Sevenson Environmental Services, Inc.

August 18, 2020

Dana Bayuk
Project Manager
NW Region Cleanup & Site Assessment Section
Oregon Department of Environmental Quality
700 NE Multnomah St., Suite 600
Portland, Oregon 97232
Bayuk.dana@deq.state.or.us

RE: NW Natural Source Control Groundwater Treatment Facility Residual Lab Data Package, First and Second Quarters 2020 – Soft Copy Lab Package Submittal

Dear Dana:

Enclosed please find the NW Natural Source Control Groundwater Treatment Facility Residual Data Package for the first and second quarters of 2020. This residual data package includes filter cake, bag filter and monthly process control data from Siltronic pre-treatment plant influent and effluent, NW Natural pre-treatment plant influent and effluent, and the main Groundwater Treatment plant influent, as requested by DEQ.

Filter cake and bag filter data include total petroleum hydrocarbons (diesel-range, residual-range petroleum hydrocarbons [NWTPH-DX] and gasoline-range petroleum hydrocarbons [NWTPH-Gx]), volatile organic compounds (VOCs; halogenated and non-halogenated), total cyanide, SVOCs, metals, and percent dry weight. This data is reported and compared to 20x TCLP concentrations consistent with USEPA guidance.[1] The monthly process control data includes VOCs, cyanide, polyaromatic hydrocarbons (PAHs), copper, iron, and total suspended solids.

This semi-annual residual package is consistent with DEQ feedback received on April 25, 2016.

Sincerely,

William Byrd
Groundwater Treatment Plant Superintendent

[1] A minor laboratory deviation from USEPA's TCLP guidance is notated with a qualifier on the attached bag filter report.

Sevenson Environment Services

Cc:
Robert Wyatt – NW Natural
Patty Dost, Sarah Riddle– Pearl Legal Group
Ben Hung – Coalition Environmental
Mike Crystal, Joseph Burke – SES
Terry Driscoll – ADA
Ryan Barth, John Edwards, Kendra Skellenger, Jen Mott – Anchor QEA
Rob Ede – Hahn and Associates
Dan Hafley - ODEQ

Enclosures:

Table 1 – Jan 2020 through Jun 2020 Filter Cake Residual Lab Analyses
Table 2 – Jan 2020 through Jun 2020 Bag Filter Residual Lab Analyses
Table 3A, 3B, 3C, 3D, 3E, and 3F – Jan 2020 through Jun 2020 Process Control Monthly Sampling Charted Lab Results

CD:
Jan 2020 through Jun 2020 Filter Cake Lab Results
Jan 2020 through Jun 2020 Bag Filter Lab Results
Jan 2020 through Jun 2020 Monthly Process Labs Results

Table 1 -2020 (Jan-Jun) Filter Cake Residuals Charted Lab Results

Drop #		1261		1294		1315		1350		1375		1392	
Sample ID		FC-010220-1261		FC-021020-1294		FC-030520-1315		FC-041420-1350		FC-051320-1375		FC-060220-1392	
LAB ID		A0A0026-01		A0B0244-01		A0C0152-01		A0D0325-01		A0E0405-01		A0F0077-01	
	EPA TCLP Level (20 x) in ug/kg	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
Diesel (ug/kg dry)		**1030000**	**F-13, F-15**	**298000**	**F-13**	**234000**	**F-13**	**601000**	**F-13, F-15**	**564000**	**F-13, F-15**	**422000**	**F-13**
Oil (ug/kg dry)		**2280000**	**F-03, F-16**	**519000**		**478000**	**F-13**	**1010000**	**F-13, F-16**	**745000**	**F-16**	**593000**	
Gasoline Range Organics (ug/kg dry)		**816000**		**515000**	**F-13**	**130000**		**592000**	**F-13**	**827000**	**F-09**	**35800**	**F-13**
VOC (ug/kg)													
Acetone		<10300		<7800		<4310		<12900		<9800		<889	
Acrylonitrile										<980		<88.9	
Benzene	10,000 (500 µg/L)	<103		<78.0		<43.1		<129		<98.0		**9.78**	**J**
Bromobenzene		<258		<195		<108		<321		<245		<22.2	
Bromochloromethane		<517		<390		<215		<643		<490		<44.5	
Bromodichloromethane		<517		<390		<215		<643		<490		<44.5	
Bromoform		<1030		<780		<431		<1290		<980		<88.9	
Bromomethane		<10300		<7800		<4310		<12900		<9800		<889	
2-Butanone (MEK)	4,000,000 (200,000 µg/L)	<5170		<3900		<2150		<6430		<4900		<445	
n-Butylbenzene		<517		<390		<215		<643		<490		<44.5	
sec-Butylbenzene		<517		<390		<215		<643		<490		<44.5	
tert-Butylbenzene		<517		<390		<215		<643		<490		<44.5	
Carbon disulfide										<4900		<445	
Carbon tetrachloride	10,000 (500 µg/L)	<517		<390		<215		<643		<490		<44.5	
Chlorobenzene	2,000,000 (100,000 µg/L)	<258		<195		<108		<321		<245		<22.2	
Chloroethane		<5170		<3900		<4310		<6430		<4900		<445	
Chloroform	120,000 (6,000 µg/L)	<517		<390		<215		<643		<490		<44.5	
Chloromethane		<2580		<1950		<1080		<3210		<2450		<222	
2-Chlorotoluene		<517		<390		<215		<643		<490		<44.5	
4-Chlorotoluene		<517		<390		<215		<643		<490		<44.5	
Dibromochloromethane		<1030		<780		<431		<1290		<980		<88.9	
1,2-Dibromo-3-chloropropane		<2580		<1950		<1080		<3210		<2450		<222	
1,2-Dibromoethane (EDB)		<517		<390		<215		<643		<490		<44.5	
Dibromomethane		<517		<390		<215		<643		<490		<44.5	
1,2-Dichlorobenzene		<258		<195		<108		<321		<245		<22.2	
1,3-Dichlorobenzene		<258		<195		<108		<321		<245		<22.2	
1,4-Dichlorobenzene	150,000 (7,500 µg/L)	<258		<195		<108		<321		<245		<22.2	
Dichlorodifluoromethane		<1030		<780		<431		<1290		<980		<88.9	
1,1-Dichloroethane		<258		<195		<108		<321		<245		<22.2	
1,2-Dichloroethane (EDC)	10,000 (500 µg/L)	<258		<195		<108		<321		<245		<22.2	
1,1-Dichloroethene	14,000 (700 µg/L)	<258		<195		<108		<321		<245		<22.2	
cis-1,2-Dichloroethene		<258		<195		<108		<321		<245		<22.2	
trans-1,2-Dichloroethene		<258		<195		<108		<321		<245		<22.2	
1,2-Dichloropropane		<258		<780		<431		<321		<245		<22.2	
1,3-Dichloropropane		<517		<390		<215		<643		<490		<44.5	
2,2-Dichloropropane		<517		<390		<215		<643		<490		<44.5	
1,1-Dichloropropene		<517		<390		<215		<643		<490		<44.5	
cis-1,3-Dichloropropene		<517		<390		<215		<643		<490		<44.5	
trans-1,3-Dichloropropene		<517		<390		<215		<643		<490		<44.5	
Ethylbenzene		<258		<195		<108		<321		<245		<22.2	
Hexachlorobutaldiene	10,000 (500 µg/L)	<1030		<780		<431		<1290		<980		<88.9	
2-Hexanone		<5170		<3900		<2150		<6430		<4900		<445	
Isopropylbenzene		<517		<390		<215		<643		<490		<44.5	
4-Isopropyltoluene		<517		<390		<215		<643		<490		<44.5	

