TABLES

TABLE 3.3-1

Water Rights within 1 Mile of the Proposed Facility

Document Number	Document Type	Purpose Code*	Priority Date	Qi (Gpm)	Qa (Acre-Ft)	Source Name	Tributary Name	City	Business Name	TRS	Quad Designation
G1-27758	Application	CI	23-Aug-96	700		Well		Bellingham	Whatcom Cnty PUD 1	T39N/R01E-09	SE/4SW/4
G1-27758	Application	MU	23-Aug-96	700		Well		Bellingham	Whatcom Cnty PUD 1	T39N/R01E-09	SE/4SW/4
G1-27758	Application	CI	23-Aug-96	700		Well		Bellingham	Whatcom Cnty PUD 1	T39N/R01E-09	SE/4SW/4
G1-27758	Application	MU	23-Aug-96	700		Well		Bellingham	Whatcom Cnty PUD 1	T39N/R01E-09	SE/4SW/4
R1-*13043CWRIS	Certificate	IR	27-Jul-54			Fingalson Creek	Terrell Creek		Smrekar V F	T39N/R01E-04	SE/4SE/4
R1-*13043CWRIS	Certificate	WL	27-Jul-54			Fingalson Creek	Terrell Creek		Smrekar V F	T39N/R01E-04	SE/4SE/4
S1-*12547CWRIS	Certificate	IR	01-Sep-53	269	120	Unnamed Source	Terrell Creek		Krause E H	T39N/R01E-06	W/2SW/4
G1-*01762CWRIS	Certificate	DS	26-Dec-50	45	10	Well			Haugen M	T39N/R01E-06	SW/4NW/4
G1-*01762CWRIS	Certificate	IR	26-Dec-50	45	10	Well			Haugen M	T39N/R01E-06	SW/4NW/4
G1-*02537CWRIS	Certificate	DM	19-May-52	60	97	Well			Bell-Bay-Jackson Water	T39N/R01E-06	NE/4NE/4
G1-20581C	Certificate	DM	26-Apr-73	50	18	Well		Ferndale	Pleasant Valley Water Association	T39N/R01E-09	
G1-20581C	Certificate	DM	26-Apr-73	50	18	Well		Ferndale	Pleasant Valley Water Association	T39N/R01E-09	

***Purpose Codes:**

IR (irrigation)
DS (domestic single)
DM (domestic multiple)
CI (commercial & industrial manufacturing)
MU (Domestic Municipal)
WL (Wildlife)

Source: Washington State Department of Ecology, WRATS Database, August 2001.

TABLE 3.3-2

Applicable Water Rights Permits, Certifications, Claims, and Applications

Document Number	Document Type	Purpose Code	Priority Date*	Qi (Gpm)	Qa (Acre-Ft)	Business Name	Cfs	Source Name	Tributary Name
Whatcom County PUD-No.1 Water Rights									
S1-00708CWRIS	Certificate	CI, IR	27-Sep-68	12566	18544	Whatcom Cnty Pud 1	28	Nooksack River	Bellingham Bay
S1-00707C	Certificate	CI	16-Apr-65	22440	27667	Whatcom Cnty Pud 1	50	Nooksack River	Bellingham Bay
S1-*11970C	Certificate	CI	13-Jan-53	2244	0	Whatcom Cnty Pud 1	5	Nooksack River	Bellingham Bay
S1-00707C	Certificate	DM, IR	16-Apr-65	22440	27667	Whatcom Cnty Pud 1	50	Nooksack River	Bellingham Bay
G1-27758	Application	CI, MU	23-Aug-96	700		Whatcom Cnty Pud 1		Well	
S1-*06273AWRIS	Application	CI, DM	23-Dec-44	8976		Whatcom Cnty Pud 1	20	South Fork Nooksack River	Nooksack River
City of Blaine and Birch Bay Water and Sewer District Water Rights									
G1-*05086CWRIS	Certificate	MU	22-Dec-58	500	800	City Of Blaine		Well	
G1-*07623CWRIS	Certificate	MU	21-May-65	400	640	City Of Blaine		Well	
G1-22483CWRIS	Certificate	MU	14-Apr-75	450	726	City Of Blaine		Well	
G1-300037CL	Claim/	MU		800	1290	City Of Blaine		Well	
G1-26822	Permit	MU	13-Nov-92	200	320	City Of Blaine		Well	
G1-26820	Application	MU	13-Nov-92	200		City Of Blaine		Well	
G1-26821	Application	MU	13-Nov-92	450		City Of Blaine		Well	
G1-28046	Application	DM	03-Aug-99	500		Birch Bay Water & Sewer District		Well	

