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December 23, 2013
GO2-13-173

RECEIVED
DEC 30 2013
ENERGY FACILITY SITE
EVALUATION COUNCIL

EFSEC Manager
Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172

Subject: **COLUMBIA GENERATING STATION**
SUPPLEMENTAL NPDES RENEWAL APPLICATION

References:
1. Letter, GO2-10-167, dated November 19, 2010, SR Gambhir (Energy Northwest) to A Wright, "Energy Northwest Columbia Generating Station Application for Renewal of NPDES Permit No. WA-002515-1"
2. Letter, GI2-10-230, dated December 29, 2010, J La Spina (EFSEC) to DK Atkinson, "NPDES Permit No. WA-002515-1 – Receipt of Application for Permit Renewal"
3. Letter, GI2-11-076, dated May 17, 2011, A Wright (EFSEC) to DK Atkinson, "Extension of NPDES Permit No. WA-002515-1"

Energy Northwest submitted an application for renewal of National Pollutant Discharge Elimination System (NPDES) Permit No. WA-002515-1 on November 19, 2010 in accordance with permit condition S5 (Reference 1). By previous agreement with EFSEC, the renewal application omitted Outfall 001 characterization information due to the pending condenser replacement project. The Energy Facility Site Evaluation Council (EFSEC) acknowledged timely receipt of the application for permit renewal in a letter dated December 29, 2010 (Reference 2). EFSEC extended the expiration date of the existing permit of May 25, 2011 (Reference 3). The Columbia Generating Station main condenser was subsequently replaced in 2011 during the R-20 refueling and maintenance outage. In accordance with previous agreements with EFSEC, Energy Northwest is providing a supplemental NPDES renewal application complete with the remaining discharge characterization information for Outfall 001 (Attachment B).

Energy Northwest is also providing an update of the Wastewater Source Descriptions document (Attachment C) and information regarding underground injection control (UIC) well stormwater discharges at Columbia Generating Station (Attachment D).

If you have any questions concerning this information, please contact BC Barfuss at (509) 377-4541

Respectfully,

DK Atkinson
Vice President, Employee Development/Corporate Services

Attachments (4)

cc: NRC Region IV Administrator
J La Spina, EFSEC
J Ayres, Ecology
L Albin, WDOH

Attachment A – Certification per NPDES Permit WA-002515-1, Condition G1.D
(1 page)

Certification per NPDES Permit WA-002515-1, Condition G1.D

Re: **Columbia Generating Station**
Supplemental NPDES Renewal Application

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

DK Atkinson
Vice President, Employee Development/
Corporate Services

12-23-13
Date

Attachment B – Outfall 001 Characterization Information
(14 pages)

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
WAD980738488 WAD980738488

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* 001

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand *(BOD)*												
b. Chemical Oxygen Demand *(COD)*												
c. Total Organic Carbon *(TOC)*												
d. Total Suspended Solids *(TSS)*												
e. Ammonia *(as N)*												
f. Flow	Value		Value		Value					Value		
g. Temperature *(winter)*	Value		Value		Value			°C		Value		
h. Temperature *(summer)*	Value		Value		Value			°C		Value		
i. pH	Minimum	Maximum	Minimum	Maximum				STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'		3. EFFLUENT						4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	B. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	☒	☐	*17.1*		*N/A*		*15.2*		*3*	*mg/L*				
b. Chlorine, Total Residual	☒	☐	*<0.05*		*N/A*		*<0.05*		*3*	*mg/L*				
c. Color	☒	☐	*20*		*N/A*		*13.3*		*3*	*color units*				
d. Fecal Coliform	☒	☐	*11.0*		*N/A*		*6.3*		*3*	*col/100mL*				
e. Fluoride (16984-48-8)	☒	☐	*0.761*		*N/A*		*0.736*		*3*	*mg/L*				
f. Nitrate-Nitrite *(as N)*	☒	☐	*2.39*		*N/A*		*1.98*		*3*	*mg/L*				

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'		3. EFFLUENT						d. NO. OF ANALYSIS	4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	☒	☐	*0.824*		*N/A*		*0.811*		*3*	*mg/L*				
h. Oil and Grease	☒	☐	*<1*		*N/A*		*<1*		*3*	*mg/L*				
i. Phosphorus *(as P)*, Total (7723-14-0)	☒	☐	*3.03*		*N/A*		*2.43*		*3*	*mg/L*				
j. Radioactivity														
(1) Alpha, Total	☐	☒			*N/A*									
(2) Bets, Total	☒	☐	*9.56*		*N/A*		*5.29*		*23*	*pCi/L*				
(3) Radium, Total	☐	☒			*N/A*									
(4) Radium 226, Total	☐	☒			*N/A*									
k. Sulfate *(as SO_4) (14808-79-8)*	☒	☐	*703*		*N/A*		*627*		*3*	*mg/L*				
l. Sulfide (as S)	☐	☒	*<0.2*		*N/A*		*<0.2*		*3*	*mg/L*				
m. Sulfite *(as SO_3)(14265-45-3)*	☐	☒	*<2*		*N/A*		*<2*		*3*	*mg/L*				
n. Surfactants	☐	☒			*N/A*									
o. Aluminum, Total (7429-90-5)	☒	☐	*0.185*		*N/A*		*0.152*		*3*	*mg/L*				
p. Barium, Total (7440-39-3)	☒	☐	*0.281*		*N/A*		*0.271*		*3*	*mg/L*				
q. Boron, Total (7440-42-8)	☒	☐	*0.0308*		*N/A*		*0.0302*		*3*	*mg/L*				
r. Cobalt, Total (7440-48-4)	☒	☐	*0.00057*		*N/A*		*0.00021*		*3*	*mg/L*				
s. Iron, Total (7439-89-4)	☒	☐	*0.239*		*N/A*		*0.189*		*3*	*mg/L*				
t. Magnesium, Total (7439-95-4)	☒	☐	*53.1*		*N/A*		*51.7*		*3*	*mg/L*				
u. Molybdenum, Total (7439-98-7)	☒	☐	*0.00726*		*N/A*		*0.00691*		*3*	*mg/L*				
v. Manganese, Total (7439-96-5)	☒	☐	*0.0231*		*N/A*		*0.0202*		*3*	*mg/L*				
w. Tin, Total (7440-31-5)	☒	☐	*<0.001*		*N/A*		*<0.001*		*3*	*mg/L*				
x. Titanium, Total (7440-32-6)	☒	☐	*0.0176*		*N/A*		*0.0106*		*3*	*mg/L*				