Table 1 -2020 (Jan-Jun) Filter Cake Residuals Charted Lab Results

Methylene chloride		<2580		<3900		<2150		<6430		<4900		<445	
4-Methyl-2-pentanone (MIBK)		<5170		<3900		<2150		<6430		<4900		<445	
Methyl tert-butyl ether (MTBE)		<517		<390		<215		<643		<490		<44.5	
Naphthalene		**1610**	J	<780		**1750**		<1290		<980		<88.9	
n-Propylbenzene		<258		<195		<108		<321		<245		<22.2	
Stryrene		<517		<390		<215		<643		<490		<44.5	
1,1,1,2-Tetrachloroethane		<258		<195		<108		<321		<245		<22.2	
1,1,2,2-Tetrachloroethane		<517		<390		<215		<643		<490		<44.5	
Tetrachloroethene (PCE)	14,000 (700 µg/L)	<258		<195		<108		<321		<245		<22.2	
Toluene		<517		<390		<215		<643		<490		<44.5	
1,2,3-Trichlorobenzene		<2580		<1950		<1080		<3210		<2450		<222	
1,2,4-Trichlorobenzene		<2580		<1950		<1080		<3210		<2450		<222	
1,1,1-Trichloroethane		<258		<195		<108		<321		<245		<22.2	
1,1,2-Trichloroethane		<258		<195		<108		<321		<245		<22.2	
Trichloroethene (TCE)	10,000 (500 µg/L)	<258		<195	Q-42	<108		<321		<245		<22.2	
Trichlorofluromethane		<1030		<780		<431		<1290		<980		<88.9	
1,2,3-Trichloropropane		<517		<390		<215		<643		<490		<44.5	
1,2,4-Trimethylbenzene		<517		<390		<215		<643		<490		<44.5	
1,3,5-Trimethylbenzene		<517		<390		<215		<643		<490		<44.5	
Vinyl chloride	4,000 (200 µg/L)	<258		<195		<108		<321		<245		<22.2	
m,p-Xylene		<517		<390		<215		<643		<490		<44.5	
o-Xylene		<258		<195		<108		<321		<245		<22.2	
TCLP Volatile Organic Compounds (ug/L)													
Benzene	10,000 (500µg/L)	<6.25		<6.25		<6.25		<6.25		<6.25		<6.25	
2-Butanone (MEK)	4,000,000 (200,000 µg/L)	<250		<250		<250		<250		<250		<250	
Carbon tetrachloride	10,000 (500 µg/L)	<25.0		<50.0		<25.0		<25.0		<25.0		<25.0	
Chlorobenzene	2,000,000 (100,000 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Chloroform	120,000 (6,000 µg/L)	<25.0		<25.0		<25.0		<25.0		<25.0		<25.0	
1,4-Dichlorobenzene	150,000 (7,500 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
1,2-Dichloroethane (EDC)	10,000 (500 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
1,1-Dichloroethene	14,000 (700 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5			
Hexachlorobutadiene	10,000 (500 µg/L)												
Tetrachloroethene (PCE)	14,000 (700 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Trichloroethene (TCE)	10,000 (500 µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Vinyl chloride	4,000 (200 µg/L)	<25.0		<12.5		<12.5		<12.5		<12.5		<12.5	
Total Cyanide (ug/kg dry)		**8070**		**9400**		**9710**		**7640**		**7730**	**AMEND**	**8040**	
SVOC (ug/kg dry)													
Acenaphthene		**5750**		**386**	**J**	**1940**		**6240**	**Q-42**	**2440**	**Q-42**	<52.1	
Acenaphthylene		**1060**		**332**	**J**	**614**		**1340**	**J,Q-42**	**953**		**58.7**	**J, Q-42**
Anthracene		**12300**		**1150**		**4460**		**11900**	**Q-42**	**7010**		**163**	**Q-42**
Benz(a)anthracene		**10500**	**B-02**	**2160**		**4170**		**9740**	**Q-42**	**7460**		**327**	**Q-42**
Benzo(a)pyrene		**11600**		**3410**		**5840**		**12800**	**Q-42**	**10500**		**464**	**Q-42**
Benzo(b)fluoranthene		**10100**		**2690**		**4370**		**10100**	**Q-42**	**7770**		**393**	**Q-42**
Benzo(k)fluoranthene		**4230**	**M-05**	**1150**	**M-05**	**1790**	**M-05**	**3890**	**M-05, Q-42**	**3300**	**M-05**	**171**	**M-05**
Benzo(g,h,i)perylene		**8330**		**1810**		**3380**		**7400**	**Q-42**	**6230**		**286**	**Q-42**
Chrysene		**12500**	**B-02**	**2710**		**5210**		**11800**	**Q-42**	**9020**		**387**	**Q-42**
Dibenz(a,h)anthracene		**869**		**318**	**J**	**405**	**J**	**900**	**J,Q-42**	**691**		<52.1	
Fluoranthene		**34400**	**B-02**	**6000**		**14700**		**35300**	**Q-42**	**25000**		**909**	**Q-42**
Fluorene		**5690**		**394**	**J**	**1630**		**6110**	**Q-42**	**2400**	**Q-42**	<52.1	
Indeno(1,2,3-cd)pyrene		**7400**		**1680**		**2990**		**6800**	**Q-42**	**5340**		**250**	**Q-42**
1-Methlnaphthalene		<733		<596		**491**	J	<1400		<614	**Q-42**	<105	
2-Methlnaphthalene		<733		<596		<491		<1400		<614		<105	

Table 1 -2020 (Jan-Jun) Filter Cake Residuals Charted Lab Results

Naphthalene		<733		<596		<491		<1400		<614		<105	
Phenanthrene		**48100**	**B**	**3840**		**16400**		**49000**	**Q-42**	**24400**	**B, Q-42**	**557**	**Q-42**
Pyrene		**40100**	**B-02**	**7320**		**16900**		**40200**	**Q-42**	**29200**		**1090**	**Q-42**
Carbazole		<549		<447		**404**	**J**	<1050		**471**	**J**	<78.3	
Dibenzofuran		**411**	**J**	<297		<245		<699		<306		<52.1	
2-Chlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
4-Chloro-3-methyplenol		<3650		<2970		<2450		<6990		<3060		<521	
2,4-Dichlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
2,4-Dimethyphenol		<1830		<1490		<1230		<3510		<1530		<261	
2,4-Dinitrophenol		<9140		<7440		<6130		<17500		<7660		<1300	
4,6-Dinitro-2-methylphenol		<9140		<7440		<6130		<17500		<7660		<1300	
2-Methylphenol		<914		<744		<613		<1750		<766		<130	
3+4-Methyphenol(s)		<914		<744		<613		<1750		<766		<130	
2-Nitrophenol		<3650		<2970		<2450		<6990		<3060		<521	
4-Nitrophenol		<3650		<2970		<2450		<6990		<3060		<521	
Pentachlorophenol(PCP)		<3650		<2970		<2450		<6990		<3060		<521	
Phenol		<733		<596		<491		<1400		<614		<105	
2,3,4,6-Tetrachlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
2,3,5,6-Tetrachlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
2,4,5-Trichlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
Nitrobenzene		<3650		<2970		<2450		<6990		<3060		<521	
2,4,6-Trichlorophenol		<1830		<1490		<1230		<3510		<1530		<261	
Bis(2-ethylhexyl)phthalate		<5490		<4470		<3680		<10500		<4600		<783	
Butyl benzyl phtalate		<3650		<2970		<2450		<6990		<3060		<521	
Diethylphthalate		<3650		<2970		<2450		<6990		<3060		<521	
Dimethylphthalate		<3650		<2970		<2450		<6990		<3060		<521	
Di-n-butylphthalate		<3650		<2970		<2450		<6990		<3060		<521	
Di-n-octyl phthalate		<3650		<2970		<2450		<6990		<3060		<521	
N-Nitrosodimethylamine		<914		<744		<613		<1750		<766		<130	
N-Nitroso-di-n-propylamine		<914		<744		<613		<1750		<766		<130	
N-Nitrosodiphenylamine		<914		<744		<613		<1750		<766		<130	
Bis(2-Chloroethoxy) methane		<914		<744		<613		<1750		<766		<130	
Bis(2-Chloroethyl) ether		<914		<744		<613		<1750		<766		<130	
2,2'-Oxybis (1-Chloropropane)		<914		<744		<613		<1750		<766		<130	
Hexachlorobenzene		<365		<297		<245		<699		<306		<52.1	
Hexachlorobutadiene		<914		<744		<613		<1750		<766		<130	
Hexachlorocyclopentadiene		<1830		<1490		<1230		<3510		<1530		<261	
Hexachloroethane		<914		<744		<613		<1750		<766		<130	
2-Chloronaphthalene		<365		<297		<245		<699		<306		<52.1	
1,2,4-Trichlorobenzene		<914		<744		<613		<1750		<766		<130	
4-Bromophenyl phenyl ether		<914		<744		<613		<1750		<766		<130	
4-Chlorophenyl phenyl ether		<914		<744		<613		<1750		<766		<130	
Aniline		<1830		<1490		<1230		<3510		<1530		<261	
4-Chloroaniline		<914		<744		<613		<1750		<766		<130	
2-Nitroaniline		<7330		<5960		<4910		<14000		<6140		<1050	
3-Nitroaniline		<7330		<5960		<4910		<14000		<6140		<1050	
4-Nitroaniline		<7330		<5960		<4910		<14000		<6140		<1050	
2,4-Dinitrotoluene		<3650		<2970		<2450		<6990		<3060		<521	
2,6-Dinitrotoluene		<3650		<2970		<2450		<6990		<3060		<521	
Benzoic acid		<45800		<37300		<30700		<87800		<38400		<6540	
Benzyl alchohol		<1830		<1490		<1230		<3510		<3060		<261	
Isophorone		<914		<744		<613		<1750		<1530		<130	
Azobenzene (1,2-DPH)		<914		<744		<613		<1750		<766		<130	
Bis(2-Ethylhexyl)adipate		<9140		<7440		<6130		<17500		<7660		<1300	
3,3'-Dichlorobenzidine		<7330	**Q-52**	<5960	**Q-52**	<4910	**Q-52**	<14000	**Q-52**	<6140	**Q-52**	<1050	**Q-52**

Table 1 -2020 (Jan-Jun) Filter Cake Residuals Charted Lab Results

1,2-Dinitrobenzene		<9140		<7440		<6130		<17500		<7660		<1300	
1,3-Dinitrobenzene		<9140		<7440		<6130		<17500		<7660		<1300	
1,4-Dinitrobenzene		<9140		<7440		<6130		<17500		<7660		<1300	
Pyridine		<1830		<1490		<1230		<3510		<1530		<261	
1,2-Dichlorobenzene		<914		<744		<613		<1750		<766		<130	
1,3-Dichlorobenzene		<914		<744		<613		<1750		<766		<130	
1,4-Dichlorobenzene		<914		<744		<613		<1750		<766		<130	
Total Metals (ug/kg dry)													
Arsenic	100,000 (5,000 µg/L)	**9510**		**6220**		**9500**		**9150**		**7220**		**8110**	
Barium	2,000,000 (100,000 µg/L)	**227000**		**127000**	**Q-39, Q-42**	**207000**		**198000**		**203000**		**191000**	
Cadmium	20,000 (1,000 µg/L)	<486		<606		<509		<554		<424		<655	
Chromium	100,000 (5,000 µg/L)	<2430		<3030		<2550		<2770		<2120		<3320	
Lead	100,000 (5,000 µg/L)	<486		1830		<509		<2770		**513**	**J**	**1220**	**J**
Mercury	4,000 (200 µg/L)	<194		<242		<204		<222		<170		<266	
Selenium	20,000 (1,000 µg/L)	<2430		<3030		<2550		<2770		<2120		<3320	
Silver	100,000 (5,000 µg/L)	<486		<606		<509		<554		<424		<665	
TCLP Metals (ug/L)													
Arsenic		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Barium		<2500		<2500		<2500		<2500		<2500		<2500	
Cadmium		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Chromium		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Lead		<25.0		<25.0		<25.0		<25.0		<25.0		<25.0	
Mercury		<3.50		<3.50		<3.50		<3.50		<3.50		<3.50	
Selenium		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Silver		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Percent Dry Weight													
%Solids		**21.2**		**17.4**		**20.6**		**18.8**		**25.3**		**16.5**	

Qualifier Notes

AMEND = Result for this sample or analyte has been amended from the original report.

B = Analyte detected in an associated blank at a level above the MRL.

B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL.

F-03 = The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

F-09 = Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.

F-13 = The chromatographic pattern does not resemble the fuel standard used for quantitation

F-15 = Results for diesel are estimated due to overlap from the reported oil result.

