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October 15, 2020

Mr. Randall Bailey
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah St., Suite 600
Portland, OR 97232

Re: Third Quarter 2020 Characterization Monitoring Report
NW Natural Source Control Groundwater Treatment Facility
7900 NW St. Helens Road, Portland
NPDES Permit Number 103061 (permit renewal pending with DEQ)

Dear Mr. Bailey:

Attached is the Quarterly Characterization Monitoring Report for July-September 2020. The data are reported as prescribed in the NPDES permit and the June 2013 DEQ document "Completing Discharge Monitoring Reports (DMRs)" as follows:

- Sample results at or below the detection level are reported as "< detection level."
- Sample results above the detection level but below quantitation level have a data code denomination "e" next to the result on the "Raw Data" Worksheet. These data were converted to the "Final" Worksheet as follows:
    - If the sample result was greater than detection limit, but less than the quantitation limit, the value of the detection limit was substituted.

All samples were taken at the designated discharge point. Internal process samples taken by Sevenson Environmental Services for process optimization, but not taken at the designated sample point are not reported.

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If you have questions about this package, please contact Terry Driscoll at Aponowich, Driscoll & Associates, Inc, (404) 641-8107, tpdriscoll@mindspring.com.

Very truly yours,

Vice President of Public Affairs
NW Natural

Attachment:
Third Quarter 2020 Effluent Characterization Tables

NW Natural Source Control Treatment Plant Effluent Flow and Temperature Data
Permit Number 103061
File Number 120589

	Total Flow	Average Daily Temp	Maximum Daily Temp	Maximum Temp 7-day Moving Average
Date	Gals/Day	deg F	deg F	deg F
1-Jul-2020	267334	61.4	63.0	63.1
2-Jul-2020	256056	61.0	62.0	62.9
3-Jul-2020	265994	61.4	62.0	62.4
4-Jul-2020	259825	61.4	62.0	62.1
5-Jul-2020	274873	61.5	62.0	62.1
6-Jul-2020	284107	61.4	62.0	62.1
7-Jul-2020	266827	61.4	62.0	62.1
8-Jul-2020	293646	61.5	63.0	62.1
9-Jul-2020	285649	61.4	63.0	62.3
10-Jul-2020	282815	61.8	63.0	62.4
11-Jul-2020	268788	61.9	63.0	62.6
12-Jul-2020	298943	61.6	62.0	62.6
13-Jul-2020	283216	61.5	63.0	62.7
14-Jul-2020	285129	62.3	65.0	63.1
15-Jul-2020	263321	63.0	65.0	63.4
16-Jul-2020	291107	62.8	64.0	63.6
17-Jul-2020	280920	62.0	64.0	63.7
18-Jul-2020	284782	61.8	64.0	63.9
19-Jul-2020	290664	63.1	67.0	64.6
20-Jul-2020	298250	63.3	65.0	64.9
21-Jul-2020	268032	63.4	65.0	64.9
22-Jul-2020	276598	63.1	65.0	64.9
23-Jul-2020	284592	61.9	63.0	64.7
24-Jul-2020	304721	61.5	63.0	64.6
25-Jul-2020	308641	61.3	63.0	64.4