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
WAD980738488 WAD980738488	*001*

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT						d. NO. OF ANALYSIS	4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1m. Antimony, Total (7440-36-0)	☐	☐	☒	*0.00351*		*N/A*		*0.00239*		*3*	*mg/L*				
2M. Arsenic, Total (7440-38-2)	☐	☒	☐	*6.80*		*N/A*		*6.11*		*3*	*µg/L*				
3M. Beryllium, Total (7440-41-7)	☐	☐	☒	*<0.0005*		*N/A*		*<0.0005*		*3*	*mg/L*				
4M. Cadmium, Total (7440-43-9)	☐	☐	☒	*<0.00025*		*N/A*		*<0.00025*		*3*	*mg/L*				
5M Chromium, Total (7440-47-3)	☐	☒	☐	*0.00102*		*N/A*		*0.00041*		*3*	*mg/L*				
6M Copper, Total (7440-50-8)	☐	☒	☐	*0.00930*		*N/A*		*0.00879*		*3*	*mg/l*				
7M lead, Total (7439-92-1)	☐	☒	☐	*0.00074*		*N/A*		*0.00028*		*3*	*mg/L*				
8M Mercury, Total (7439-97-6)	☐	☐	☒	*0.00578*		*N/A*		*0.00314*		*3*	*µg/L*				
9M Nickel, Total (7440-02-0)	☐	☒	☐	*0.00365*		*N/A*		*0.00333*		*3*	*mg/L*				
10M Selenium, Total (7782-49-2)	☐	☐	☒	*1.94*		*N/A*		*1.86*		*3*	*µg/L*				
11M Silver, Total (7440-22-4)	☐	☐	☒	*<0.0002*		*N/A*		*<0.0002*		*3*	*mg/L*				
12M Thallium, Total (7440-28-0)	☐	☐	☒	*<0.00036*		*N/A*		*<0.00036*		*3*	*mg/L*				
13M Zinc, Total (7440-66-6)	☐	☒	☐	*0.0334*		*N/A*		*0.0278*		*3*	*mg/L*				
14M Cyanide, Total (57-12-5)	☐	☐	☒	*<0.01*		*N/A*		*<0.01*		*3*	*mg/L*				
15M Phenols, Total	☐	☐	☒	*<0.05*		*N/A*		*<0.05*		*3*	*mg/L*				
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764--01-6)	☐	☒	☐	DESCRIBE RESULTS ***We expect Dioxin to be present solely as a result of its presence in the intake water. There is an existing TMDL for Dioxin on the Columbia River.***											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☒	<2.5		N/A		<2.5		3	µg/L				
2V. Acrylonitrille (107-13-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
3V. Benzene (71-43-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
4V. Bis (Chloromethyl) Ether (542-88-1)	☐	☐	☒												
5V. Bromoform (75-25-2)	☒	☒	☐	1.43		N/A		1.14		3	µg/L				
6V. Carbon Tetrachloride (56-23-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
7V. Chlorobenzene (108-90-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
8V. Chlorodibromomethane (124-48-1)	☒	☐	☐	<0.5		N/A		<0.5		3	µg/L				
9V. Chloroethane (75-00-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
11V. Chloroform (67-66-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
12V. Dichlorobromoethane (75-27-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
13V. Dichlorodifluoromethane (75-71-8)	☐	☐	☒												
14V. 1,1-Dichloroethane (75-27-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
15V. 1,2-Dichloroethane (107-06-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
16V. 1,1-Dichloroethylene (7535-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
17V. 1,2-Dichloropropane (78-87-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
18V. 1,3-Dichloropropylene (542-75-6)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
19V. Ethylbenzene (100-41-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
20V. Methyl Bromide (74-83-9)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
21V. Methyl Chloride (74-87-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: WAD980738488 WAD980738488

OUTFALL NUMBER: 001

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS *(continued)*															
22 V. Methylene Chloride (75-09-2)	☒	☐	☒	<2.5		N/A		<2.5		3	µg/L				
23V. 1,1,2,2-Tetra-Chloroethane (79-34-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
24V. Tetrachloro-ethylene (127-18-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
25V. Toluene (108-88-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
27V. 1,1,1-Tri-chloroethane (71-55-6)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
28V. 1,1,2-Tri-chloroethane (79-00-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
29V. Trichloro-ethylene (79-01-6)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
30V. Trichloro-fluoromethane (75-69-4)	☐	☐	☒												
31V. Vinyl Chloride (75-01-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
2A. 2,4-Dichloro-phenol (120-83-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
3A. 2,4-Dimethyl-phenol (105-67-9)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
4A. 4,6-Dinitro-O-cresol (534-52-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
5A. 2,4-Dinitro-phenol (51-28-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
6A. 2-Nitro-phenol (88-75-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
7A. 4-Ntro-phenol (100-02-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
8A. P-Chloro-M-Cresol (59-50-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
9A. Penta-chlorophenol (87-86-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
10A. Phenol (108-95-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
11A. 2,4,6-Tri-chlorophenol (88-06-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenphthene (83-32-9)	☒	☐	☒	*<0.4*		*N/A*		*<0.4*		*3*	*µg/L*				
2B. Acenaphtylene (208-96-8)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
3B. Anthracene (120-12-7)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
4B. Benzidine (92-87-5)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
5B. Benzo (a) Anthracene (56-55-3)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
6B. Benzo (a) Pyrene (50-32-8)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
7B. 3,4-Benzo-fluoranthene (205-99-2)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/l*				
8B. Benzo (ghi) Perylene (191-24-2)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
9B. Benzo (k) Fluoranthene (207-08-9)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
12B. Bis (2-Chloroisopropyl) Ether (108-60-1	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
13B. Bis(2-Ethyl-hexyl) Phthalate (117-81-7)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
14 B. 4-Bromo-phenyl Phenyl Ether (101-55-3)	☒	☐	☒	*<0.4*		*N/A*		*<0.4*		*3*	*µg/L*				
15B Butyl Benzyl Phthalate (85-68-7)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
16B. 2-Chloro-naphthalene (91-58-7)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
18B. Chrysene (218-01-9)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
19B. Dibenzo (a,h) Anthracene (53-70-3)	☐	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
20B. 1,2-Dichloro-benzene (95-50-1)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
21B. 1,3-Dichloro-benzene (541-73-1)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				