F-16 = Results for oil are estimated due to overlap from the reported diesel result.

J = Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

Q-39 = Results for sample duplicate are significantly higher than the sample results. See duplicate results in QC section of the report.

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

Q-52 = Due to erratic or low blank spike recoveries, results for this analyte are considered Estimated Values.

Table 2 - (Jan-Jun) Bag Filter Residuals Charted Lab Results

Collection #		111		112		113		114		115		116	
Sample ID		BF-010220-111		BF-022020-112		BF-030520-113		BF-041120-114		BF-051420-115		BF-052920-116	
LAB ID		A0A0027-01		A0B0552-01		A0C0149-01		A0D0267-01		A0E0407-01		A0E0800-01	
	EPA TCLP Level (20 x) in ug/kg (Actual TCLP Level in µg/L)	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
Diesel (ug/kg)		**42500000**	**F-13**	**8610000**	**F-13**	**5080000**	**F-13**	**24200000**	**F-13,F-15**	**10400000**	**F-13,F-15**	**11100000**	**F-13**
Oil (ug/kg)		**31100000**		**5930000**		**3380000**		**16900000**	**F-16**	**6960000**	**F-16**	**7220000**	
Gasoline Range Organics (ug/kg)		**4370000**	**F-13**	**1410000**	**F-13**	**11600000**		**9300000**	**F-13**	**10100000**	**F-09**	**331000**	**F-09**
VOC (ug/kg)													
Acetone		<13800		<14900		<54900		<24600		<31400		<1950	
Acrylonitrile										<3140		<195	
Benzene	10,000 (500µg/L)	<138		<149		<549		<246		<314		<19.5	
Bromobenzene		<345		<373		<1370		<614		<786		<48.6	
Bromochloromethane		<690		<746		<2750		<1230		<1570		<97.3	
Bromodichloromethane		**3650**		<746		<2750		**2800**		**5450**		<97.3	
Bromoform		<1380		<1490		<5490		<2460		<3140		<195	
Bromomethane		<13800		<14900		<54900		<24600		<31400		<1950	
2-Butanone (MEK)		<6900		<7460		<27500		<12300		<15700		<973	
n-Butylbenzene		<690		<746		<2750		<1230		<1570		<97.3	
sec-Butylbenzene		<690		<746		<2750		<1230		<1570		<97.3	
tert-Butylbenzene		<690		<746		<2750		<1230		<1570		<97.3	
Carbon disulfide										<15700		<973	
Carbon tetrachloride	10,000 (500µg/L)	<690		<746		<2750		<1230		<1570		<97.3	
Chlorobenzene	2,000,000 (100,000µg/L)	<345		<373		<1370		<614		<786		<48.6	
Chloroethane		<6900		<7460		<54900		<12300		<15700		<973	
Chloroform	120,000 (6,000µg/L)	**22100**		**5110**		**8490**		**18400**		**22900**		**187**	J
Chloromethane		<3450		<3730		<13700		<6140		<7860		<486	
2-Chlorotoluene		<690		<746		<2750		<1230		<1570		<97.3	
4-Chlorotoluene		<690		<746		<2750		<1230		<1570		<97.3	
Dibromochloromethane		<1380		<1490		<5490		<2460		<3140		<195	
1,2-Dibromo-3-chloropropane		<3450		<3730		<13700		<6140		<7860		<486	
1,2-Dibromoethane (EDB)		<690		<746		<2750		<1230		<1570		<97.3	
Dibromomethane		<690		<746		<2750		<1230		<1570		<97.3	
1,2-Dichlorobenzene		<345		<373		<1370		<614		<786		<48.6	
1,3-Dichlorobenzene		<345		<373		<1370		<614		<786		<48.6	
1,4-Dichlorobenzene	150,000 (7,500µg/L)	<345		<373		<1370		<614		<786		<48.6	
Dichlorodifluoromethane		<1380		<1490		<5490		<2460		<3140		<195	
1,1-Dichloroethane		<345		<373		<1370		<614		<786		<48.6	
1,2-Dichloroethane (EDC)	10,000 (500µg/L)	<345		<373		<1370		<614		<786		<48.6	
1,1-Dichloroethene	14,000 (700µg/L)	<345		<373		<1370		<614		<786		<48.6	
cis-1,2-Dichloroethene		<345		<373		<1370		<614		<786		<48.6	
trans-1,2-Dichloroethene		<345		<373		<1370		<614		<786		<48.6	
1,2-Dichloropropane		<345		<1490		<5490		<614		<786		<48.6	
1,3-Dichloropropane		<690		<746		<2750		<1230		<1570		<97.3	
2,2-Dichloropropane		<690		<746		<2750		<1230		<1570		<97.3	
1,1-Dichloropropene		<690		<746		<2750		<1230		<1570		<97.3	
cis-1,3-Dichloropropene		<690		<746		<2750		<1230		<1570		<97.3	
trans-1,3-Dichloropropene		<690		<746		<2750		<1230		<1570		<97.3	
Ethylbenzene		**1200**		**688**	J	<1370		**3340**		**1660**		<48.6	
Hexachlorobutadiene	10,000 (500µg/L)	<1380		<1490		<5490		<2460		<3140		<195	
2-Hexanone		<6900		<7460		<27500		<12300		<15700		<973	
Isopropylbenzene		<690		<746		<2750		<1230		<1570		<97.3	
4-Isopropyltoluene		<690		<746		<2750		<2460		<1570		<97.3	
Methylene chloride		<3450		<7460		<27500		<12300		<15700		<973	
4-Methyl-2-pentanone (MiBK)		<6900		<7460		<27500		<12300		<15700		<973	
Methyl tert-butyl ether (MTBE)		<690		<746		<2750		<1230		<1570		<97.3	
Naphthalene		**250000**		**133000**		**164000**		**1200000**		**168000**		**3080**	
n-Propylbenzene		<345		<373		<1370		<614		<786		<48.6	

Table 2 - (Jan-Jun) Bag Filter Residuals Charted Lab Results

Styrene		<690		<746		<2750		<2460		<1570		<97.3	
1,1,1,2-Tetrachloroethane		<345		<373		<1370		<614		<786		<48.6	
1,1,2,2-Tetrachloroethane		<690		<746		<5490		<3690	R-02	<7070	R-02	<97.3	
Tetrachloroethene (PCE)	14,000 (700µg/L)	<345		<373		<1370		<614		<786		<48.6	
Toluene		<690		<746		<2750		<1230		<1570		<97.3	
1,2,3-Trichlorobenzene		<3450		<3730		<13700		<6140		<7860		<486	
1,2,4-Trichlorobenzene		<3450		<3730		<13700		<6140		<7860		<486	
1,1,1-Trichloroethane		<345		<373		<1370		<614		<786		<48.6	
1,1,2-Trichloroethane		<345		<373		<1370		<614		<786		<48.6	
Trichloroethene (TCE)	10,000 (500µg/L)	<345		<373		<1370		<614		<786		<48.6	
Trichlorofluromethane		<1380		<1490		<5490		<2460		<3140		<195	EST
1,2,3-Trichloropropane		<690		<746		<2750		<1230		<1570		<97.3	
1,2,4-Trimethylbenzene		**4080**		**843**	J	<2750		**9290**		**5590**		**357**	
1,3,5-Trimethylbenzene		**755**	J	<746		<2750		**3000**		<1570		**131**	J
Vinyl chloride	4,000 (200µg/L)	<345		<373		<1370		<614		<786		<48.6	
m,p-Xylene		**967**	J	**906**	J	<2750		**3000**		<1570		<195	
o-Xylene		**765**		**481**	J	<1370		**2010**		**952**	J	<48.6	
TCLP Volatile Organic Compounds (ug/L)													
Benzene	10,000 (500µg/L)	<6.25		<6.25		<6.25		<6.25		<6.25		<6.25	
2-Butanone (MEK)		<250		<250		<250		<250		<250		<250	
Carbon tetrachloride	10,000 (500µg/L)	<25.0		<25.0		<25.0		<25.0		<25.0		<50.0	
Chlorobenzene	2,000,000 (100,000µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Chloroform	120,000 (6,000µg/L)	**27.8**	J	**25.0**	J	<25.0		**40.5**	J	**28.5**	J	<25.0	
1,4-Dichlorobenzene	150,000 (7,500µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
1,2-Dichloroethane (EDC)	10,000 (500µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
1,1-Dichloroethene	14,000 (700µg/L)	<12.5		<12.5		<12.5		<12.5					
Tetrachloroethene (PCE)	14,000 (700µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Trichloroethene (TCE)	10,000 (500µg/L)	<12.5		<12.5		<12.5		<12.5		<12.5		<12.5	
Vinyl chloride	4,000 (200µg/L)	<25.0		<12.5		<12.5		<12.5		<12.5		<12.5	
Total Cyanide (ug/kg)		**13700**		**15200**		**23800**		**36300**		**31900**		**19400**	
SVOC (ug/kg/dry)													
Acenaphthene		<3610	R-02	**35000**		**106000**		**205000**		**18700**		**41100**	Q-42
Acenaphthylene		<2750		**7720**		**17300**		**49400**		<3670	R-02	<1080	Q-42
Anthracene		<2750		**3610**	J	**9840**		**21700**	J	<2490	R-02	**10600**	Q-42
Benz(a)anthracene		**4470**	B-02	**33300**		**51700**		**78900**		**10300**		**4350**	Q-42
Benzo(a)pyrene		**3810**	J	**53400**		**84700**		**94300**		**5770**		**2650**	J,Q-42, Q-37
Benzo(b)fluoranthene		**13700**		**57900**		**114000**		**319000**		**23800**		**3650**	Q-42
Benzo(k)fluoranthene		**3430**	J	**19300**	M-05	**41000**	M-05	**98400**	M-05	**7360**	M-05	**2320**	J,Q-42, Q-37
Benzo(g,h,i)perylene		**4400**		**42800**		**80800**		**107000**		**9880**		<1080	Q-42, Q-37
Chrysene		**22300**	B-02	**54500**		**114000**		**281000**		**45900**		**7120**	
Dibenz(a,h)anthracene		<1370		**5440**		**10200**		**22000**	J	**1430**	J	<1080	
Fluoranthene		**144000**	B-02	**152000**		**523000**		**963000**		**310000**		**60500**	Q-42
Fluorene		**241000**		**44200**		**188000**		**456000**		**108000**		**22400**	Q-42
Indeno(1,2,3-cd)pyrene		**4870**	B-02	**39700**		**71300**		**122000**		**8980**		<1080	Q-42, Q-37
1-Methlnaphthalene		<27500		**40900**	Q-42	**197000**		**348000**		**35200**		**26800**	Q-42
2-Methlnaphthalene		<27500		**46200**	Q-42	**196000**		**411000**		**33900**		**8100**	Q-42
Naphthalene		**164000**	B-02	**138000**	Q-42	**367000**		**848000**		**41500**	B-02	**6600**	Q-42
Phenanthrene		**443000**	B	**209000**		**843000**		**1980000**		**385000**	B	**103000**	Q-42
Pyrene		**7630**	B-02	**91700**		**216000**		**256000**		**89700**		**58000**	Q-42
Carbazole		**78500**		**40600**		**110000**		**321000**		**134000**		**11400**	Q-42
Dibenzofuran		**34500**		**7030**		**27900**		**74300**		**18500**		**3600**	Q-42
2-Chlorophenol		<6870		<11300		<24500		<60600		<4890		<5410	
4-Chloro-3-methyplenol		<137000		<22600		<48900		<121000		<35900	R-02	<10800	
2,4-Dichlorophenol		<68700		<11300		<24500		<60600		<4890		<5410	
2,4-Dimethyphenol		<68700		<11300		<24500		<60600		<16100	R-02	<5410	
2,4-Dinitrophenol		<34300		<56700		<122000		<302000		<24400		<27000	
4,6-Dinitro-2-methylphenol	4,000,000 (200,000µg/L)	<34300		<56700		<122000		<302000		<24400		<27000	
2-Methylphenol	4,000,000 (200,000µg/L)	<3430		<5670		<12200		<30200		<2440		<2700	

