State of New Jersey

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Governor

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Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420, Trenton, NJ 08625-0420
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BOB MARTIN
Commissioner

CERTIFIED MAIL:
7003 2260 0001 3064 0787
RETURN RECEIPT REQUESTED

Theresa Sudnik, Plant Superintendent
United Water Princeton Meadows
PO Box 336
Plainsboro, NJ 08536

January 28, 2011

Re: Draft Surface Water Renewal Permit Action
Category: A -Sanitary Wastewater
NJPDES Permit No. NJ0024104
UNITED WATER PRINCETON MEADOWS
Plainsboro, Middlesex County

Dear Ms. Sudnik:

Enclosed is a **draft** New Jersey Pollutant Discharge Elimination System (NJPDES) permit action identified above which has been issued in accordance with N.J.A.C. 7:14A.

Notice of this draft permit action has appeared in the January 28, 2011 Home News Tribune and in the January 12, 2011 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin or by contacting the DEP Document Distribution Center at (609) 777-4398. The public comment period will close thirty days after the date of this letter.

As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments or a request that the Department hold a non-adversarial public hearing on the draft document must be submitted in writing to Pilar Patterson, Chief, Bureau of Surface Water Permitting, P.O. Box 029, Trenton, NJ 08625 by the close of the public comment period. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The NJDEP will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the NJDEP's final decision to issue, revoke, or redraft the document.

If you have questions or comments regarding the draft action, please contact Heather Genievich at (609) 292-4860 or via email at heather.genievich@dep.state.nj.us.

Sincerely,

Melisse Carasia Auriti

Melisse Carasia Auriti
Supervising Environmental Specialist
Bureau of Surface Water Permitting

Enclosures
c: Permit Distribution List
Masterfile #: 5335; PI #: 46800

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New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection (NJDEP) proposes to renew the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Permit NJ0024104 in accordance with N.J.A.C. 7:14A-1 et seq., and by authority of the Water Pollution Control Act at N.J.S.A. 58:10A-1 et seq., for the following discharge::

Applicant or Permittee	Facility
United Water Princeton Meadows PO Box 336 Plainsboro, NJ 08536	United Water Princeton Meadows 31 Maple Ave Plainsboro, NJ 08536

The existing facility discharges treated, disinfected, domestic wastewater with industrial contribution into an unnamed tributary of the Cranbury Brook, classified as FW2-NT waters. The Cranbury Brook is located within the Raritan River Basin and is a tributary to the Millstone River. The existing facility has a NJPDES flow value of 1.64 million gallons per day (MGD) and currently discharges a monthly average flow of approximately 1.36 MGD. This action proposes effluent limitations based on a flow of 1.64 MGD.

Modification provisions as cited in the permit may be initiated in accordance with the provisions set forth in Part IV and upon written notification from the Department.

A draft NJPDES permit renewal has been prepared for this facility based on the administrative record filed at the NJDEP, 401 East State Street, Trenton, New Jersey 08625. Copies of the draft document are obtainable, for a nominal charge, and the administrative record is available for inspection by appointment only, Monday through Friday. If you are interested in scheduling an appointment or requesting specific information regarding the draft document, contact Heather Genievich of the Bureau of Surface Water Permitting at (609) 292-4860.

Written comments or a request that the Department hold a non-adversarial public hearing on the draft document must be submitted in writing to Pilar Patterson, Chief, or Attention: Comments on Public Notice NJ0024104, Bureau of Surface Water Permitting, P.O. Box 029, Trenton, NJ 08625 by the close of the public comment period, which closes thirty calendar days after publication of this notice in the newspaper. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The NJDEP will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department’s permit decision.

Public Notice of Proposed Permit Actions
(Division of Water Quality)

Permit: • ***Name*** • ***NJPDES No.*** • ***Type***	***Facility Location:*** • ***Address*** • ***County***	***NJDEP:*** • ***Case manager*** • ***Bureau*** • ***Phone No.***	***Receiving Discharge:*** • ***Stream or Formation or POTW*** • ***Stream Classification*** • ***Watershed***	***Executive Summary***
United Water Princeton Meadows NJ0024104 DSW Major	31 Maple Avenue Plainsboro, NJ 08536 Middlesex County	Heather Genievich Bureau of Surface Water Permitting (609) 292-4860	Unnamed tributary to Cranbury Brook FW2-NT Millstone River (above Carnegie Lake)	This application is for a renewal of a NJPDES permit to discharge a permitted flow of 1.64 million gallons per day (MGD) of treated and disinfected domestic wastewater. This permit includes conditions for Reclaimed Water for Beneficial Reuse (RWBR).