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EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: WAD980738488 WAD980738488

OUTFALL NUMBER: 001

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4 *if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1,4-Dichlorobenzene (106-46-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
23B. 3,3'-Dichlorobenzidine (91-94-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
24B. Diethyl Phthalate (84-66-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
25B. Dimethyl Phthalate (131-11-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
26B. Di-N-Butyl Phthalate (84-74-2)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
27B. 2,4-Dinitrotoluene (121-14-2)	☒	☐	☒	<0.4		N/A		<0.4		3	µg/L				
28B. 2,6-Dinitrotoluene (606-20-2)	☒	☐	☒	<0.4		N/A		<0.4		3	µg/L				
29B. Di-N-Octyl Phthalate (117-84-0)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
31B. Fluoranthene (206-44-0)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
32B. Fluorene (86-73-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
33B. Hexachlorobenzene (118-74-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
34B. Hexachlorobutadiene (87-68-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
35B. Hexachlorocyclopentadiene (77-47-4)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
36B. Hexachloroethane (67-72-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
38B. Isophorone (78-59-1)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
39B. Napthalene (91-20-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
40B. Nitrobenzene (98-95-3)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
41B. N-Nitrosodimethylamine (62-75-9)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				
42B. N-Nitrosdi-N-Propylamine (621-64-7)	☒	☐	☒	<0.5		N/A		<0.5		3	µg/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			2. EFFLUENT						d. NO. OF ANALYSIS	3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE *(if available)*			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
44B. Phenanthrene (85-01-8)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
45B. Pyrene (129-00-0)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
46B. 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☒	*<0.5*		*N/A*		*<0.5*		*3*	*µg/L*				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☒												
2P. α-BHC (319-84-6	☐	☐	☒												
3P. β-Bhc (319-85-7)	☐	☐	☒												
4P. γ-BHC (58-89-9)	☐	☐	☒												
5P. δ-BHC (319-86-8)	☐	☐	☒												
6P. Chlordane (57-74-9)	☐	☐	☒												
7P. 4,4'-DDT (50-29-3)	☐	☐	☒												
8P. 4,4'-DDE (72-55-9)	☐	☐	☒												
9P. 4,4'-DDD (72-54-8)	☐	☐	☒												
10P. Dieldrin (60-57-1)	☐	☐	☒												
11P. α-Endo-sulfan (115-29-7)	☐	☐	☒												
12P. β-Endo-sulfan (115-29-7	☐	☐	☒												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☒												
14P. Endrin (72-20-8)	☐	☐	☒												
15P. Endrin Aldehyde (7421-93-4)	☐	☐	☒												
16P. Heptachlor (76-44-8)	☐	☐	☒												

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EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
WAD980738488 WAD980738488	*001*

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES *(continued)*															
17P. Heptachlor Expxide (1024-57-3)	☐	☐	☒												
18P. PCB-1242 (53469-21-9)	☐	☐	☒												
19P. PCB-1254 (11097-69-1)	☐	☐	☒												
20P. PCB-1221 (11104-28-2)	☐	☐	☒												
21P. PCB-1232 (11141-16-5)	☐	☐	☒												
22P. PCB-1248 (12672-29-6)	☐	☐	☒												
23P. PCB-1260 (11096-82-5)	☐	☐	☒												
24P. PCB-1016 (12674-11-2)	☐	☐	☒												
25P. Toxa-phene (8001-35-2)	☐	☐	☒												

Columbia Generating Station
Supplemental NPDES Renewal Application
NPDES Outfall 001 - Appendix A Priority Pollutants
Nonconventional Parameters, Metals, Cyanide and Total F

Date	DO (mg/L)	TRC (mg/L)	TDS (mg/L)	S Fecal Coliform col/100 mL)	Total Coliform (col/100 mL)
12/12/2012	6.7	<0.05	1140	6.8	122.3
1/30/2013	6.9	<0.05	1180	N/A	N/A
4/3/2013	6.5	<0.05	1220	1.0	325.1
4/30/2013				11.0	17.0
Maximum	6.9	<0.05	1220	11	325.1
Average	6.7	<0.05	1180	6.3	154.8

Date	Cyanide Total (57-12-5) mg/L	Cyanide Amenable mg/L	Cyanide WAD mg/L	Br (mg/L)	SO4 (mg/L)	Sulfide (mg/L)	Sulfite (mg/L)
12/12/2012	<0.01	<0.01	<0.01	17.1	594	<0.2	<2
1/30/2013	<0.01	<0.01	<0.01	11.7	584	<0.1	<2
4/3/2013	<0.01	<0.01	<0.01	16.7	703	<0.1	<2
4/30/2013							
Maximum	<0.01	<0.01	<0.01	17.1	703	<0.2	<2
Average	<0.01	<0.01	<0.01	15.2	627	<0.2	<2

Date	Al (7429-90-5) (mg/L)	Ba (7440-39-3) (mg/L)	B (7440-42-8) (mg/L)	Cu ((7440-50-8) (mg/L)	Co (7440-48-4) (mg/L)	Pb (7439-92-1) (mg/L)	Hg (7439-97-6) (µg/L)
12/12/2012	0.183	0.274	0.0308	0.00897	0.00057	0.00074	0.00142
1/30/2013	0.185	0.281	0.0293	0.00930	<0.00025	<0.0005	0.00578
4/3/2013	0.0885	0.258	0.0304	0.00810	<0.00025	<0.0005	0.00223
4/30/2013							
Maximum	0.185	0.281	0.0308	0.00930	0.00057	0.00074	0.00578
Average	0.152	0.271	0.0302	0.00879	0.00021	0.00028	0.00314