Table 2 - (Jan-Jun) Bag Filter Residuals Charted Lab Results

3+4-Methyphenol(s)		<3430		<5670		<12200		<30200		<2440		<2700	
2-Nitrophenol		<137000		<45400		<128000	R-02	<242000		<121000	R-02	<30000	R-02
4-Nitrophenol	2,000,000 (100,000µg/L)	<27500		<22600		<48900		<121000		<19600		<10800	
Pentachlorophenol(PCP)		<13700		<22600		<48900		<121000		**10300**	J	<10800	
Phenol		<2750		<4540		<9820		<24200		<1960		<2170	
2,3,4,6-Tetrachlorophenol		<6870		<11300		<24500		<60600		<4890		<5410	
2,3,5,6-Tetrachlorophenol	8,000,000 (400,000µg/L)	<6870		<11300		<24500		<60600		<9750		<5410	
2,4,5-Trichlorophenol	40,000 (2,000µg/L)	<6870		<11300		<53800	R-02	<121000		<51300	R-02	<10800	
Nitrobenzene	2,600 (130µg/L)	<13700		<22600		<48900		<121000		<9750		<10800	
2,4,6-Trichlorophenol		<17000	R-02	<11300		<53800	R-02	<121000		<30100	R-02	<10800	
Bis(2-ethylhexyl)phthalate		<20600		<34000		<73600		<182000		<14700		<16200	
Butyl benzyl phtalate		<13700		<22600		<48900		<121000		<9750		<10800	
Diethlyphthalate		<13700		<22600		<48900		<121000		<9750		<10800	
Dimethylphthalate		<13700		<22600		<48900		<121000		<9750		<10800	
Di-n-butylphthalate		<13700		<22600		<48900		<121000		<9750		<10800	
Di-n-octyl phthalate		<13700		<22600		<48900		<121000		<9750		<10800	
N-Nitrosodimethylamine		<3430		<5670		<12200		<30200		<2440		<2700	
N-Nitroso-di-n-propylamine		<26300	R-02	<11300		<61300	R-02	<60600		<21300	R-02	<11400	R-02
N-Nitrosodiphenylamine		<3430		<5670		<12200		<30200		<4890		<5410	
Bis(2-Chloroethoxy) methane		<34300		<5670		<12200		<30200		<2440		<2700	
Bis(2-Chloroethyl) ether		<3430		<5670		<12200		<30200		<2440		<2700	
2,2'-Oxybis(1-Chloropropane)	2,600 (130µg/L)	<3430		<5670		<12200		<30200		<2440		<2700	
Hexachlorobenzene	10,000 (500µg/L)	<1370		<2260		<4890		<12100		<975		<1080	
Hexachlorobutadiene		<34300		<5670		<12200		<30200		<2440		<2700	
Hexachlorocyclopentadiene	60,000 (3,000µg/L)	<6870		<11300		<24500		<60600		<4890		<5410	
Hexachloroethane		<3430		<5670		<12200		<30200		<2440		<2700	
2-Chloronaphthalene		<1370		<2260		<4890		<12100		<975		<1080	
1,2,4-Trichlorobenzene		<34300		<5670		<12200		<30200		<9530	R-02	<2700	
4-Bromophenyl phenyl ether		<3430		<5670		<12200		<30200		<2440		<2700	
4-Chlorophenyl phenyl ether		<3430		<5670		<12200		<30200		<2440		<2700	
Aniline		<6870		<11300		<24500		<60600		<4890		<5410	
4-Chloroaniline		<34300		<11300		<29400	R-02	<60600		<21300	R-02	<9740	R-02
2-Nitroaniline		<27500		<45400		<98200		<242000		<19600		<21700	
3-Nitroaniline		<27500		<45400		<98200		<242000		<19600		<21700	
4-Nitroaniline	40,000 (2,000µg/L)	<27500		<45400		<98200		<242000		<19600		<21700	
2,4-Dinitrotoluene		<13700		<22600		<48900		<121000		<9750		<10800	
2,6-Dinitrotoluene		<13700		<22600		<48900		<121000		<19600		<10800	
Benzoic acid		<1720000		<284000		<614000		<1520000		<122000		<136000	
Benzyl alchohol		<6870		<11300		<48900		<60600		<9750		<5410	
Isophorone		<242000	R-02	<85100	R-02	<363000	R-02	<436000	R-02	<273000	R-02	<59200	R-02
Azobenzene (1,2-DPH)		<3430		<5670		<12200		<30200		<2440		<2700	
Bis(2-Ethylhexyl)adipate		<34300		<56700		<122000		<302000		<24400		<27000	
3,3'-Dichlorobenzidine		<27500	Q-52	<45400	Q-52	<98200	Q-52	<242000	Q-52	<19600	Q-52	<21700	Q-52
1,2-Dinitrobenzene		<34300		<56700		<122000		<30200		<24400		<27000	
1,3-Dinitrobenzene		<34300		<56700		<122000		<30200		<48900		<27000	
1,4-Dinitrobenzene		<34300		<56700		<122000		<30200		<24400		<27000	
Pyridine	100,000 (5,000µg/L)	<6870		<11300		<24500		<60600		<4890		<5410	
1,2-Dichlorobenzene		<3430		<5670		<12200		<30200		<2440		<2700	
1,3-Dichlorobenzene	150,000 (7,500µg/L)	<3430		<5670		<12200		<30200		<2440		<2700	
1,4-Dichlorobenzene		<3430		<5670		<12200		<30200		<2440		<2700	
Total Metals (ug/kg)													
Arsenic	100,000 (5,000µg/L)	**81900**		**38100**		**59000**		**73800**		**79400**		**97300**	
Barium	2,000,000 (100,000µg/L)	**187000**		**234000**		**150000**		**126000**		**163000**		**140000**	
Cadmium	20,000 (1,000µg/L)	<1150		<1880		<1490		<1420		<1980		<1980	
Chromium	100,000 (5,000µg/L)	**34500**		**186000**		**367000**		**260000**		**1280000**		**822000**	
Lead	100,000 (5,000µg/L)	**63200**		**69000**	Q-39, Q-42	**92700**		**125000**		**154000**		**72800**	
Mercury	4,000 (200µg/L)	**499**	J	**864**	J	**800**	J	**574**	J	<793		<793	
Selenium	20,000 (1,000µg/L)	<5760		<9390		<7450		<7090		<9910		<9910	
Silver	100,000 (5,000µg/L)	<1150		<1880		<1490		<1420		<1980		<1980	
TCLP Total Metals (ug/L)													

Table 2 - (Jan-Jun) Bag Filter Residuals Charted Lab Results

Arsenic		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Barium		<2500		<2500		<2500		<2500		<2500		<2500	
Cadmium		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Chromium		<50.0		<50.0		<50.0		<50.0		**111**		<50.0	
Lead		<25.0		<25.0		<25.0		<25.0		<25.0		<25.0	
Mercury		<3.50		<3.50		<3.50		<3.50		<3.50		<3.50	
Selenium		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Silver		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
%Solids		**9.56**		**5.79**		**6.60**		**7.47**		**5.42**		**4.93**	

Qualifier Notes:
B = Analyte detected in an associated blank at a level above the MRL.
B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL.
EST = Result reported as an Estimated Value.
F-09 = Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.
F-13 = The chromatographic pattern does not resemble the fuel standard used for quantitation
F-15 = Results for diesel are estimated due to overlap from the reported oil result.
F-16 = Results for oil are estimated due to overlap from the reported diesel result.
J - Estimated Result. Result is detected below the lowest point of the calibration curve, but above the specified MDL.
M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
Q-37 = Sample is non-homogenous. Sample results are less than MRL and duplicate results have hits greater than the MRL. See Duplicate results.
Q-39 = Results for sample duplicate are significantly higher than the sample results. See duplicate results in QC section of the report.
Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.
Q-52 = Due to erratic or low blank spike recoveries, results for this analyte are considered Estimated Values.
R-02 = The reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

