

Sewage Treatment Plant (STP) Design/SPDES Permit Modifications Update

*Brookhaven National Laboratory
Community Advisory Council*

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SPDES Permit Modification

CURRENT STATUS

- Notice of Complete Application was published in Newsday on Thursday, November 21, 2013:
 - Allow relocation of the STP discharge from the Peconic River to groundwater via recharge beds.
 - In response to requirements contained in the SPDES Permit that was issued on June 9, 2009, which included more stringent water quality based effluent limits for copper, iron, lead, mercury, nickel, and zinc (primarily to prevent impact to aquatic species)
 - Draft SPDES permit with DEC proposed effluent limits and monitoring requirements is available for review at DEC Region 1 office in Stony Brook.

- Comments due no later than 12/21/13

Outfall 001 Permit Limits, Levels and Monitoring

Effluent Parameter	Existing 001 Permit Limit (surface water)	Groundwater Standards	Groundwater Effluent Limits	Proposed Permit Limit (groundwater)
Flow Rate (MGD)	2.3	Not Applicable (NA)	NA	2.3
pH (SU)	5.8-9.0	*	6.5-8.5	5.8-8.5
Total Suspended Solids (mg/l)	20	NA	NA	20
Total Dissolved Solids (mg/l)	NA	500	1000	1000
BOD ₅ (mg/l)	5	NA	NA	5
Settleable Solids (ml/l)	0.1	NA	NA	0.1
Temperature (° F)	90	NA	NA	---
Total Nitrogen, as N (mg/l)	10	NA	10	10
Total Nitrogen (lbs/day)	20	NA	NA	---
Ammonia, Total as N (mg/l)	1.5	2.0	NA	2.0
Total Phosphorus (mg/l)	Monitor	NA	NA	Monitor
Cyanide, Total (ug/l)	100	200	400	100
Fecal Coliform (MPN/100ml)	200 avg./400 max	NA	NA	---
Copper, Total (mg/l)	0.15	0.2	1.0	0.15
Iron, Total (mg/l)	0.37	0.3	0.6	0.6
Lead, Total (mg/l)	0.019	0.025	0.05	0.025
Mercury, Total (ng/l)	200	700	1400	200
Nickel, Total (mg/l)	0.11	0.1	0.2	0.1
Silver, Total (mg/l)	0.015	0.05	0.1	0.015
Zinc, Total (mg/l)	0.1	2.0	5.0	2.0
1,1,1-Trichloroethane (ug/l)	5	5	5	5
Methylene Chloride (ug/l)	5	5	5	5
Toluene (ug/l)	5	5	5	5
2-Butanone (ug/l)	50	NA	NA	---
HEDP (mg/l)	Monitor	0.05	0.05	0.5
Tolytriazole (mg/l)	Monitor	0.05	0.05	0.05
PCBs (ug/l)	Monitor	0.09	0.09	Monitor
Whole Effluent Toxicity Testing (TUc)	1.0	NA	NA	---