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

FACT SHEET

Masterfile #: 5335 **PI #:** 46800

This fact sheet sets forth the principle facts and the significant factual, legal, and policy considerations examined during preparation of the draft permit. This action has been prepared in accordance with the New Jersey Water Pollution Control Act and its implementing regulations at N.J.A.C. 7:14A-1 et seq. - The New Jersey Pollutant Discharge Elimination System.

PERMIT ACTION: Surface Water Renewal Permit Action

The permittee has applied for a New Jersey Pollutant Discharge Elimination System (NJPDES) Surface Water Renewal Permit Action through an application dated 06/28/2010.

1 Name and Address of the Applicant:

United Water Princeton Meadows
PO Box 336
Plainsboro, NJ 08536

2 Name and Address of the Facility/Site:

United Water Princeton Meadows
31 Maple Ave
Plainsboro, Middlesex County

3 Receiving Water Discharge Location Information:

A copy of the appropriate section of a USGS quadrangle map indicating the location of the facility and discharge point is included towards the end of this Fact Sheet.

Outfall Designator: 001A

General Information		Watershed Information	
Receiving Water:	Cranbury Brook via unnamed tributary	Downstream Confluences:	Millstone River
Via :	Outfall pipe	Receiving River Basin:	Raritan River Basin
Classification (a):	FW2-NT	WMA (b):	10
Latitude:	40° 19’ 36.4”	Watershed:	Millstone River (above Carnegie Lake)
Longitude:	74° 36’ 26.8”	Subwatershed:	Cranbury Brook (below NJ Turnpike)
County:	Middlesex	HUC 14 (c):	02030105100090
Municipality:	Plainsboro Township	Water Quality Impairments (d):	None
Outfall Description			
Outfall Configuration:	Partially submerged pipe	Submerged Pipe Characteristics:	Depth below surface = 0.6 feet

Current Receiving Stream Design Low Flow Values (e)			
MA1CD10 / 1Q10:	2.2 cfs	MA1CD10 (1Q10) summer:	2.2 cfs
MA7CD10 / 7Q10:	2.5 cfs	MA1CD10 (1Q10) winter:	2.2 cfs
75th percentile flow (f):	9.5 cfs	MA30CD10 (30Q10) summer:	3.2 cfs
		MA30CD10 (30Q10) winter:	7.9 cfs

Footnotes:
(a) The designated uses for this waterbody classification can be found at N.J.A.C. 7:9B-1.12.
(b) WMA = Watershed Management Area

(c) HUC 14 = 14 digit Hydrologic Unit Code
(d) These parameters are listed on Sublist 5 as impaired for this waterbody as per New Jersey's 2006 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List).
(e) Please refer to Section 6 for the specific stream design low flow values utilized in parameter limitation calculations.
(f) The 75th percentile flow is defined as the flow which is exceeded 75 percent of the time for the appropriate "period of record" as determined by the United States Geological Survey (USGS).

As per the Surface Water Quality Standards at N.J.A.C. 7:9B, the designated uses for the Freshwater 2 (FW2) receiving waters are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Primary and secondary contact recreation;
3. Industrial and agricultural water supply;
4. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
5. Any other reasonable uses.

As noted in the above table, this segment of the Cranbury Brook is not impaired.

4 Facility Description:

The facility is classified as a major discharger by the Department of Environmental Protection (Department) in accordance with the United States Environmental Protection Agency (EPA) rating criteria. The facility's NJPDES flow value is 1.64 million gallons per day (MGD).

The permittee operates a privately owned treatment works and is therefore not subject to the industrial pretreatment program requirements under 40 CFR Part 403. However, this does not relieve the permittee of the responsibility to control discharges into its treatment plant which alone or in combination with other discharges may cause the permittee to violate the limits or conditions of this permit.