Table 3A - January 2020 Process Control Charted Lab Results

Location	Siltronic Influent (SI)		Siltronic Effluent (SE)		NW Natural Influent		NW Natural Effluent		Treatment Plant	
Sample ID	SI-010820-62		SE-010820-62		NWI-010820-62		NWE-010820-62		TPI-010820-62	
Laboratory ID	A0A0199-01		A0A0199-02		A0A0199-03		A0A0199-04		A0A0199-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<50.0		<10.0		<20.0	
Benzene	**154**		**49.5**		**268**		**50.3**		**39.9**	
Bromobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Bromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromodichloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromoform	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromomethane	<100		<25.0		<25.0		<5.00		<10.0	
2-Butanone (MEK)	<100		<25.0		<25.0		<5.00		<10.0	
n-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
sec-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
tert-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Carbon tetrachloride	<10.0		<2.50		<2.50		<0.500		<1.00	
Chlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Chloroethane	<100		<25.0		<25.0		<5.00		<10.0	
Chloroform	<10.0		<2.50		<2.50		<0.500		<1.00	
Chloromethane	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Dibromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dibromo-3-chloropropane	<50.0		<12.5		<12.5		<2.50		<5.00	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<1.25		<0.250		<0.500	
Dibromomethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,4-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Dichlorodifluoromethane	<10.0		<2.50		<2.50		<1.00		<1.00	
1,1-Dichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloroethane (EDC)	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	

Table 3A - January 2020 Process Control Charted Lab Results

cis-1,2-Dichloroethene	**5.06**	**J**	**2.12**		<1.00		<0.200		<0.400	
trans-1,2-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloropropane	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
2,2-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
cis-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
trans-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
Ethylbenzene	**76.3**		**45.3**		**18.8**		**3.42**		**7.09**	
Hexachlorobutadiene	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Hexanone	<100		<25.0		<25.0		<5.00		<10.0	
Isopropylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Isopropyltoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Methylene chloride	<50.0		<12.5		<12.5		<5.00		<5.00	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<25.0		<5.00		<10.0	
Methyl tert-butyl ether (MTBE)	<10.0		<2.50		<2.50		<0.500		<1.00	
n-Propylbenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Stryrene	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Tetrachloroethene (PCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Toluene	<5.00		**2.07**	**J**	**3.37**		**0.650**		**0.620**	**J**
1,2,3-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,1,1-Trichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2-Trichloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Trichloroethene (TCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Trichlorofluromethane	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,3-Trichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2,4-Trimethylbenzene	**13.2**	**J**	**13.7**		<2.50		<0.500		**1.52**	**J**
1,3,5-Trimethylbenzene	<10.0		**3.66**	**J**	<2.50		<0.500		<1.00	
Vinyl chloride	**20.4**		**1.56**	**J**	<1.00		<0.200		<0.400	
m,p-Xylene	**20.5**		**30.4**		**6.59**		**1.34**		**3.75**	
o-Xylene	**15.5**		**19.8**		**3.58**		**1.24**		**2.49**	

Table 3A - January 2020 Process Control Charted Lab Results

Cyanide (ug/L)										
Total Cyanide-(Final Target Range)	207	Pres	147		151	Pres	148		155	
SVOC (ug/L)										
Acenaphthene	66.8		193		111		2.24		3.12	
Acenaphthylene	<11.1		<4.44		12.5		<0.440		<1.14	
Anthracene	<11.1		27.3		38.7		<0.440		4.25	
Benz(a)anthracene	<11.1		6.79	J	21.6		<0.440		<1.14	
Benzo(a)pyrene	<11.1		4.64	J	19.5		<0.440		<1.14	
Benzo(b)fluoranthene	<11.1		4.66	J	18.3		<0.440		<1.14	
Benzo(k)fluoranthene	<11.1		<4.44		5.51	M-05	<0.440		<1.14	
Benzo(g,h,i)perylene	<11.1		<4.44		14.4		<0.440		<1.14	
Chrysene	<11.1		6.21	J	24.6		<0.440		<1.14	
Dibenz(a,h)anthracene	<11.1		<4.44		1.72	J	<0.440		<1.14	
Dibenzofuran	<11.1		13.9		14.2		1.11		2.60	
Fluoranthene	<11.1		25.5		75.4		1.55		4.40	
Fluorene	18.6	J	64.1		52.5		2.49		11.4	
Indeno(1,2,3-cd)pyrene	<11.1		<4.44		12.6		<0.440		<1.14	
1-Methylnaphthalene	111		261		135		8.18		34.3	
2-Methylnaphthalene	123		385		219		7.99		38.5	
Naphthalene	2150		4420		676		106		366	
Phenanthrene	45.0		158		213		7.19		29.1	
Pyrene	<11.1		28.7		88.7		<0.440		4.63	
Total Metals (ug/L)										
Copper	<2.50	R-04	<2.50	R-04	<2.50	R-04	<2.50	R-04	<2.50	R-04
Iron	33900		31000		76700		79700	Q-42	76300	
Conventional Chemistry Parameters										
HEM (Oil and Grease) (ug/L)	<5210		<5000		<5100		<5150		<4720	
Total Suspended Solids (ug/L)									552000	

NOTES

J = Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.

M-05= Estimated results. Peak separation for structural isomers is insufficient for accurate quantification

PRES = Incomplete field preservation. Additional preservstive was added to adjust the pH within the appropriate range for this analysis.

R-04 = Reporting levels elevated due to dilution necessary for analysis.

Table 3A - January 2020 Process Control Charted Lab Results

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

Table 3B - February 2020 Process Control Charted Lab Results

Location	Siltronic Influent (SI)		Siltronic Effluent (SE)		NW Natural Influent		NW Natural Effluent		Treatment Plant	
Sample ID	SI-021220-63		SE-021220-63		NWI-021220-63		NWE-021220-63		TPI-021220-63	
Laboratory ID	A0B0318-01		A0B0318-02		A0B0318-03		A0B0318-04		A0B0318-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<50.0		<10.0		<20.0	
Benzene	**84.8**		**11.2**		**266**		**62.4**		**37.7**	
Bromobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Bromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromodichloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromoform	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromomethane	<100		<25.0		<25.0		<5.00		<10.0	
2-Butanone (MEK)	<100		<25.0		<25.0		<5.00		<10.0	
n-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
sec-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
tert-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Carbon tetrachloride	<10.0		<2.50		<2.50		<0.500		<1.00	
Chlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Chloroethane	<100		<25.0		<25.0		<5.00		<10.0	
Chloroform	<10.0		<2.50		<2.50		<0.500		<1.00	
Chloromethane	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Dibromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dibromo-3-chloropropane	<50.0		<12.5		<12.5		<2.50		<5.00	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<1.25		<0.250		<0.500	
Dibromomethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,4-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Dichlorodifluoromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloroethane (EDC)	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	

Table 3B - February 2020 Process Control Charted Lab Results

cis-1,2-Dichloroethene	**5.80**	J	<1.00		<1.00		<0.200		<0.400	
trans-1,2-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloropropane	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
2,2-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
cis-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
trans-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
Ethylbenzene	**109**		**11.8**		**25.9**		**5.00**		**6.32**	
Hexachlorobutadiene	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Hexanone	<100		<25.0		<25.0		<5.00		<10.0	
Isopropylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Isopropyltoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Methylene chloride	<100		<25.0		<25.0		<5.00		<10.0	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<25.0		<5.00		<10.0	
Methyl tert-butyl ether (MTBE)	<10.0		<2.50		<2.50		<0.500		<1.00	
n-Propylbenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Stryrene	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Tetrachloroethene (PCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Toluene	<5.00		<1.25		**3.75**		**0.870**		**0.680**	J
1,2,3-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,1,1-Trichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2-Trichloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Trichloroethene (TCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Trichlorofluromethane	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,3-Trichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2,4-Trimethylbenzene	**29.8**		**4.95**	J	**4.30**	J	**0.680**	J	**1.96**	J
1,3,5-Trimethylbenzene	<10.0	**Q-42**	<2.50		<2.50		<0.500		<1.00	
Vinyl chloride	**9.40**		**0.131**		<1.00		<0.200		<0.400	
m,p-Xylene	**73.2**		**9.00**		**10.2**		**1.92**		**3.78**	
o-Xylene	**38.8**		**7.55**		**6.35**		**1.72**		**3.16**	

Table 3B - February 2020 Process Control Charted Lab Results

Cyanide (ug/L)									
Total Cyanide-(Final Target Range)	**182**		**187**		**157**		**163**		**165**	
SVOC (ug/L)									
Acenaphthene	**370**		**125**		**16.4**		<0.381		**4.92**	
Acenaphthylene	**19.6**	**J**	**15.0**	**J**	<1.05		**0.938**		**8.33**	
Anthracene	**141**		**36.7**		**1.76**	**J**	<0.381		**10.3**	
Benz(a)anthracene	**65.2**		**24.5**		<1.05		<0.381		**7.91**	
Benzo(a)pyrene	**55.8**		**19.0**	**J**	<1.05		<0.381		**6.44**	
Benzo(b)fluoranthene	**55.8**	**M-05**	**20.8**	**M-05**	<1.05		<0.381		**7.22**	
Benzo(k)fluoranthene	**20.3**	**M-05**	<9.80		<1.05		<0.381		**2.57**	**M-05**
Benzo(g,h,i)perylene	**37.5**		**12.9**	**J**	<1.05		<0.381		**4.73**	
Chrysene	**74.0**		**26.4**		<1.05		<0.381		**9.52**	
Dibenz(a,h)anthracene	<10.0		<9.80		<1.05		<0.381		<0.971	
Fluoranthene	**213**		**75.4**		**2.34**		**1.61**		**28.8**	
Fluorene	**156**		**63.6**		**5.48**		**3.06**		**22.0**	
Indeno(1,2,3-cd)pyrene	**38.3**		**14.2**	**J**	<1.05		<0.381		**4.85**	
1-Methylnaphthalene	**434**		**159**		**24.9**		**10.0**		**45.2**	
2-Methylnaphthalene	**687**		**211**		**36.6**		**9.75**		**48.4**	
Naphthalene	**6520**		**2110**		**453**		**163**		**457**	
Phenanthrene	**650**		**227**		**10.5**		**6.84**		**75.3**	
Pyrene	**244**		**83.8**		**2.49**		<0.381		**27.1**	
Dibenzofuran	**28.7**		**11.6**	**J**	**3.36**		**1.49**		**4.10**	
Total Metals (ug/L)									
Copper	<0.500		**1.19**		<0.500		<0.500		<0.500	
Iron	**33900**		**34200**		**76900**	**Q-42**	**75200**		**61800**	
Conventional Chemistry Parameters									
HEM (Oil and Grease) (ug/L)	<5320	**PRES**	<4810		<5000		<5000		<4720	
Total Suspended Solids (ug/L)									**398000**	

NOTES

J = Estimated Result. Result detected <MDL and >MRL.