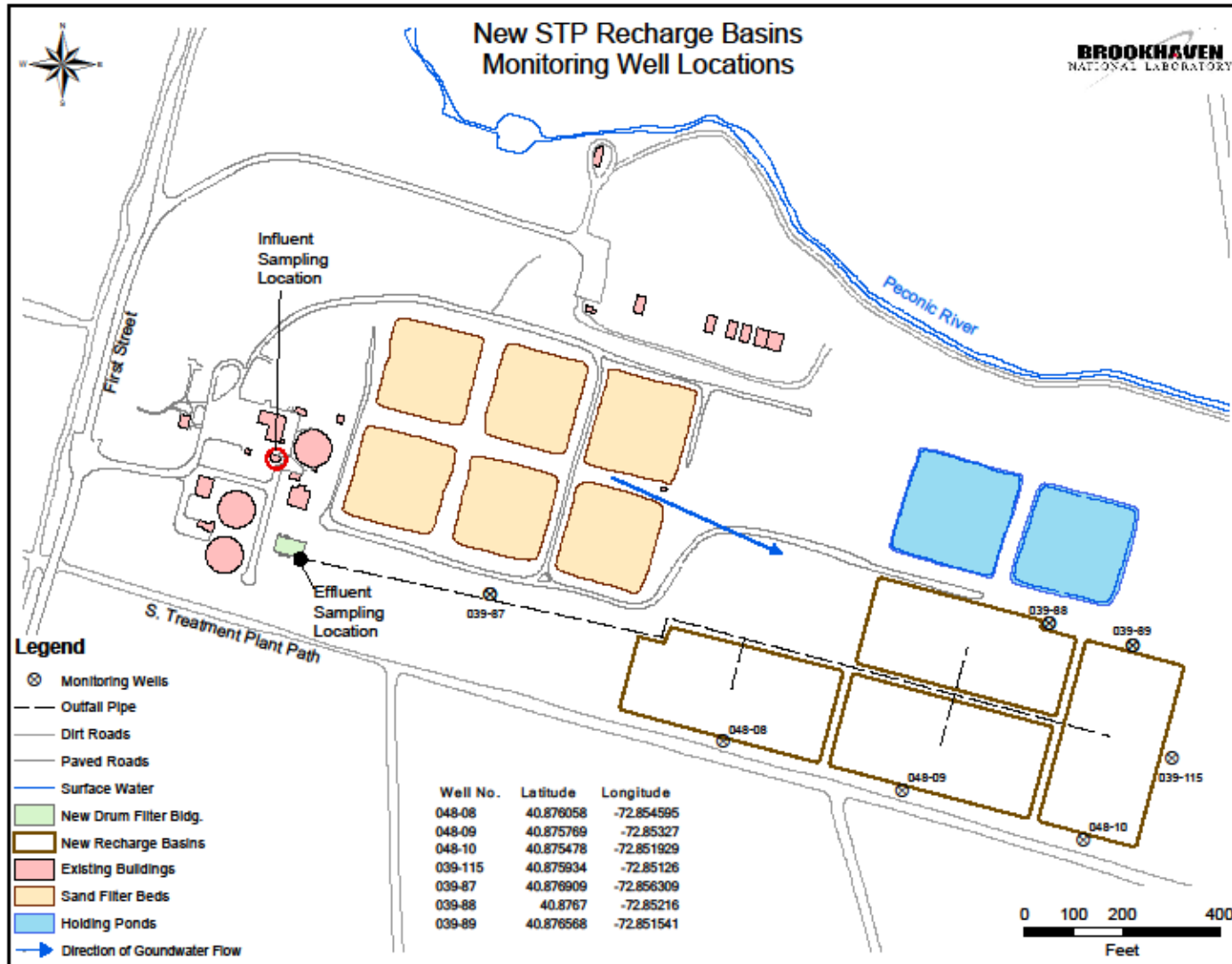
* pH shall not be lower than 6.5 or the pH of the natural groundwater, whichever is lower, nor shall it be greater than 8.5 or the pH of the natural groundwater, whichever is greater

SPDES Permit Modification

OTHER NOTABLE CHANGES

- Groundwater Monitoring has been added to the draft permit
 - Annual grab samples for pH, total copper, iron, lead, mercury, nickel, silver, and zinc
- Mercury Minimization Program Requirements will be removed
 - But we will continue to target mercury with pollution prevention efforts
- Requirement added for short term monitoring program for PCBs and delta-BHC/Heptachlor (Pesticides)
- Water Treatment Chemical (WTC) Requirements page updated to list the current WTCs used and approved at BNL.

SPDES Permit Modification



STP Design Modifications Update

CURRENT STATUS

- Contract awarded to SENECA, SCMC, LLC
 - A tribally-owned construction firm, certified as a SBA Small Disadvantaged Business

- Construction started – September 2013
 - Foundation for filter building
 - Excavation/piping to recharge beds

- Estimated Construction completion – Spring 2014

STP Design Modifications Update