***Purpose Codes:**

IR (irrigation)
CI (commercial & industrial manufacturing)
DS (domestic single)
MU (Domestic Municipal)
DM (domestic multiple)

Source: Washington State Department of Ecology, WRATS Database, August 2001.

TABLE 3.3-3

Cogeneration Project Wastewater Flows and Chemical Composition

	Demin Plant Regeneration Water (includes Filter Backwash)	**Potentially Oily Wastewater**
AverageFlow (gpm)	47	2
Peak Flow/Duration	250 gpm	120 gpm
	4 hrs/day	30 min/day
pH (pH units)	6.5-8.5	7.0-7.5
General Parameters		
Dissolved Oxygen (mg/L)	8	8
COD	ND	ND
Oil & Grease (mg/L)	0	10
TDS (mg/L)	6715	100
TSS (mg/L)	8	1
Temperature (°F)	Amb	Amb
Major Cation Conc. (mg/L		
Ca	202	12
Mg	50	3
Na	1660	3
K	8.4	0.5
Major Anions Conc. (mg/L		
HCO_3	722	43
Cl	42	3
SO_4	3832	24
Trace Metals Conc. (mg/L		
Al	8.79	0.523
Ba	0.17	0.01
Fe	6.15	0.366
Mn	0.15	0.009
Ni	0.02	0.001
V	0.15	0.009
Zn	0.08	0.005
Other Anions Conc. (mg/L)		
SiO_2	185	11
PO_4	0	0
NO_3/NO_2	2.52	0.15
NH_3/NH_4	0	0
Organics Conc. (mg/L		
Dissolved Organic Carbon	4	0
Polymers (polyquaternary amine)		
Others (mg/L)		
Total Organic Carbon	9.24	0.55

Source: Duke Fluor Daniel, 2001

TABLE 3.3-4

Potential Impact of the Proposed BP Cherry Point Cogeneration Project Facility on the Existing Refinery Waste Water Stream After Treatment

Parameter	Cogen Project contribution (averages, converted to unit of measure used in NPDES limit)	Percent increase due to Cogen contribution	Combined Flow, Percent of NPDES Limit
Discharged Flow (gpm)	49	2.1%	NL
Discharged Flow (mgd)	0.07	2.1%	NL
Production (bbls/day)	---	---	NL
Temperature (°F, max.)	53	-0.7%	NL
Biochemical Oxygen Demand (lbs/day)	0.00	0.0%	24%
Chemical Oxygen Demand (lbs/day)	0.0	0.0%	28%
Total Suspended Solids (lbs/day)	4.5	1.0%	47%
Oil & Grease (lbs/day)	0.02	0.0%	34%
Oil & Grease (mg/l, ppm)	0.41	-2%	42%
Phenolic compounds (lbs/day)	0.0	0.0%	29%
Ammonia as N (lbs/day)	1.4	1.5%	15%
Sulfide (lbs/day)	0.0	0.0%	11%
Total Chromium (lbs/day)	0.0	0.0%	0%
Hexavalent Chromium (lbs/day)	0.0	0.0%	0%
Fecal Coliform (organisms/100mls)	0.0	0.0%	0%
pH (maximum)	8.0	-1.0%	(i)

(i) Not calculated because pH is a logarithmic scale