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

PRES = Sample pH was greater than 2 upon receipt. Additional acid was added to bring pH below 2.

Table 3C - March 2020 Process Control Charted Lab Results

Location	Siltronic Influent (SI)		Siltronic Effluent (SE)		NW Natural Influent		NW Natural Effluent		Treatment Plant	
Sample ID	SI-031120-64		SE-031120-64		NWI-031120-64		NWE-031120-64		TPI-031120-64	
Laboratory ID	A0C0343-01		A0C0343-02		A0C0343-03		A0C0343-04		A0C0343-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<20.0		<10.0		<20.0	
Benzene	**291**		**31.6**		**380**		**40.5**		**29.1**	
Bromobenzene	<5.00		<1.25		<0.500		<0.250		<0.500	
Bromochloromethane	<10.0		<2.50		<1.00		<0.500		<1.00	
Bromodichloromethane	<10.0		<2.50		<1.00		<0.500		<1.00	
Bromoform	<10.0		<2.50		<1.00		<0.500		<1.00	
Bromomethane	<100		<25.0		<10.0		<5.00		<10.0	
2-Butanone (MEK)	<100		<25.0		<10.0		<5.00		<10.0	
n-Butylbenzene	<10.0		<2.50		<1.00		<0.500		<1.00	
sec-Butylbenzene	<10.0		<2.50		<1.00		<0.500		<1.00	
tert-Butylbenzene	<10.0		<5.00		<1.00		<1.00		<2.00	
Carbon disulfide	<100									
Carbon tetrachloride	<20.0		<5.00		<2.00		<1.00		<2.00	
Chlorobenzene	<5.00		<1.25		<0.500		<0.250		<0.500	
Chloroethane	<100	**EST**	<25.0	**EST**	<10.0	**EST**	<5.00	**EST**	<10.0	**EST**
Chloroform	<10.0		<2.50		<1.00		<0.500		<1.00	
Chloromethane	<50.0		<12.5		<5.00		<2.50		<5.00	
2-Chlorotoluene	<10.0		<2.50		<1.00		<0.500		<1.00	
4-Chlorotoluene	<10.0		<2.50		<1.00		<0.500		<1.00	
Dibromochloromethane	<10.0		<2.50		<1.00		<0.500		<1.00	
1,2-Dibromo-3-chloropropane	<50.0		<25.0		<5.00		<5.00		<10.0	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<0.500		<0.250		<0.500	
Dibromomethane	<10.0		<2.50		<1.00		<0.500		<1.00	
1,2-Dichlorobenzene	<5.00		**1.42**	**J**	<0.500		<0.250		<0.500	
1,3-Dichlorobenzene	<5.00		<1.25		<0.500		<0.250		<0.500	
1,4-Dichlorobenzene	<5.00		<1.25		<0.500		<0.250		<0.500	
Dichlorodifluoromethane	<10.0		<2.50		<1.00		<0.500		<1.00	
1,1-Dichloroethane	<4.00		<1.00		<0.400		<0.200		<0.400	
1,2-Dichloroethane (EDC)	<4.00		<1.00		<0.400		<0.200		<0.400	

Table 3C - March 2020 Process Control Charted Lab Results

1,1-Dichloroethene	<4.00		<1.00		<0.400		<0.200		<0.400	
cis-1,2-Dichloroethene	**7.90**	**J**	**1.90**	**J**	<0.400		<0.200		**0.454**	**J**
trans-1,2-Dichloroethene	<4.00		<1.00		<0.400		<0.200		<0.400	
1,2-Dichloropropane	<5.00		<1.25		<0.500		<0.250		<0.500	
1,3-Dichloropropane	<10.0		<2.50		<1.00		<0.500		<1.00	
2,2-Dichloropropane	<10.0		<2.50		<1.00		<0.500		<1.00	
1,1-Dichloropropene	<10.0		<2.50		<1.00		<0.500		<1.00	
cis-1,3-Dichloropropene	<10.0		<2.50		<1.00		<0.500		<1.00	
trans-1,3-Dichloropropene	<10.0		<2.50		<1.00		<0.500		<1.00	
Ethylbenzene	**269**		**24.6**		**43.0**		**2.22**		**7.66**	
Hexachlorobutadiene	<50.0		<12.5		<5.00		<2.50		<5.00	
2-Hexanone	<100		<25.0		<10.0		<5.00		<10.0	
Isopropylbenzene	**10.0**	**J**	<2.50		**1.34**	**J**	<0.500		<1.00	
4-Isopropyltoluene	<10.0		<2.50		<1.00		<0.500		<1.00	
Methylene chloride	<100		<25.0		<10.0		<5.00		<10.0	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<10.0		<5.00		<10.0	
Methyl tert-butyl ether (MTBE)	<10.0		<2.50		<1.00		<0.500		<1.00	
n-Propylbenzene	<5.00		<1.25		<0.500		<0.250		<0.500	
Stryrene	<10.0		<2.50		<1.00		<0.500		<1.00	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<0.400		<0.200		<0.400	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<0.500		<0.250		<0.500	
Tetrachloroethene (PCE)	<4.00		<1.00		<0.400		<0.200		<0.400	
Toluene	**12.5**		**1.72**	**J**	**7.40**		**0.462**	**J**	**0.632**	**J**
1,2,3-Trichlorobenzene	<20.0		<5.00		<2.00		<1.00		<2.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<2.00		<1.00		<2.00	
1,1,1-Trichloroethane	<4.00		<1.00		<0.400		<0.200		<0.400	
1,1,2-Trichloroethane	<5.00		<1.25		<0.500		<0.250		<0.500	
Trichloroethene (TCE)	<4.00		<1.00		<0.400		<0.200		<0.400	
Trichlorofluromethane	<20.0		<5.00		<2.00		<1.00		<2.00	
1,2,3-Trichloropropane	<10.0		<2.50		<1.00		<0.500		<1.00	
1,2,4-Trimethylbenzene	**61.9**		**8.44**		**6.56**		<0.500		**1.69**	**J**
1,3,5-Trimethylbenzene	**19.0**	**J**	<2.50		**1.80**	**J**	<0.500		<1.00	
Vinyl chloride	**9.60**		<1.00		<0.400		<0.200		<0.400	
m,p-Xylene	**177**		**17.6**		**17.2**		**0.697**	**J**	**4.62**	
o-Xylene	**96.4**		**13.1**		**10.2**		**0.724**		**3.69**	

Table 3C - March 2020 Process Control Charted Lab Results

Cyanide (ug/L)										
Total Cyanide-(Final Target Range)	255	PRES	219		203	PRES	190		192	
SVOC (ug/L)										
Acenaphthene	235		494		67.3		<0.408		5.16	
Acenaphthylene	12.2	J	79.6		12.1		0.725	J	4.59	
Anthracene	83.5		431		41.9		1.42		8.23	
Benz(a)anthracene	37.8		293		29.8		1.39		6.21	
Benzo(a)pyrene	33.3		294		27.2		0.847		5.55	
Benzo(b)fluoranthene	30.9	M-05	287		23.8		1.23		5.44	
Benzo(k)fluoranthene	11.5	J	72.9	M-05	8.05	M-05	<0.408		1.76	J
Benzo(g,h,i)perylene	25.6		231		21.5		1.04		4.44	
Chrysene	45.6		368		33.2		1.89		7.84	
Dibenz(a,h)anthracene	<10.1		32.5		2.63		<0.408		<0.962	
Dibenzofuran	17.0	J	39.7		9.21		1.84		3.64	
Fluoranthene	127		1000		94.8		6.95		23.6	
Fluorene	91.0		286		40.0		5.49		18.9	
Indeno(1,2,3-cd)pyrene	23.1		204		18.1		0.965		4.10	
1-Methylnaphthalene	272		277		62.2		9.30		41.8	
2-Methylnaphthalene	421	B-02	325	B-02	105	B-02	9.24	B-02	41.8	B-02
Naphthalene	4330		1530		232		116		372	
Phenanthrene	374		1860		234		21.1		70.2	
Pyrene	150		1170		117		4.03		21.5	
Total Metals (ug/L)										
Copper	<10.0	R-04	<10.0	R-04	<10.0	R-04	<10.0	R-04	<10.0	R-04
Iron	33500		33600		87300		82700		67600	
Conventional Chemistry Parameters										
HEM (Oil and Grease) (ug/L)	<5000		<4810		<4950		<5150		<4720	
Total Suspended Solids (ug/L)									435000	

NOTES

J = Estimated Result. Result detected <MDL and >MRL.

B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)

EST = Result reported as an Estimated Value. [Custom Value]

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

Table 3C - March 2020 Process Control Charted Lab Results

PRES = Incomplete field preservation. Additional preservstive was added to adjust the pH within the appropriate range for this analysis.
R-04 = Reporting levels elevated due to dilution necessary for analysis.