Date	Mo (7439-98-7) (mg/L)	Ni (7440-02-0) (mg/L)	Se (7782-49-2) (µg/L)	(
12/12/2012	0.00726	0.00308	1.83	
1/30/2013	0.00645	0.00325	1.94	
4/3/2013	0.00702	0.00365	1.81	
4/30/2013				
Maximum	0.00726	0.00365	1.94	
Average	0.00691	0.00333	1.86	

Columbia Generating Station
Supplemental NPDES Renewal Application
NPDES Outfall 001

Pollutant and CAS No. (Appendix A Priority Pollutants)	Units	12/12/2012 Results	1/30/2013 Results	4/3/2013 Results	Maximum	Average
ACID COMPOUNDS						
2-Chlorophenol (95-57-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol (120-83-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol (105-67-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2,4 dinitrophenol (51-28-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2-Nitrophenol (88-75-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol (100-02-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol (87-86-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Phenol (108-95-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol (88-06-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5

Columbia Generating Station
Supplemental NPDES Renewal Application
NPDES Outfall 001

Pollutant and CAS No. (Appendix A Priority Pollutants)	Units	12/12/2012 Results	1/30/2013 Results	4/3/2013 Results	Maximum	Average
VOLATILE COMPOUNDS						
Acrolein (107-02-8)	µg/L	<2.5	<2.5	<2.5	<2.5	<2.5
Acrylonitrile (107-13-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene (71-43-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform (75-25-2)	µg/L	1.01	0.99	1.43	1.43	1.14
Carbon tetrachloride (56-23-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene (108-90-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane (75-00-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl Ether (110-75-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform (67-66-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane (124-48-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene (95-50-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene (541-73-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene (106-46-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorobromomethane (75-27-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane (75-34-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane (107-06-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene (75-35-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane (78-87-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) (542-75-6)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (100-41-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl bromide (74-83-9) (Bromomethane)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl chloride (74-87-3) (Chloromethane)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Methylene chloride (75-09-2)	µg/L	<2.5	<2.5	<2.5	<2.5	<2.5
1,1,2,2-Tetrachloroethane (79-34-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene (127-18-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (108-88-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane (71-55-6)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1;1,2-Trichloroethane (79-00-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene (79-01-6)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride (75-01-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5

Columbia Generating Station
Supplemental NPDES Renewal Application
NPDES Outfall 001

Pollutant and CAS No. (Appendix A Priority Pollutants)	Units	12/12/2012 Results	1/30/2013 Results	4/3/2013 Results	Maximum	Average
BASE/NEUTRAL COMPOUNDS						
Acenaphthene (83-32-9)	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
Acenaphthylene (208-96-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene (120-12-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzidine (92-87-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzyl butyl phthalate (85-68-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene (56-55-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene (3,4-benzofluoranthene) (205-99-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(j)fluoranthene (205-82-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene (11,12-benzofluoranthene) (207-08-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(r,s,t)pentaphene (189-55-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene (50-32-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(ghi)Perylene (191-24-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy)methane (111-91-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethyl)ether (111-44-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroisopropyl)ether (39638-32-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-ethylhexyl)phthalate (117-81-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4-Bromophenyl phenyl ether (101-55-3)	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
2-Chloronaphthalene (91-58-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorophenyl phenyl ether (7005-72-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene (218-01-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo (a,h)acridine (226-36-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo (a,j)acridine (224-42-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a-h)anthracene (53-70-3)(1,2,5,6-dibenzanthracene)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,e)pyrene (192-65-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)pyrene (189-64-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
3,3-Dichlorobenzidine (91-94-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl phthalate (84-66-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethyl phthalate (131-11-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Di-n-butyl phthalate (84-74-2)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrotoluene (121-14-2)	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
2,6-dinitrotoluene (606-20-2)	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
Di-n-octyl phthalate (117-84-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene (206-44-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5

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Pollutant and CAS No. (Appendix A Priority Pollutants)	Units	12/12/2012 Results	1/30/2013 Results	4/3/2013 Results	Maximum	Average
BASE/NEUTRAL COMPOUNDS (continued)						
Fluorene (86-73-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (118-74-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene (87-68-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene (77-47-4)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachloroethane (67-72-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)Pyrene (193-39-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Isophorone (78-59-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
3-Methyl cholanthrene (56-49-5)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (91-20-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrobenzene (98-95-3)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodimethylamine (62-75-9)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodi-n-propylamine (621-64-7)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodiphenylamine (86-30-6)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Perylene (198-55-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene (85-01-8)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene (129-00-0)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene (120-82-1)	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5

Attachment C – Wastewater Source Descriptions
(5 pages)

WASTEWATER SOURCE DESCRIPTIONS

Columbia Generating Station (CGS)
December 2013

Circulating Cooling Water Blowdown

The main steam condenser and miscellaneous heat exchangers (turbine service water system) are cooled by the non-contact circulating water (CW) system. The recirculating flow is typically about 600,000 gallons per minute (gpm). The heat is rejected to the atmosphere by the evaporative process in six (6) mechanical draft cooling towers. The evaporated water and that lost through drift and blowdown is replenished from the Columbia River at an average rate of about 15,000 gpm. Evaporation of the cooling water results in the concentration of dissolved solids. To limit the buildup of dissolved salts, a portion of the cooling water is released to the river as blowdown (to Outfall 001).

Although the blowdown stream is intended to be a relatively constant discharge, several factors can cause variation in the chemical composition of the discharge. The most important factor is the adjustable blowdown rate that determines the concentration factor for dissolved material in the circulating water. Columbia Generating Station (CGS) has typically operated between 5 cycles of concentration (about 3000 gpm blowdown) and 12 cycles of concentration (about 800 gpm blowdown).