26-Jul-2020	296893	62.7	65.0	64.1
27-Jul-2020	286626	63.7	65.0	64.1
28-Jul-2020	295714	63.3	65.0	64.1
29-Jul-2020	303528	62.9	65.0	64.1
30-Jul-2020	277574	63.3	65.0	64.4
31-Jul-2020	284384	63.8	66.0	64.9
1-Aug-2020	295343	62.3	64.0	65.0
2-Aug-2020	304169	62.5	64.0	64.9
3-Aug-2020	295508	62.6	64.0	64.7
4-Aug-2020	304196	62.7	64.0	64.6
5-Aug-2020	288902	63.3	65.0	64.6
6-Aug-2020	301341	62.0	64.0	64.4
7-Aug-2020	305585	61.3	63.0	64.0
8-Aug-2020	305459	61.7	63.0	63.9
9-Aug-2020	312636	61.6	63.0	63.7
10-Aug-2020	313131	62.5	64.0	63.7
11-Aug-2020	294767	61.8	64.0	63.7
12-Aug-2020	316202	61.7	64.0	63.6
13-Aug-2020	298805	61.3	63.0	63.4
14-Aug-2020	327464	61.9	64.0	63.6
15-Aug-2020	307562	62.8	65.0	63.9
16-Aug-2020	301708	63.2	65.0	64.1
17-Aug-2020	283950	63.0	65.0	64.3
18-Aug-2020	290059	63.0	65.0	64.4
19-Aug-2020	303008	62.9	65.0	64.6
20-Aug-2020	292697	62.6	64.0	64.7
21-Aug-2020	292118	62.5	64.0	64.7
22-Aug-2020	293607	61.8	63.0	64.4
23-Aug-2020	305674	62.0	63.0	64.1
24-Aug-2020	305881	61.7	63.0	63.9
25-Aug-2020	312709	61.7	63.0	63.6
26-Aug-2020	311453	61.7	63.0	63.3
27-Aug-2020	311085	61.7	63.0	63.1
28-Aug-2020	309570	61.7	63.0	63.0
29-Aug-2020	306667	61.6	63.0	63.0
30-Aug-2020	312779	60.9	62.0	62.9
31-Aug-2020	307929	61.0	62.0	62.7
1-Sep-2020	318757	61.9	64.0	62.9
2-Sep-2020	306336	62.8	66.0	63.3
3-Sep-2020	293086	62.7	64.0	63.4
4-Sep-2020	311164	62.6	64.0	63.6
5-Sep-2020	310813	61.6	63.0	63.6
6-Sep-2020	313156	61.9	64.0	63.9
7-Sep-2020	310504	62.2	64.0	64.1
8-Sep-2020	322200	62.0	63.0	64.0
9-Sep-2020	307444	62.1	65.0	63.9
10-Sep-2020	306863	61.8	63.0	63.7
11-Sep-2020	306254	60.3	62.0	63.4
12-Sep-2020	287615	60.0	61.0	63.1
13-Sep-2020	292067	60.0	60.0	62.6
14-Sep-2020	303755	60.3	61.0	62.1
15-Sep-2020	301676	60.8	62.0	62.0
16-Sep-2020	306969	60.7	62.0	61.6
17-Sep-2020	305091	60.5	61.0	61.3
18-Sep-2020	302512	61.0	61.0	61.1
19-Sep-2020	309893	60.4	61.0	61.1
20-Sep-2020	313070	60.6	62.0	61.4
21-Sep-2020	311687	60.6	62.0	61.6
22-Sep-2020	311656	60.7	62.0	61.6
23-Sep-2020	312067	60.6	62.0	61.6
24-Sep-2020	311200	60.5	61.0	61.6
25-Sep-2020	313101	60.2	61.0	61.6
26-Sep-2020	311739	59.9	61.0	61.6
27-Sep-2020	314174	60.0	61.0	61.4
28-Sep-2020	308169	60.4	62.0	61.4
29-Sep-2020	307630	60.8	62.0	61.4
30-Sep-2020	298291	60.9	62.0	61.4
July Average	**282,889**	**62.2**	**63.7**	**63.5**
July Maximum	**308,641**	**63.8**	**67.0**	**64.9**
August Average	**303,612**	**62.1**	**63.7**	**63.9**
August Maximum	**327,464**	**63.3**	**65.0**	**65.0**
September Average	**307,631**	**61.0**	**62.3**	**62.4**
September Maximum	**322,200**	**62.8**	**66.0**	**64.1**
3rd Quarter Average	**297,940**	**61.8**	**63.3**	**63.3**
3rd Quarter Maximum	**327,464**	**63.8**	**67.0**	**65.0**

