:1 and the dilution at the edge of the chronic dilution zone was 1,709:1. Therefore, based on this information and on the results of no impacts of the ongoing quarterly acute bioassay testing conducted by BP as part of the refinery's NPDES testing and monitoring requirements, no impacts are anticipated from the combined refinery and cogeneration wastewater discharge.

- In the second paragraph on Page 3.4-14 of the Draft EIS, the second to the last sentence should be deleted. A special groundwater study is not needed because stormwater discharged to the detention facility, and ultimately to CMA 2, would be collected only from uncontaminated areas of the cogeneration facility.

3.4.5 Mitigation Measures

- On Page 3.4-17 of the Draft EIS, the second paragraph should be deleted and replaced with the following text.

Water used for hydrostatic testing would require capture and discharge. The Applicant would meet the requirement of the State Waste Discharge Permit and develop and implement a plan to characterize the hydrostatic test wastewater for conventional and priority pollutants. The results would determine if the wastewater could be properly disposed of in the refinery's wastewater treatment system prior to discharge. Hydrostatic test water would only be discharged to the refinery's wastewater treatment system if testing confirmed that it was within acceptable limits for that system. After treatment, the hydrostatic test water would be discharged to the Strait of Georgia through the refinery's Outfall 001. If hydrostatic test water does not meet criteria for discharge to the refinery's wastewater treatment plant, other offsite disposal options would be necessary.

- On Page 3.4-17 of the Draft EIS, the following text should precede the third paragraph under the heading “Stormwater Mitigation Measures.”

EFSEC has developed conditions for the proposed project’s National Pollutant Discharge Elimination System Permit, which the Applicant will meet. The permit conditions specify construction stormwater effluent limits and monitoring requirements. The effluent limitations are presented in Table 3.4-7. The Applicant would begin monitoring construction stormwater quality with the start of construction activities.

- On Page 3.4-17 of the Draft EIS, the last sentence and list items 1 through 12 (which continue onto the next page) should be deleted.
- On Page 3.4-19 of the Draft EIS, the heading “Additional Recommended Mitigation Measures” and paragraph below it should be deleted. This section has been deleted throughout the Final EIS.
- On Page 3.4-19 of the Draft EIS, the following text should be added before the third paragraph.

EFSEC has developed State Waste Discharge Permit conditions for operation of the cogeneration facility. These conditions include discharge limitations, monitoring requirements, reporting and recordkeeping requirements, an operation and maintenance plan for water quality treatment facilities, SPCC and hazardous waste management plans, and a SWPP plan. The operation effluent limits are presented in Table 3.4-7.

- On Page 3.4-20 of the Draft EIS and continuing onto the next page, the heading “Additional Recommended Mitigation Measures” and paragraphs below it should be deleted. This section has been deleted throughout the Final EIS.