The chemical composition of the blowdown is also affected by the circulating water treatment regime. Sulfuric acid is added to help maintain pH. The water is also treated with a polyphosphate blend for corrosion inhibition in mild steel and a phosphonate copolymer (aminomethylene phosphonate or AMPs) that acts as a dispersant to minimize scale formation. Sodium tolyltriazole is added separately for copper alloy corrosion control. Microbiocidal treatment is provided with additions of sodium hypochlorite and sodium bromide two or three times per week. Upsets in these treatments can result in variations in the amount of plant component material that becomes corroded or eroded into the cooling water. Also, concentrations of dissolved material can increase slightly during biocide treatment because blowdown is terminated for approximately 10 to 24 hours to allow the halogen residual to decay.

Another factor causing short-term increases in metal concentrations in the cooling water is the periodic dewatering and mechanical cleaning of the condenser tubes during maintenance outages. Higher copper CW concentrations are typical after an outage. Online cooling tower cleaning to remove silt and organic matter can cause some of the material to become resuspended such that the solids concentration in the blowdown is slightly higher than normal. CW (and blowdown) suspended solids concentrations are also increased during dust storms because the towers act like large air scrubbers. Seasonal increases in makeup water turbidity also result in higher CW suspended solids.

Also affecting the composition of the waste stream at point of entry to the river are the

streams that may be introduced into the blowdown line. One of these is processed liquid radwaste which is relatively pure, low conductivity water that is released in batches of about 15,000 gallons at rates of up to 190 gpm. These releases are necessary if the plant storage inventory is full or if the total organic content of the water is too high to be used in the plant. There have been no releases from the liquid radwaste system since September 19, 1998.

Another source of water discharged to the blowdown line is the standby service water (SSW) system (discussed in more detail in the SSW section below). The primary reason for discharging service water is to reduce the concentration of sulfur or chlorides that have the potential to induce corrosion. Other reasons for discharging include the need to perform maintenance on the submerged components in the spray ponds, the need to clean out accumulations of sediment in the ponds, or to reduce suspended solids in the ponds. Infrequently, several million gallons of standby service water might be released to the blowdown line or to the CW system over a period of a couple days to multiple weeks. This water tends to be of lower cycles of concentration than the circulating cooling water.

Periodically the main condenser becomes scaled, reducing plant efficiency to the point that chemical cleaning of the main condenser becomes necessary. Blowdown to the river will be secured and a cleaning agent, Ferroquest™ or equivalent, will be added to the circulating water system. Sodium tolyltriazole will be added for copper metal corrosion protection. After the treated water has circulated a sufficient time to remove most of the scale (estimated to be one or two hours), sodium hydroxide will be added for pH adjustment. At the completion of the cleaning process, if any permit condition is not met (typically copper), circulating water will be pumped to a storage location using temporary pumps and piping. During this pumping process, the concentration of constituents in the circulating water will be reduced by the addition of makeup water from the river. When the circulating water meets all conditions for discharge, blowdown to the river will be initiated. After the condenser cleaning process is completed, the stored water will be treated as necessary to meet discharge requirements. Following achievement of discharge limits, the water will be pumped back to the circulating water basin at Columbia Generating Station. Sediment from the cleaning process will be analyzed and disposed in accordance with our solid waste control plan.

Stormwater and Miscellaneous Wastes

Runoff from the plant building roofs is routed through the stormwater system to a small pond (Outfall 002) located approximately 1500 feet northeast of the plant. Stormwater collected in the bermed area around the Diesel Fuel Polishing Building is collected in a sump and periodically discharged to Outfall 002. Also routed to the pond are several wastewater streams. The most significant non-rainfall sources are the water treatment systems. Site potable water is prepared by flocculation and filtration of river water. The mixed media filter is periodically cleaned by backwashing with 15,000-25,000 gallons of potable water. This backwash water is discharged through the storm drain system. A side stream of potable water is provided with additional treatment to produce high purity plant process water. The reverse osmosis unit in this treatment train has a reject stream of

about 30 gpm when it is producing water with a feed flow rate of 70 gpm. It also has continuous 5 gpm flow through monitoring instrumentation. Both of these streams are routed to the pond.

Other sources of water discharges to the pond are the sump in the plant General Services Bldg (GSB) basement and floor drains in the Diesel-Generator Bldg (DGB). The GSB sump collects water from building equipment drains and area floor drains. Examples of water sources directed to the sump include HVAC units, pump and valve leakage, demineralized water storage tank overflows, and floor washings. A level switch activates the sump pump and causes the collected water to be discharged to the stormwater pond. The DGB floor drains are connected directly to the stormwater pipe. Among the few sources of water in the DGB are the diesel engine cooling jackets from which approximately 3,800 gallons of water treated with a nitrite-based corrosion inhibitor are drained about once per year.

The Turbine-Generator Bldg (TGB) has three non-radioactive sumps that are directed to radwaste processing. The sumps are receiving points for equipment and floor drains in the TGB. The sumps are no longer physically connected to the storm drainage system. The Radwaste and Reactor buildings have air wash units on the fresh air intakes that operate during warm weather months and discharge to the storm drain system.

A proposed transformer yard oil collection system would collect stormwater and/or deluge testing water immediately around each transformer and discharge the water directly to the evaporation ponds that will replace the storm drain pond in 2014. This project is currently in the design phase with tentative implementation in 2016.

Operation and testing of the fire protection system is another source of water discharges to the pond. Periodically portions of the system are removed from service for flushing and flow-rate tests. These batches of several thousand gallons may also be routed to the sanitary waste system or directly to the ground depending on the location and system configuration.

Other discharges to ground may include hydrotesting, maintenance, and construction wastewater discharges. Hydrotesting discharges such as system and component testing, maintenance discharges such as drainage, flushing, and wash down activities, and construction discharges such as compaction, demolition, vacuum truck digging, dust control watering, concrete curing, concrete cutting, including rinsate and etching solutions, and pressure washing activities. Additionally, discharges to ground may also include condensate discharges from heating, ventilation, and air conditioning systems, air compressors, and engines; potable water system testing and flushing, water tank overflows; other miscellaneous discharges such as well sampling purge water, eyewash and safety shower testing, and incidental releases from facilities.

