

CITY OF BELMONT

LONG TERM MONITORING PLAN

During the late part of 1990, the City of Belmont WWTP initiated a new and more adequate in-house Long-Term-Monitoring-Plan which we have used for prelim, pretreatment allocations, and SIU permits all with approval of DEQ. On July 22, 2011, DEQ approved our latest headworks analysis. At this time, we are submitting the continuance of this program in writing as the Long Term Monitoring Plan for the City of Belmont with updated information for the DEQ approval.

The plant capacity is 5.0 MGD and we have 1 SIU. The SIU is in the textile industry and is currently approved.

This data will characterize the WWTP process efficiency, inhibition thresholds and the POTW's SIUs.

We plan to collect on a continuing basis, site-specific data necessary for continual updating of the headworks analysis. This data will be stored in a database to be used in "Excel" spreadsheet.

Pollutants which might reasonably be expected to be discharged to the City of Belmont plant in quantities which could pass through or interfere with plant processes or jeopardize worker safety and health will be monitored.

Pollutants in City of Belmont WWTP NPDES permit #NC0021181, EPA required metals, and all Land Application Permit #WQ003281 requirements in accordance with 40 CFR 503 sludge disposal limited pollutants will be monitored; also, pollutants limited in SIU permits.

Where and when to monitor

“Representative Uncontrollable Samples”

*As a minimum the City will twice per year take representative uncontrollable samples in locations including domestic, commercial, restaurants, dentists, non-SIU's, etc. POC's are; BOD, TSS, NH3, cadmium, chromium, copper, nickel, lead, silver, zinc, mercury, cyanide, total phosphate, arsenic, molybdenum, and selenium.

*SIU

Significant Industrial User Monitoring will be conducted per industrial user permit (IUP). Additionally, extra SIU sampling will be performed such that all SIUs are sampled for all LTMP POCs at least once per year. The information received from our SIU's each month and the sampling events which we do on our industries will accurately show the controllable pollutant loading in Excel calculations. The SIU's are as follows:

SIU Name	SIU #	Sample Point #
Spartan Dyers	#0009	Pipe 001

*WWTP

Data from WWTP sites will be used to determine pollutant removal efficiencies and in the calculation of uncontrollable loadings.

*Data will be collected at influent prior to recycle streams. This data will be used for determination of both removal efficiencies and uncontrollable loading. This will be collected quarterly on a workday and per NPDES requirements.

*Post-disinfection effluent. This will be the final effluent to stream sampling point #2P in flow. This point will be used to determine removal efficiencies. Quarterly sampling on a workday and per NPDES requirements.

*Internal to bioprocess. To provide site-specific inhibition thresholds a sampling of each or a combined proportional sample will be taken of activated sludge midpoint of the basin, south catwalk. This will be sampling point #3P-1 once per six months thereafter.

*Sludge to Disposal. After the sludge holding process, before being sent to the permitted land sites by a certified contracted company, sampling will be conducted at point #6P-1 (effluent of holding tank). Sampling and testing will be per our Land Application permit and/or 503 regulations.

The sampling, testing, and monitoring starting at point #6P-1 will be conducted by Southern Soil Builders. We have a continuous contract with them to perform the above procedures. The contract also includes hauling the sludge, soil testing, land preparation, record keeping and State reporting.

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We will employ the ICP and/or graphite furnace determinations as required to attain the desired detection levels needed for metals in accordance with our current permit limits. 40 CFR 136 regulations will be followed on all sampling of pollutants of concern. Detection level and sample methods are as follows:

<u>P.O.C.</u>	<u>Detection Level (mg/L)</u>	<u>Sample Method</u>
BOD	2	24 hr. composite
TSS	2.5	24 hr. composite
NH3	0.1	24 hr. composite
Cn	0.01	Grab
Cd	0.002	24 hr. composite
Cr	0.005	24 hr. composite
Cu	0.002	24 hr. composite
Pb	0.01	24 hr. composite
Hg (effluent)	1.0	Grab-method 1631 E
Hg (all other locations)	0.0002	24 hr. composite
Ni	0.01	24 hr. composite
Zn	0.01	24 hr. composite
As	0.01	24 hr. composite
Mo	0.10	24 hr. composite
Se	0.01	24 hr. composite
Ag	0.005	24 hr. composite
Chloride	1.00	24 hr. composite

Mercury samples by method 1631 E have a detection limit of 1.0 ng/L.

Sludge to disposal samples will be a grab sample.

Any volatile P.O.C. should be a grab samples.

Land application samples will be in accordance with permit WQ003281.

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SAMPLING PLAN

P.O.C.	Pt.1P Influent	Pt.2P Effluent	Pt.3P1 Aeration	Pt.4P/Pt.5P Waste/Digester Effluent
BOD	X	X		
TSS	X	X		
Flow	X	X		
Cd	X	X	X	
Cr	X	X	X	
Cu	X	X	X	
Pb	X	X	X	
Hg	X	X	X	
Ni	X	X	X	
Zn	X	X	X	
NH3	X	X	X	
Cn	X	X	X	
Silver	X	X	X	
Arsenic	X	X	X	
Molybdenum	X	X	X	
Selenium	X	X	X	

Pt.6P-1 (To Field)

Holding Tank Effluent

% total solids	Magnesium
Chlorides	Sulfate Potassium
Phosphorus	Zinc
Lead	Nickel
Copper	Chromium
Cadmium	Calcium
Sodium T-Nitrogen	Ammonia Nitrogen
Nitrate/Nitrite Nitrogen	pH
Plant Available Nitrogen (by calculation)	Mercury
TLCP	
Arsenic	
Molybdenum	
Selenium	

Detention Times and Flows

Starting November 1, 2015 we will be sampling point one (influent) and point two (effluent) as unpaired sampling for the average to determine the overall removal rates. Also flow monitoring point is marked on attached facility diagram.

Original plan approved in 1994.

Revised in 2004.

Revised in 2015, approved November 25, 2015.

Revised in 2016, approved July 22, 2016

Revised in 2019, pending approval