25-Jun-2020	64.0
26-Jun-2020	65.0
27-Jun-2020	64.0
28-Jun-2020	62.0
29-Jun-2020	62.0
30-Jun-2020	62.0

NW Natural Source Control Treatment Plant Effluent Data

Permit Number 103061

File Number 120589

Sample Type Grab/Composite (Total Cadmium and Dissolved Cadmium results are taken from the **FR -** Fremont Laboratory report. Inorganic Arsenic result is taken from the **BR -** Brooks Laboratory report. For VOCs and Cyanide, 6 discrete samples composited at the laboratory).

Date of Sample 12-Aug-20

	Code[1]	Result	MDL	RL	UNITS	
Hardness		**21**	NR	1.9	mg CaCO3/L	
Metals						
Arsenic (Inorganic)		**1.1**	0.04	0.10	ug/L	BR
Chromium III (Total)		NA				
Chromium III (Dissolved)		NA				
Chromium VI (Total)	**e**	**2.8**	2.0	5.0	ug/L	
Chromium VI (Dissolved)		<5.0	5.0	5.0	ug/L	
Cadmium (Total)		<0.01	0.01	0.01 *	ug/L	FR
Chromium (Total)		**1.8**	0.50	1.0	ug/L	
Nickel (Total)		<1.0	1.0	2.0	ug/L	
Selenium (Total)		<0.50	0.50	1.00	ug/L	
Silver (Total)		<0.10	0.10	0.20	ug/L	
Zinc (Total)		<2.0	2.0	4.0	ug/L	
Cadmium (Dissolved)		<0.01	0.01	0.01 *	ug/L	FR
Nickel (Dissolved)		<1.0	1.0	2.0	ug/L	
Silver (Dissolved)		<0.10	0.10	0.20	ug/L	
Zinc (Dissolved)		<2.0	2.0	4.0	ug/L	
PAHs and Phenols						
Acenaphthene		<0.04	0.04	0.04	ug/L	
Acenaphthylene		<0.04	0.04	0.04	ug/L	
Anthracene		<0.04	0.04	0.04	ug/L	
Benzo(b)fluoranthene		<0.04	0.04	0.04	ug/L	
Benzo(k)fluoranthene		<0.04	0.04	0.04	ug/L	
Benzo(g,h,i)perylene		<0.04	0.04	0.04	ug/L	
Carbazole		<0.04	0.04	0.04	ug/L	
Chrysene		<0.04	0.04	0.04	ug/L	
Dibenzofuran		<0.04	0.04	0.04	ug/L	
Fluoranthene		<0.04	0.04	0.04	ug/L	
Fluorene		<0.04	0.04	0.04	ug/L	
2-Methylnaphthalene		<0.04	0.04	0.04	ug/L	
Naphthalene		<0.04	0.04	0.04	ug/L	
Phenanthrene		<0.04	0.04	0.04	ug/L	
Pyrene		<0.04	0.04	0.04	ug/L	
2-Chlorophenol		<0.49	0.49	0.49	ug/L	
2,4-Dichlorophenol		<0.49	0.49	0.49	ug/L	
2,4-Dimethylphenol		<0.49	0.49	0.49	ug/L	
4,6-Dinitro-2-methylphenol		<0.58	0.58	0.58	ug/L	
2-Methylphenol		<0.49	0.49	0.49	ug/L	
2-Nitrophenol		<0.49	0.49	0.49	ug/L	
4-Nitrophenol		<0.49	0.49	0.49	ug/L	
2,4,5-Trichlorophenol		<0.49	0.49	0.49	ug/L	
2,4,6-Trichlorophenol		<0.49	0.49	0.49	ug/L	
Pentachlorophenol (PCP)		<0.39	0.39	0.39	ug/L	
Phenol		<0.49	0.49	0.49	ug/L	
VOCs						
Acetone		<10	10	20	ug/L	
Benzene		<0.13	0.13	0.25	ug/L	
2-Butanone (MEK)		<5.0	5.0	10	ug/L	

1,1-Dichloroethene		<0.25	0.25	0.50	ug/L
trans-1,2-Dichloroethene		<0.25	0.25	0.50	ug/L
Ethylbenzene		<0.25	0.25	0.50	ug/L
Tetrachloroethene (PCE)		<0.25	0.25	0.50	ug/L
Toluene		<0.25	0.25	0.50	ug/L
Trichloroethene (TCE)		<0.25	0.25	0.50	ug/L
1,2,4-Trimethylbenzene		<0.50	0.50	1.0	ug/L
1,3,5-Trimethylbenzene		<0.50	0.50	1.0	ug/L
Vinyl chloride		<0.25	0.25	0.50	ug/L
Xylene (Total)		<0.75	0.75	1.5	ug/L
Cyanide Analyses					
Cyanide, Available		**13**	1.0	2.0	ug/L
Cyanide, Free		**5.4**	2.5	5.0	ug/L

[1] **Code shown is per June 2013 DEQ Document "Completing Discharge Monitoring Reports (DMRs) page 9 as follows:**

"**e**" Sample result is above detection limit but below the quantitation level.

NR = None Reported by Laboratory

NA = Not analyzed due to permit requirements (Table B2: Table B2 Notes/note 5).

* RL from the Freemont report for dissolved and total metals are taken from the analysis of the Method Blank in order to