Stormwater runoff from parking lots, support buildings, and other impervious surfaces around CGS are managed by multiple underground injection control (UIC) wells.

Standby Service Water

The SSW system removes reactor decay heat during normal shutdown conditions and provides a heat sink for emergency equipment during a plant transient or accident. The SSW system is a closed-loop circulating water system that draws cooling water from, and returns heated water to, an onsite reservoir. This reservoir consists of an interconnected pair of concrete basins (or spray ponds) with a total capacity of 12 million gallons. Water lost to evaporation, drift, and discharges is replenished from the river or from the site potable water system. Dissolved constituents in the SSW are typically 2½ times river concentrations. Microbiological growth is controlled with periodic batch additions of 50% hydrogen peroxide and Busan 77. The service water is also treated with sodium silicate for corrosion inhibition.

Historically, a sidestream filter was operated during warm weather months (approximately April through October) to remove suspended organic material from the service water. The filter was backwashed at intervals varying from three days to three weeks. The resulting water was discharged to the ground in a shallow depression (Outfall 003) located about 500 feet south of the spray ponds. Each backwash cycle took about 25 to 40 minutes and created 10,000-15,000 gallons of effluent. The sidestream filter was not placed into service during the current permitting cycle.

On an infrequent basis, the SSW ponds must be drained down for cleaning or for equipment maintenance. Sediments can also be vacuumed from the bottom of the ponds without draining the ponds. The sediments removed from the ponds are placed in the sediment disposal cells in accordance with EFSEC Resolution No. 299. As discussed above, the ponds can also be dewatered by direct discharge to the blowdown line (Outfall 001).

Sanitary Waste

Sanitary waste from CGS, WNP-1/4, and the support facilities is piped to a treatment system that uses aeration lagoons and facultative stabilization ponds. This wastewater treatment facility is located about ½ mile southeast of CGS. Influent averages about 20,000 gallons per day with the higher flows being coincident with the biannual CGS maintenance outage. When the stabilization ponds are full, the treated wastewater is discharged to percolation beds. These discharges are made a few times per year in accordance with EFSEC Resolution No. 300.

Chemical Usage

Water treatment additives used in the systems discussed above and in other water systems is summarized in the attached table.

CGS Water Treatment Chemical Consumption

System and Chemical	Frequency	Annual Use (lb/yr)		Description of Use
		Average	Maximum	
Circulating Water/Turbine Service Water				
Sulfuric Acid	Continuous	2,075,000	2,471,000	pH Control
Sodium Hypochlorite	Batch 2-3 times/wk	560,000	700,000	Biocide
Sodium Bromide	Batch 2-3 times/wk	225,000	269,000	Biocide
AMPs Copolymer & Polyphosphate Blend (DVS3A002)	Continuous	355,000	450,000	Dispersant and Corrosion Control
Sodium Tolyltriazole (CWT 4543)	Continuous	19,800	19,900	Corrosion Control
Ferroquest™	Periodic	As needed	140,000	Condenser Cleaning
Sodium Hydroxide	Periodic	As needed	13,000	pH control following chemical cleaning
Standby Service Water				
Hydrogen Peroxide (50%)	Batch - seasonal	250,000	271,000	Biocide
Busan 77	Batch	3,800	5,100	Biocide
N Sodium Silicate	Batch	42,000	58,000	Corrosion Control
Potable Water				
Sodium Hypochlorite (12%)	Semi-continuous	8,000	8,000	Disinfectant
Poly Aluminum Chloride	Continuous	4,400	4,500	Coagulant Aid
Polymer	Continuous	8	9	Filter Aid
Demineralized Water				
Amino Acid F	Semi continuous	75	80	Silica Analyzer Reagent
Citric Acid/Surfactant Reagent	Semi continuous	80	85	Silica Analyzer Reagent
Molybdate 3 Reagent	Semi continuous	100	100	Silica Analyzer Reagent
Silica Standard Solution	Semi continuous	75	80	Silica Analyzer Reagent
Closed Cooling Loops				
Nalco 39M	Batch as required	500	600	Corrosion Inhibition- Diesel Jacket Water
Sodium Nitrite	Batch as required	As needed	As needed	Corrosion Inhibition – HVAC Chiller & Heater Systems
Sodium Hydroxide	Batch as required	As needed	As needed	pH Control – HVAC Chiller & Heater Systems
Standby Liquid Control				
Borax	Batch as required	300	400	Reactivity Control (Backup)
Boric Acid	Batch as required	300	400	Reactivity Control (Backup)

Attachment D – Underground Injection Control Wells
(2 pages)

Columbia Generating Station
Supplemental NPDES Renewal Application
Underground Injection Control Wells