Table 3D - April 2020 Process Control Charted Lab Results

Location	Siltronic Influent (SI)		Siltronic Effluent (SE)		NW Natural Influent		NW Natural Effluent		Treatment Plant	
Sample ID	SI-041520-65		SE-041520-65		NWI-041520-65		NWE-041520-65		TPI-041520-65	
Laboratory ID	A0D0324-01		A0D0324-02		A0D0324-03		A0D0324-04		A0D0324-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<50.0		<10.0		<20.0	
Benzene	**117**		**32.8**		**329**		**58.3**		**40.1**	
Bromobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Bromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromodichloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromoform	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromomethane	<100		<25.0		<25.0		<5.00		<10.0	
2-Butanone (MEK)	<100		<25.0		<25.0		<5.00		<10.0	
n-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
sec-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
tert-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Carbon tetrachloride	<10.0		<2.50		<2.50		<0.500		<1.00	
Chlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Chloroethane	<100		<25.0		<25.0		<5.00		<10.0	
Chloroform	<10.0		<2.50		<2.50		<0.500		<1.00	
Chloromethane	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Dibromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dibromo-3-chloropropane	<50.0		<12.5		<12.5		<2.50		<5.00	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<1.25		<0.250		<0.500	
Dibromomethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,4-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Dichlorodifluoromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloroethane (EDC)	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	

Table 3D - April 2020 Process Control Charted Lab Results

cis-1,2-Dichloroethene	**5.00**	J	**1.44**	J	<1.00		<0.200		<0.400	
trans-1,2-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloropropane	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
2,2-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
cis-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
trans-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
Ethylbenzene	**111**		**22.8**		**20.9**		**3.11**		**6.01**	
Hexachlorobutadiene	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Hexanone	<100		<25.0		<25.0		<5.00		<10.0	
Isopropylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Isopropyltoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Methylene chloride	<100		<25.0		<25.0		<5.00		<10.0	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<25.0		<5.00		<10.0	
Methyl tert-butyl ether (MTBE)	<10.0		<2.50		<2.50		<0.500		<1.00	
n-Propylbenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Stryrene	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Tetrachloroethene (PCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Toluene	<5.00		<1.25		**2.50**		**0.603**		**0.514**	J
1,2,3-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,1,1-Trichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2-Trichloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Trichloroethene (TCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Trichlorofluromethane	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,3-Trichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2,4-Trimethylbenzene	**27.0**		**6.41**		**4.71**	J	<0.500		<1.00	
1,3,5-Trimethylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Vinyl chloride	**9.76**		**0.735**		<1.00		<0.200		<0.400	
m,p-Xylene	**61.4**		**13.1**		**7.73**		**0.913**	J	**2.53**	
o-Xylene	**35.3**		**10.4**		**4.70**		**0.969**		**2.31**	

Table 3D - April 2020 Process Control Charted Lab Results

Cyanide (ug/L)										
Total Cyanide-(Final Target Range)	187	PRES	166		231	PRES	182		181	
SVOC (ug/L)										
Acenaphthene	60.0	B-02	110	B-02	27.6	B-02	7.05	B-02	30.3	B-02
Acenaphthylene	<10.0		<10.5		3.22		<0.408		<1.11	
Anthracene	<10.0		15.3	J	14.7		<0.408		4.67	
Benz(a)anthracene	<10.0		<10.5		10.5		<0.408		<1.11	
Benzo(a)pyrene	<10.0		<10.5		9.35		<0.408		<1.11	
Benzo(b)fluoranthene	<10.0		<10.5		8.70	M-05	<0.408		<1.11	
Benzo(k)fluoranthene	<10.0		<10.5		3.21	M-05	<0.408		<1.11	
Benzo(g,h,i)perylene	<10.0		<10.5		7.01		<0.408		<1.11	
Chrysene	<10.0		<10.5		12.5		<0.408		<1.11	
Dibenz(a,h)anthracene	<10.0		<10.5		<0.980		<0.408		<1.11	
Fluoranthene	<10.0		10.9	J	33.6		1.44		4.31	
Fluorene	17.3	J	38.3		14.8		2.69		12.0	
Indeno(1,2,3-cd)pyrene	<10.0		<10.5		6.42		<0.408		<1.11	
1-Methylnaphthalene	101	B-02	130	B-02	34.7	B-02	9.10	B-02	32.0	B-02
2-Methylnaphthalene	136	B-02	169	B-02	52.6	B-02	7.85	B-02	30.9	B-02
Naphthalene	2190	B	1990	B	390	B	120	B	291	B
Phenanthrene	39.9		97.3		82.4		7.26		30.5	
Pyrene	<10.0		11.3	J	40.0		1.46		4.42	
Dibenzofuran	<10.0		<10.5		3.81		1.15		2.52	
Total Metals (ug/L)										
Copper	<10.0	R-04	<10.0	R-04	<10.0	R-04	<10.0	R-04	<10.0	R-04
Iron	32100		31400	Q-42	69000		76700		62300	
Conventional Chemistry Parameters										
HEM (Oil and Grease) (ug/L)	<5050		<4760		<5000		<4850		<4720	
Total Suspended Solids (ug/L)									395000	

NOTES

J = Estimated Result. Result detected <MDL and >MRL.

B = Analyte detected in an associated blank at a level above the MRL.

B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL.

M-05= Estimated results. Peak separation for structural isomers is insufficient for accurate quantification

Table 3D - April 2020 Process Control Charted Lab Results

PRES = Incomplete field preservation. Additional preservstive was added to adjust the pH within the appropriate range for this analysis.
R-02 = The reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
R-04 = Reporting levels elevated due to dilution necessary for analysis.

Table 3E - May 2020 Process Control Charted Lab Results

Location	Siltronic Influent (SI)		Siltronic Effluent (SE)		NW Natural Influent		NW Natural Effluent		Treatment Plant	
Sample ID	SI-050620-66		SE-050620-66		NWI-050620-66		NWE-050620-66		TPI-050620-66	
Laboratory ID	A0E0137-01		A0E0137-02		A0E0137-03		A0E0137-04		A0E0137-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<50.0		<10.0		<10.0	
Acrylonitrile	<20.0		<5.00		<5.00		<1.00		<1.00	
Benzene	**212**		**47.6**		**352**		**101**		**86.6**	
Bromobenzene	<5.00		<1.25		<1.25		<0.250		<0.250	
Bromochloromethane	<10.0		<2.50		<2.50		<0.500		<0.500	
Bromodichloromethane	<10.0		<2.50		<2.50		<0.500		<0.500	
Bromoform	<20.0		<5.00		<5.00		<1.00		<1.00	
Bromomethane	<100		<25.0		<25.0		<5.00		<5.00	
2-Butanone (MEK)	<100		<25.0		<25.0		<5.00		<5.00	
n-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<0.500	
sec-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<0.500	
tert-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<0.500	
Carbon disulfide	<100		<25.0		<25.0		<5.00		<5.00	
Carbon tetrachloride	<10.0		<2.50		<2.50		<0.500		<0.500	
Chlorobenzene	<5.00		<1.25		<1.25		<0.250		**0.410**	J
Chloroethane	<100	**EST**	<25.0	**EST**	<25.0	**EST**	<5.00	**EST**	<5.00	**EST**
Chloroform	<10.0		<2.50		<2.50		<0.500		<0.500	
Chloromethane	<50.0		<12.5		<12.5		<2.50		<2.50	
2-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<0.500	
4-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<0.500	
Dibromochloromethane	<10.0		<2.50		<2.50		<0.500		<0.500	
1,2-Dibromo-3-chloropropane	<50.0		<12.5		<12.5		<2.50		<2.50	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<1.25		<0.250		<0.250	
Dibromomethane	<10.0		<2.50		<2.50		<0.500		<0.500	
1,2-Dichlorobenzene	<5.00		**1.50**	J	<1.25		<0.250		**0.480**	J
1,3-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.250	
1,4-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.250	
Dichlorodifluoromethane	<10.0		<2.50		<2.50		<0.500		<0.500	
1,1-Dichloroethane	<4.00		<1.00		<1.00		<0.200		<0.200	

Table 3E - May 2020 Process Control Charted Lab Results

1,2-Dichloroethane (EDC)	<4.00		<1.00		<1.00		<0.200		<0.200	
1,1-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.200	
cis-1,2-Dichloroethene	**6.40**	**J**	**1.90**	**J**	<1.00		<0.200		**0.720**	
trans-1,2-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.200	
1,2-Dichloropropane	<5.00		<1.25		<1.25		<0.250		<0.250	
1,3-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<0.500	
2,2-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<0.500	
1,1-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<0.500	
cis-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<0.500	
trans-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<0.500	
Ethylbenzene	**229**		**46.6**		**28.7**		**6.93**		**19.9**	
Hexachlorobutadiene	<50.0		<12.5		<12.5		<2.50		<2.50	
2-Hexanone	<100		<25.0		<25.0		<5.00		<5.00	
Isopropylbenzene	**11.8**	**J**	<2.50		<2.50		<0.500		**0.800**	**J**
4-Isopropyltoluene	<10.0		<2.50		<2.50		<0.500		<0.500	
Methylene chloride	<100		<25.0		<25.0		<5.00		<5.00	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<25.0		<5.00		<5.00	
Methyl tert-butyl ether (MTBE)	<10.0		**2.50**	**J**	<2.50		<0.500		**0.870**	**J**
n-Propylbenzene	<5.00		<1.25		<1.25		<0.250		**0.290**	**J**
Stryrene	<10.0		<2.50		<2.50		<0.500		<0.500	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<1.00		<0.200		<0.200	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<1.25		<0.250		<0.250	
Tetrachloroethene (PCE)	<4.00		<1.00		<1.00		<0.200		<0.200	
Toluene	<10.0		<2.50		**4.05**	**J**	**1.06**		**1.38**	
1,2,3-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<1.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<1.00	
1,1,1-Trichloroethane	<4.00		<1.00		<1.00		<0.200		<0.200	
1,1,2-Trichloroethane	<5.00		<1.25		<1.25		<0.250		<0.250	
Trichloroethene (TCE)	<4.00		<1.00		<1.00		<0.200		<0.200	
Trichlorofluromethane	<20.0		<5.00		<5.00		<1.00		<1.00	
1,2,3-Trichloropropane	<10.0		<2.50		<2.50		<0.500		<0.500	
1,2,4-Trimethylbenzene	**71.4**		**19.8**		**5.35**		**0.520**	**J**	**6.16**	
1,3,5-Trimethylbenzene	**20.2**		**4.70**	**J**	<2.50		<0.500		**1.71**	
Vinyl chloride	**6.60**	**J**	<1.00		<1.00		<0.200		**0.260**	**J**
m,p-Xylene	**155**		**34.4**		**12.0**		**2.19**		**11.9**	