Sanitary wastewater is processed through the following units:

1. Bar Screen
2. Parshall Flume
3. Equalization Basin
4. Primary Clarifiers (2)
5. Aeration Tanks (2)
6. Secondary Clarifiers (2)
7. Aerated Unlined Lagoon
8. Chlorine Contact Tank
9. Dechlorination Tank

A schematic of the facility's treatment is included at the end of the fact sheet.

Sludge is passed through a digester and rotary screen thickener, then stored in a holding tank before being managed at an approved residuals management site.

Ground water discharges from the unlined lagoon are covered by NJPDES permit number NJ0089711. If there are any questions regarding the NJPDES DGW permit, contact the Bureau of Nonpoint Pollution Control at (609) 633-7021.

Storm water discharges are covered by NJPDES permit number NJG0121428. If there are any questions regarding the storm water permit, contact the Bureau of Nonpoint Pollution Control at (609) 633-7021.

5 Type and Quantity of the Wastes or Pollutants:

The Permit Summary Table near the end of this fact sheet contains a summary of the quantity and quality of pollutants treated and discharged from the facility and the proposed effluent limitations.

6 Summary of Permit Conditions:

The proposed effluent limitations and other pertinent information regarding the draft permit are described below:

A. Basis for Effluent Limitations and Permit Conditions - General:

The effluent limitations and permit conditions in this permit have been developed to ensure compliance with the following, as applicable:

1. NJPDES Regulations (N.J.A.C. 7:14A),
2. New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B),
3. New Jersey's 2008 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List),
4. Requirements of the Delaware River Basin Commission (N.J.A.C. 7:9B-1.5(b)1) and/or Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2) and/or Pinelands Commission (N.J.A.C. 7:50-6.81 to 6.87) and/or the Highlands Commission (N.J.S.A. 13:20-1 et seq).,
5. Secondary Treatment Standards (40 CFR Part 133, N.J.A.C. 7:14A-12.2 and -12.3),
6. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements),
7. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements),
8. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15),
9. Existing Effluent Quality limitations in accordance with N.J.A.C. 7:14A-13.8,
10. Sludge Quality Assurance Regulations (N.J.A.C. 7:14C),
11. Pretreatment Requirements (N.J.A.C. 7:14A-19)

In accordance with N.J.A.C. 7:14A-13.5, Water Quality Based Effluent Limitations (WQBELs) are imposed when it has been determined that the discharge of a pollutant causes an excursion of criteria specified in the New Jersey Surface Water Quality Standards (SWQS), N.J.A.C. 7:9B-1.1 et seq., and the Federal Water Quality Standards, 40 CFR Part 131. WQBELs are authorized by Section 301 of the Clean Water Act, 40 CFR 122, N.J.S.A. 58:10A-4, and N.J.A.C. 7:14A-13.2 and 13.3. The procedures used to develop WQBELs are contained in the State and Federal Standards. Specific procedures, methodologies, and equations are contained in the current USEPA "Technical Support Document for Water Quality-based Toxics Control" (TSD) (EPA- 505/2-90-001) and are referenced in N.J.A.C. 7:14A-13.5 and 13.6.

Expression of all effluent limitations is in accordance with N.J.A.C. 7:14A-13.14 and 13.15.

Whole effluent toxicity is expressed as a minimum as percent effluent.

Loading limitations (kg/day or g/day) are calculated by multiplying the flow value of 1.64 million gallons per day (MGD) by the conversion factor of 3.785 (L/gal) and the appropriate concentration limitation (mg/L or µg/L). This facility is currently permitted at 1.64 MGD, but the load was held at the limitations calculated at 1.5 MGD for BOD_5 and TSS when the rerating occurred in 2001. As a result, the loading limitations for BOD_5 and TSS remain at the level that was calculated for a flow of 1.5 MGD.

B. Basis and Derivation for Effluent Limitations and Monitoring Requirements- Specific:

All permit limitations and conditions in this permit action are equal to or more stringent than those contained in the existing permit action as explained below. As a result, this permit action satisfies the federal and state anti-

degradation regulations at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d), and no further anti-degradation analysis is necessary.