Facility Name	Well Owner ID	Constr Date	Latitude	Longitude	EPA Well Type	Status	Well Constr Type	Depth of Well	Ground Water Protection Area?	Drainage Area Description	Registration Status
CGS	C-01	1984	46.468357	119.336197	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-02	1984	46.468625	119.335834	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-03	1984	46.469114	119.335733	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	C-04	1984	46.469254	119.335936	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-05	1984	46.468676	119.336254	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-06	1984	46.468140	119.336820	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-07	1984	46.468135	119.337178	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	C-08	1984	46.468734	119.337308	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	C-09	1984	46.469221	119.336888	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	C-10	1984	46.468375	119.335962	5D4	Active	DW	3	No	Other: Gravel Area	Grandfathered
CGS	C-11	1984	46.468613	119.335873	5D4	Unused	DW	0	No	Other: Gravel Area	Grandfathered
CGS	C-12	1984	46.469304	119.336200	5D4	Active	DW	4	No	Other: Gravel Area	Grandfathered
CGS	C-13	1984	46.469169	119.335532	5D4	Unused	DW	0	No	Other: Gravel Area	Grandfathered
CGS	C-14	1984	46.467756	119.336066	5D4	Active	DW	4	No	Other: Gravel Area	Grandfathered
CGS	C-15	1984	46.467773	119.337408	5D4	Active	DW	4	No	Other: Gravel Area	Grandfathered
CGS	C-16	1984	46.468790	119.338708	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	C-17	1984	46.468066	119.335247	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	C-18	1984	46.469311	119.336891	5D2	Unused	DW	0	No	Other: Gravel Area	Grandfathered
CGS	C-19	1984	46.469301	119.335557	5D2	Unused	DW	0	No	Other: Gravel Area	Grandfathered
CGS	C-20	1984	46.468776	119.334913	5D4	Active	DW	4	No	Other: Gravel Area	Grandfathered
CGS	C-21	1984	46.468306	119.349666	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	KB-1	1982	46.461602	119.342802	5D2	Active	DW	23	No	NP Roof	Grandfathered
CGS	KB-2	1982	46.461773	119.347195	5D2	Active	DW	23	No	NP Roof	Grandfathered
CGS	KB-04	1982	46.462161	119.343266	5D2	Active	IT	7	No	Other: Dirt Area	Grandfathered
CGS	KB-07	1982	46.462107	119.343105	5D2	Active	IT	5	No	NP Roof	Grandfathered
CGS	KB-08	1982	46.462264	119.343173	5D2	Active	IT	4	No	NP Roof	Grandfathered
CGS	KB-13	1982	46.463566	119.342581	5D2	Active	IT	9	No	P/D, Road	Grandfathered
CGS	KB-20	1982	46.464843	119.342213	5D2	Active	IT	6	No	P/D, Road	Grandfathered
CGS	KB-27	1982	46.463599	119.341180	5D2	Active	IT	6	No	P/D, Road	Grandfathered
CGS	KB-31	1982	46.461912	119.340890	5D2	Active	IT	3	No	LD	Grandfathered
CGS	KB-33	1982	46.461911	119.340791	5D2	Active	IT	7	No	P/D, LD	Grandfathered
CGS	KB-34	1989	46.462335	119.342433	5D2	Active	DW	4	No	P/D, LD	Grandfathered
CGS	N-01	1984	46.470459	119.336715	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-04	1984	46.470654	119.335989	5D2	Active	DW	5	No	Other: Walkway	Grandfathered
CGS	N-05	1984	46.471874	119.336717	5D2	Active	DW	5	No	Metal Roof	Grandfathered
CGS	N-07	1984	46.472705	119.335949	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-08	1984	46.471965	119.335973	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-09	1984	46.472498	119.336072	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-10	1984	46.470407	119.335359	5D2	Active	DW	6	No	Road	Grandfathered
CGS	N-11	1984	46.470571	119.334792	5D2	Active	DW	5	No	Road	Grandfathered
CGS	N-12	1984	46.470606	119.334485	5D2	Active	DW	4	No	Road	Grandfathered
CGS	N-14	1984	46.470803	119.335279	5D2	Active	DW	5	No	Road	Grandfathered
CGS	N-16	1984	46.471765	119.335159	5D2	Active	DW	5	No	Road	Grandfathered
CGS	N-18	1984	46.473653	119.333689	5D2	Active	DW	9	No	Other: Gravel Area	Grandfathered
CGS	N-19	1984	46.470813	119.334902	5D2	Active	DW	4	No	Other: Gravel Area	Grandfathered
CGS	N-20	1984	46.472037	119.335253	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-21	1984	46.472947	119.337607	5D2	Active	DW	5	No	Road	Grandfathered
CGS	N-22	1984	46.473587	119.337153	5D2	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	N-23	1984	46.472450	119.336748	5D2	Active	DW	5	No	P/D, Metal Roof	Grandfathered
CGS	N-25	1984	46.472810	119.331664	5D2	Active	DW	6	No	Other: Dirt Area	Grandfathered
CGS	N-26	1984	46.472844	119.334977	5D2	Active	DW	7	No	Road	Grandfathered
CGS	N-28	1984	46.472813	119.333021	5D2	Active	DW	2	No	Road	Grandfathered
CGS	N-29	1984	46.472667	119.333024	5D2	Active	DW	6	No	Other: Rockscape	Grandfathered
CGS	N-30	1984	46.471235	119.331348	5D2	Active	DW	6	No	Other: Dirt Area	Grandfathered
CGS	N-31	1984	46.470541	119.331073	5D2	Active	DW	6	No	P/D	Grandfathered
CGS	N-32	1984	46.470355	119.330363	5D2	Active	DW	6	No	Other: Dirt Area	Grandfathered
CGS	N-33	1984	46.470371	119.337500	5D2	Active	DW	7	No	P/D	Grandfathered
CGS	N-34	1984	46.470375	119.337901	5D2	Active	DW	7	No	P/D	Grandfathered
CGS	N-35	1984	46.504760	119.338315	5D2	Active	DW	7	No	P/D	Grandfathered
CGS	N-36	1984	46.503941	119.337495	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-37	1984	46.503945	119.337844	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-38	1984	46.503949	119.338277	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-39	1984	46.504144	119.337485	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-40	1984	46.504148	119.337840	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-41	1984	46.504152	119.338275	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-42	1984	46.504347	119.337486	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-43	1984	46.504351	119.337835	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-44	1984	46.504355	119.338268	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-45	1984	46.504340	119.336816	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-46	1984	46.504641	119.336436	5D2	Active	DW	10	No	NP Roof	Grandfathered
CGS	N-47	1984	46.504644	119.336726	5D2	Active	DW	9	No	Other: Rockscape	Grandfathered
CGS	N-48	1984	46.504650	119.337317	5D2	Active	DW	8	No	NP Roof	Grandfathered
CGS	N-50	1984	46.504660	119.338281	5D2	Active	DW	10	No	P/D	Grandfathered
CGS	N-51	1984	46.505196	119.337305	5D2	Active	DW	11	No	P/D	Grandfathered
CGS	N-52	1984	46.471836	119.335928	5D2	Active	DW	10	No	P/D, Metal Roof	Grandfathered
CGS	N-53	1984	46.471499	119.335897	5D2	Active	DW	6	No	Other: Rockscape	Grandfathered
CGS	N-58	1984	46.472250	119.336999	5D2	Active	DW	2	No	P/D, Metal Roof	Grandfathered
CGS	N-62	1984	46.470747	119.336730	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-63	1984	46.470947	119.336391	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	N-65	2004	46.470344	119.335662	5D2	Active	DW	1	No	Road	Grandfathered