Table 3E - May 2020 Process Control Charted Lab Results

o-Xylene	**90.6**		**25.0**		**7.70**		**2.41**		**9.65**	
Cyanide (ug/L)										
Total Cyanide-(Final Target Range)	**127**		**171**		**182**		**163**		**176**	
SVOC (ug/L)										
Acenaphthene	**145**		**159**		**8.48**		**8.91**		**6.31**	
Acenaphthylene	<9.90		<10.6		<1.05		<0.476		**1.82**	J
Anthracene	**43.8**		**20.5**	J	**1.26**	J	<0.476		**5.42**	
Benz(a)anthracene	**21.6**		<10.6		<1.05		<0.476		**1.18**	J
Benzo(a)pyrene	**15.4**	J	<10.6		<1.05		<0.476		<1.18	
Benzo(b)fluoranthene	**15.0**	J	<10.6		<1.05		<0.476		<1.18	
Benzo(k)fluoranthene	<9.90		<10.6		<1.05		<0.476		<1.18	
Benzo(g,h,i)perylene	**11.0**	J	<10.6		<1.05		<0.476		<1.18	
Chrysene	**20.8**		<10.6		<1.05		<0.476		<1.18	
Dibenz(a,h)anthracene	<9.90		<10.6		<1.05		<0.476		<1.18	
Fluoranthene	**60.9**		**11.6**	J	**1.22**	J	**1.49**		**6.92**	
Fluorene	**57.2**		**55.2**		**3.01**		**3.01**		**22.7**	
Indeno(1,2,3-cd)pyrene	**13.0**	J	<10.6		<1.05		<0.476		<1.18	
1-Methylnaphthalene	**199**		**208**		**12.9**		**12.7**		**75.7**	
2-Methylnaphthalene	**299**		**297**		**17.8**		**10.9**		**94.7**	
Naphthalene	**3460**	**B-02**	**3370**	**B-02**	**211**	**B-02**	**206**	**B-02**	**911**	**B-02**
Phenanthrene	**208**		**126**		**7.84**		**7.16**		**57.4**	
Pyrene	**68.8**		**12.4**	J	**1.33**	J	**1.47**		**7.27**	
Dibenzofuran	**11.0**	J	**11.7**	J	**1.23**	J	**1.45**		**4.88**	
Total Metals (ug/L)										
Copper	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**
Iron	**34500**		**36400**		**81600**		**75600**		**64900**	
Conventional Chemistry Parameters										
HEM (Oil and Grease) (ug/L)	**9000**		**6830**	**PRES**	<4810		<5050		<4850	
Total Suspended Solids (ug/L)									**426000**	

NOTES

B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL.

EST = Result reported as an Estimated Value.

J = Estimated Result. Result detected <MDL and >MRL.

Table 3E - May 2020 Process Control Charted Lab Results

PRES = Sample pH was greater than 2 upon receipt. Additional acid was added to bring pH below 2.
R-04 = Reporting levels elevated due to dilution necessary for analysis.

Table 3F - June 2020 Process Control Charted Lab Results

Location	Siltronic Influent		Siltronic Effluent		NW Natural		NW Natural		Treatment Plant	
Sample ID	SI-060320-67		SE-060320-67		NWI-060320-67		NWE-060320-67		TPI-060320-67	
Laboratory ID	A0F0074-01		A0F0074-02		A0F0074-03		A0F0074-04		A0F0074-05	
	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
VOC (ug/L)										
Acetone	<200		<50.0		<50.0		<10.0		<20.0	
Acrylonitrile	<20.0		<5.00		<5.00		<1.00		<2.00	
Benzene	**163**		**28.5**		**449**		**113**		**79.8**	
Bromobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Bromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromodichloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromoform	<10.0		<2.50		<2.50		<0.500		<1.00	
Bromomethane	<100		<25.0		<25.0		<5.00		<10.0	
2-Butanone (MEK)	<100		<25.0		<25.0		<5.00		<10.0	
n-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
sec-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
tert-Butylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Carbon disulfide	<100		<25.0		<25.0		<5.00		<10.0	
Carbon tetrachloride	<10.0		<2.50		<2.50		<0.500		<1.00	
Chlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Chloroethane	<100	**ESTa**	<25.0	**ESTa**	<25.0	**ESTa**	<5.00	**EST**	<10.0	**ESTa**
Chloroform	<10.0		<2.50		<2.50		<0.500		<1.00	
Chloromethane	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Chlorotoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Dibromochloromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dibromo-3-chloropropane	<50.0		<12.5		<12.5		<2.50		<5.00	
1,2-Dibromoethane (EDB)	<5.00		<1.25		<1.25		<0.250		<0.500	
Dibromomethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
1,4-Dichlorobenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Dichlorodifluoromethane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,2-Dichloroethane (EDC)	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	
cis-1,2-Dichloroethene	**5.02**	**J**	**1.18**	**J**	<1.00		<0.200		<0.400	
trans-1,2-Dichloroethene	<4.00		<1.00		<1.00		<0.200		<0.400	

Table 3F - June 2020 Process Control Charted Lab Results

1,2-Dichloropropane	<5.00		<1.25		<1.25		<0.250		<0.500	
1,3-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
2,2-Dichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
cis-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
trans-1,3-Dichloropropene	<10.0		<2.50		<2.50		<0.500		<1.00	
Ethylbenzene	**121**		**18.4**		**30.2**		**8.00**		**9.85**	
Hexachlorobutadiene	<50.0		<12.5		<12.5		<2.50		<5.00	
2-Hexanone	<100		<25.0		<25.0		<5.00		<10.0	
Isopropylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
4-Isopropyltoluene	<10.0		<2.50		<2.50		<0.500		<1.00	
Methylene chloride	<100		<25.0		<25.0		<5.00		<10.0	
4-Methyl-2-pentanone (MiBK)	<100		<25.0		<25.0		<5.00		<10.0	
Methyl tert-butyl ether (MTBE)	<10.0		<2.50		<2.50		<0.500		<1.00	
Naphthalene							**324**			
n-Propylbenzene	<5.00		<1.25		<1.25		<0.250		<0.500	
Stryrene	<10.0		<2.50		<2.50		<0.500		<1.00	
1,1,1,2-Tetrachloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2,2-Tetrachloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Tetrachloroethene (PCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Toluene	<10.0		<2.50		**4.04**	**J**	**1.19**		<1.00	
1,2,3-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,4-Trichlorobenzene	<20.0		<5.00		<5.00		<1.00		<2.00	
1,1,1-Trichloroethane	<4.00		<1.00		<1.00		<0.200		<0.400	
1,1,2-Trichloroethane	<5.00		<1.25		<1.25		<0.250		<0.500	
Trichloroethene (TCE)	<4.00		<1.00		<1.00		<0.200		<0.400	
Trichlorofluromethane	<20.0		<5.00		<5.00		<1.00		<2.00	
1,2,3-Trichloropropane	<10.0		<2.50		<2.50		<0.500		<1.00	
1,2,4-Trimethylbenzene	**27.1**		**5.10**		**5.16**		**0.668**	**J**	**1.93**	**J**
1,3,5-Trimethylbenzene	<10.0		<2.50		<2.50		<0.500		<1.00	
Vinyl chloride	**10.1**		**0.562**		<1.00		<0.200		<0.400	
m,p-Xylene	**67.4**		**10.9**		**11.9**		**2.49**		**4.40**	
o-Xylene	**40.7**		**8.06**		**7.50**		**2.55**		**3.74**	
Cyanide (ug/L)										
Total Cyanide-(Final Target Range)	**224**	**PRES**	**185**		**157**	**PRES**	**166**		**180**	
SVOC (ug/L)										
Acenaphthene	**78.8**	**B-02**	**64.8**	**B-02**	**3.21**	**B-02**	**7.45**	**B-02**	**17.8**	**B-02**

Table 3F - June 2020 Process Control Charted Lab Results

Acenaphthylene	<9.62		<11.1		<1.00		<0.444		<1.12	
Anthracene	**20.1**		<11.1		<1.00		**0.890**		<1.12	
Benz(a)anthracene	**10.5**	**J**	<11.1		<1.00		<0.444		<1.12	
Benzo(a)pyrene	<9.62		<11.1		<1.00		<0.444		<1.12	
Benzo(b)fluoranthene	<9.62		<11.1		<1.00		<0.444		<1.12	
Benzo(k)fluoranthene	<9.62		<11.1		<1.00		<0.444		<1.12	
Benzo(g,h,i)perylene	<9.62		<11.1		<1.00		<0.444		<1.12	
Chrysene	<9.62		<11.1		<1.00		<0.444		<1.12	
Dibenz(a,h)anthracene	<9.62		<11.1		<1.00		<0.444		<1.12	
Fluoranthene	**22.4**		<11.1		<1.00		**1.19**		**2.75**	
Fluorene	**27.0**		**20.2**	**J**	<1.00		**2.39**		**6.14**	
Indeno(1,2,3-cd)pyrene	<9.62		<11.1		<1.00		<0.444		<1.12	
1-Methylnaphthalene	**119**	**B-02**	**98.4**	**B-02**	**5.19**	**B-02**	**9.78**	**B-02**	**22.2**	**B-02**
2-Methylnaphthalene	**160**	**B**	**102**	**B**	**6.88**	**B**	**6.69**	**B**	**16.9**	**B**
Naphthalene	**2170**	**B**	**1390**	**B**	**101**	**B**	**119**	**B**	**203**	**B**
Phenanthrene	**91.9**		**46.6**		**2.56**		**4.87**		**14.3**	
Pyrene	**25.5**		<11.1		<1.00		**1.23**		**2.59**	
Dibenzofuran	<9.62		<11.1		<1.00		**1.06**		**1.39**	**J**
Total Metals (ug/L)										
Copper	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**	<5.00	**R-04**
Iron	**30300**		**31100**		**71900**		**71000**		**59100**	
Conventional Chemistry Parameters										
HEM (Oil and Grease) (ug/L)	<5050		<4850		<4900		<4720		<4850	
Total Suspended Solids (ug/L)									**432000**	

NOTES:

B = Analyte detected in an associated blank at a level above the MRL.

B-02 = Analyte detected in an associated blank at a level between one-half the MRL and the MRL.

ESTa = Result reported as an Estimated Value.

J = Estimated Result. Result detected <MDL and >MRL.

PRES = Incomplete field preservation. Additional preservstive was added to adjust the pH within the appropriate range for this analysis.

R-04 = Reporting levels elevated due to dilution necessary for analysis.