NW Natural Source Control Treatment Plant Effluent Data						
Permit Number		103061				
File Number		120589				
Sample Type	Grab/Composite (Total Cadmium and Dissolved Cadmium results					
	are taken from the **FR -** Fremont Laboratory report. Inorganic Arsenic					
	result is taken from the **BR -** Brooks Laboratory report. For VOCs					
	and Cyanide, 6 discrete samples composited at the laboratory).					
Date of Sample		12-Aug-20				
	Code[1]	**Result**	**MDL**	**RL**	**UNITS**	
Hardness		**20.7**	NR	1.91	mg CaCO3/L	
METALS						
Arsenic (Inorganic)		**1.13**	0.044	0.100	ug/L	BR
Chromium III (Total)		NA				
Chromium III (Dissolved)		NA				
Chromium VI (Total)	**e**	**2.76** J	2.00	5.00	ug/L	
Chromium VI (Dissolved)		<5.00	5.00	5.00	ug/L	
Cadmium (Total)		<0.0140	0.0140	0.0140 *	ug/L	FR
Chromium (Total)		**1.79**	0.500	1.00	ug/L	
Nickel (Total)		<1.00	1.00	2.00	ug/L	
Selenium (Total)		<0.500	0.500	1.00	ug/L	
Silver (Total)		<0.100	0.100	0.200	ug/L	
Zinc (Total)		<2.00	2.00	4.00	ug/L	
Cadmium (Dissolved)		<0.0136	0.0136	0.0136 *	ug/L	FR
Nickel (Dissolved)		<1.00	1.00	2.00	ug/L	
Silver (Dissolved)		<0.100	0.100	0.200	ug/L	
Zinc (Dissolved)		<2.00	2.00	4.00	ug/L	
PAHs and PHENOLS						
Acenaphthene		<0.0388	0.0388	0.0388	ug/L	
Acenaphthylene		<0.0388	0.0388	0.0388	ug/L	
Anthracene		<0.0388	0.0388	0.0388	ug/L	
Benzo(b)fluoranthene		<0.0388	0.0388	0.0388	ug/L	
Benzo(k)fluoranthene		<0.0388	0.0388	0.0388	ug/L	
Benzo(g,h,i)perylene		<0.0388	0.0388	0.0388	ug/L	
Carbazole		<0.0388	0.0388	0.0388	ug/L	
Chrysene		<0.0388	0.0388	0.0388	ug/L	
Dibenzofuran		<0.0388	0.0388	0.0388	ug/L	
Fluoranthene		<0.0388	0.0388	0.0388	ug/L	
Fluorene		<0.0388	0.0388	0.0388	ug/L	
2-Methylnaphthalene		<0.0388	0.0388	0.0388	ug/L	
Naphthalene		<0.0388	0.0388	0.0388	ug/L	
Phenanthrene		<0.0388	0.0388	0.0388	ug/L	
Pyrene		<0.0388	0.0388	0.0388	ug/L	
2-Chlorophenol		<0.485	0.485	0.485	ug/L	
2,4-Dichlorophenol		<0.485	0.485	0.485	ug/L	
2,4-Dimethylphenol		<0.485	0.485	0.485	ug/L	
4,6-Dinitro-2-methylphenol		<0.583	0.583	0.583	ug/L	
2-Methylphenol		<0.485	0.485	0.485	ug/L	
2-Nitrophenol		<0.485	0.485	0.485	ug/L	
4-Nitrophenol		<0.485	0.485	0.485	ug/L	
2,4,5-Trichlorophenol		<0.485	0.485	0.485	ug/L	
2,4,6-Trichlorophenol		<0.485	0.485	0.485	ug/L	
Pentachlorophenol (PCP)		<0.388	0.388	0.388	ug/L	
Phenol		<0.485	0.485	0.485	ug/L	
NW Natural Source Control Treatment Plant Effluent Data						
Permit Number		103061				

File Number		120589				
Sample Type		Grabs				
Date of Sample		12-Aug-20				
VOCs and Cyanide						
Sample (3QRD-081419-23 Composite)						
Acetone		<10.0	10.0	20.0	ug/L	
Benzene		<0.125	0.125	0.250	ug/L	
2-Butanone (MEK)		<5.00	5.00	10.0	ug/L	
1,1-Dichloroethene		<0.250	0.250	0.500	ug/L	
trans-1,2-Dichloroethene		<0.250	0.250	0.500	ug/L	
Ethylbenzene		<0.250	0.250	0.500	ug/L	
Tetrachloroethene (PCE)		<0.250	0.250	0.500	ug/L	
Toluene		<0.250	0.250	0.500	ug/L	
Trichloroethene (TCE)		<0.250	0.250	0.500	ug/L	
1,2,4-Trimethylbenzene		<0.500	0.500	1.00	ug/L	
1,3,5-Trimethylbenzene		<0.500	0.500	1.00	ug/L	
Vinyl chloride		<0.250	0.250	0.500	ug/L	
Xylenes, total		<0.750	0.750	1.50	ug/L	
Cyanide Analyses						
Cyanide, Available (ug/L)		**12.5**	1.00	2.00	ug/L	
Cyanide, Free		**5.39**	2.50	5.00	ug/L	
[1] **Code shown is per June 2013 DEQ Document "Completing Discharge Monitoring Reports (DMRs) page 9 as follows:**						
"e" Sample result is above detection limit but below the quantitation level.						
NR = None Reported by Laboratory						
NA = Not analyzed due to permit requirements (Table B2: Table B2 Notes/note 5).						
* RL from the Freemont report for dissolved and total metals are taken from the analysis of the Method Blank in order to						
correctly use the "e code". Analytes are reported to the Method Detection Limit (MDL)						