Columbia Generating Station
Supplemental NPDES Renewal Application
Underground Injection Control Wells

Facility Name	Well Owner ID	Constr Date	Latitude	Longitude	EPA Well Type	Status	Well Constr Type	Depth of Well	Ground Water Protection Area?	Drainage Area Description	Registration Status
CGS	N-66	1984	46.471274	119.335538	5D2	Active	DW	7	No	Road	Grandfathered
CGS	N-67	1984	46.471274	119.335538	5D2	Active	DW	6	No	Road	Grandfathered
CGS	N-68	1984	46.471338	119.335275	5D2	Active	DW	6	No	Metal Roof	Grandfathered
CGS	N-69	2012	46.473383	119.336300	5D2	Active	IT	3	No	P/D	Permit
CGS	N-70	2012	46.473186	119.336300	5D2	Active	IT	3	No	P/D	Permit
CGS	N-71	2004	46.472454	119.336218	5D2	Active	DW	5	No	P/D, Metal Roof	Grandfathered
CGS	N-72	2009	46.472454	119.336218	5D2	Active	IT	3	No	Metal Roof	Permit
CGS	N-73	2009	46.472357	119.336200	5D2	Active	IT	3	No	Metal Roof	Permit
CGS	N-74	2011	46.281888	119.201135	5D2	Active	IT	3	No	Metal Roof	Permit
CGS	N-75	2013	46.471410	119.337110	5D2	Active	IT	3	No	Building Entry	Pending
CGS	S-01	1984	46.469752	119.338641	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	S-02	1984	46.470057	119.338631	5D2	Active	DW	6	No	P/D	Grandfathered
CGS	S-03	1984	46.469751	119.338160	5D2	Active	DW	6	No	P/D	Grandfathered
CGS	S-04	1984	46.470053	119.338155	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	S-05	1984	46.469747	119.337680	5D2	Active	DW	6	No	P/D	Grandfathered
CGS	S-06	1984	46.470049	119.337679	5D2	Unused	DW	0	No	P/D	Grandfathered
CGS	S-07	1984	46.470264	119.341852	5D2	Active	DW	4	No	P/D	Grandfathered
CGS	S-08	1984	46.469353	119.336922	5D2	Active	DW	5	No	Road	Grandfathered
CGS	S-09	1984	46.469689	119.336240	5D2	Active	DW	3	No	LD	Grandfathered
CGS	S-10	1984	46.470096	119.336382	5D2	Unused	DW	0	No	Other: Gravel Area	Grandfathered
CGS	S-15	1984	46.469882	119.334438	5D2	Active	DW	5	No	P/D	Grandfathered
CGS	S-16	1984	46.469875	119.333775	5D2	Active	DW	6	No	Metal Roof	Grandfathered
CGS	S-17	1984	46.472757	119.333229	5D4	Active	DW	3	No	Other: Gravel Area	Grandfathered
CGS	S-18	1984	46.469655	119.332684	5D4	Active	DW	5	No	Other: Gravel Area	Grandfathered
CGS	S-19	1984	46.469749	119.332770	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	S-20	1984	46.469623	119.332522	5D4	Active	DW	6	No	Other: Gravel Area	Grandfathered
CGS	S-24	1984	46.472631	119.334280	5D2	Active	DW	5	No	LD	Grandfathered
CGS	S-25	1984	46.469891	119.336934	5D2	Active	DW	4	No	Road	Grandfathered
CGS	S-26	1984	46.469418	119.330101	5D2	Active	DW	6	No	Other: Dirt Area	Grandfathered
CGS	S-27	1984	46.469894	119.338375	5D2	Active	DW	6	No	Other: Dirt Area	Grandfathered
CGS	S-28	1984	46.469949	119.336026	5D2	Active	DW	5	No	Road, Metal Roof	Grandfathered
CGS	S-37	1984	46.469563	119.335174	5D2	Active	DW	5	No	P/D, Metal Roof	Grandfathered
CGS	S-40	1984	46.469949	119.331127	5D4	Active	DW	2	No	Other: Gravel Area	Grandfathered
CGS	W-03	1998	46.472410	119.329040	5D2	Active	DW	9	No	P/D	Grandfathered
CGS	W-04	1998	46.471960	119.328494	5D2	Active	DW	10	No	P/D	Grandfathered
CGS	W-05	1984	46.471926	119.328896	5D2	Active	DW	6	No	P/D	Grandfathered
CGS	W-07	1998	46.971605	119.327833	5D2	Active	DW	10	No	P/D	Grandfathered
CGS	W-08	2004	46.473115	119.328776	5D2	Active	DW	3	No	P/D	Grandfathered
CGS	W-10	1984	46.472619	119.330151	5D2	Active	DW	4	No	P/D, R	Grandfathered
CGS	W-11	1984	46.472479	119.330420	5D2	Active	DW	4	No	P/D, R	Grandfathered
CGS	W-13	1984	46.471605	119.328759	5D2	Active	DW	5	No	P/D, R	Grandfathered
CGS	W-14	1984	46.471922	119.329099	5D2	Active	DW	5	No	P/D, R	Grandfathered
CGS	W-15	1984	46.472158	119.329371	5D2	Active	DW	5	No	P/D, R	Grandfathered
CGS	W-16	1984	46.471104	119.338357	5D2	Active	DW	5	No	P/D, R	Grandfathered
CGS	W-17	1984	46.472366	119.330886	5D2	Active	DW	10	No	P/D, R	Grandfathered
CGS	W-18	1984	46.472645	119.330363	5D2	Active	DW	10	No	P/D, R	Grandfathered
CGS	W-19	1984	46.470959	119.329268	5D2	Active	DW	10	No	P/D, R	Grandfathered
CGS	W-20	1984	46.136755	119.315074	5D2	Active	DW	8	No	P/D, R	Grandfathered