Monitoring frequencies and sample types are in accordance with N.J.A.C. 7:14A-14, unless specified otherwise in the permit. In accordance with N.J.A.C. 7:14A-14.2, the permittee may submit a written request for a modification of the permit to decrease monitoring frequencies for non-limited parameters listed in Part III if site specific conditions indicate the applicability of such a modification.

1. Flow: This permit action does not include a numerical limitation for flow. Monitoring conditions are applied pursuant to N.J.A.C. 7:14A-13.13.

   The monitoring frequency is **continuous** using a **metered** sample type.

2. 5-Day Biochemical Oxygen Demand (BOD_5): The concentration and loading limitations are carried forward from the existing permit consistent with the antibacksliding provisions at N.J.A.C 7:14A-13.19. The concentration limitations are a monthly average of 15 mg/L and a weekly average of 25 mg/L. The loading limitations are a monthly average of 85.1 kg/d and a weekly average of 142 kg/d. Even though the facility is currently permitted at 1.64 MGD, these loading limitations are calculated based on a flow of 1.5 MGD because the load was held when the facility expanded in 2001. The percent removal limitation of 85% is based on the definition of secondary treatment at 40 CFR 133.102(a)(3) and N.J.A.C. 7:14A-12.2(b) 3.

   The monitoring frequency for influent BOD_5 and effluent BOD_5 is **once per week** with a **24 hour composite** sample type.

3. Total Suspended Solids (TSS): The concentration and loading limitations are carried forward from the existing permit consistent with the antibacksliding provisions at N.J.A.C 7:14A-13.19. The concentration limitations are a monthly average of 30 mg/L and a weekly average of 45 mg/L. The loading limitations are a monthly average of 170 kg/d and a weekly average of 255 kg/d. Even though the facility is currently permitted at 1.64 MGD, these loading limitations are calculated based on a flow of 1.5 MGD because the load was held when the facility expanded in 2001. Percent removal limitations are based on the definition of secondary treatment at 40 CFR 133.102(b)(3) and N.J.A.C. 7:14A-12.2(e) 3.

   The monitoring frequency for influent TSS and effluent TSS is **once per week** with a **24 hour composite** sample type.

4. pH: The effluent limitations of 6.0 s.u. as a minimum and 9.0 s.u. as a maximum are carried forward in accordance with the antibacksliding provisions as cited in N.J.A.C. 7:14A-13.19 and are based on the definition of secondary treatment at 40 CFR 133.102(c) and N.J.A.C. 7:14A-12.2 (f).

   The monitoring frequency for influent pH and effluent pH is **once per day** with a **grab** sample type.

5. Temperature: As authorized by N.J.A.C. 7:14A-6.2(a)14, monitoring and reporting requirements for temperature are included in the permit to track compliance with the instream un-ionized ammonia criteria at N.J.A.C. 7:9B-1.14(c). Influent and effluent temperature shall be reported as an instantaneous minimum, an instantaneous maximum, and a monthly average.

   The monitoring frequency for influent temperature and effluent temperature is **once per day** with a **grab** sample type.

6. Fecal Coliform: The limitations are carried forward from the existing permit pursuant to N.J.A.C. 7:14A-13.19 and are based on N.J.A.C. 7:14A-12.5(b) 1. and 2. The limitations are a monthly average of 200 colonies/100 mL and a weekly average of 400 colonies/100 mL.

   The monitoring frequency is **once per month** with a **grab** sample type.

7. E. Coli: The Department continues to impose Fecal Coliform as the bacterial standard for effluent control. Since E. Coli criteria were adopted for freshwater in the October 2006 SWQS, N.J.A.C. 7:9B-1.14(d)1(ii)2, a monitoring requirement for E. Coli is included in the permit. Since Enterococci is no longer applicable for FW2 waters, there is no monitoring required for enterococci. Consistent with N.J.A.C. 7:9B-1.5(c)7, the Department requires the permittee to collect a minimum of five (5) samples per month and report the calculated geometric mean of the sample data collected during the month. Each month that E. Coli is sampled, the permittee shall perform at least one complete set of split sample analysis of E. Coli and Fecal Coliform.

   The permittee shall summarize the individual split sample data (E. Coli and Fecal Coliform) including the dates the samples were taken and submit the report along with the renewal application forms. Please refer to the "Submittals" section in Part IV of this permit for further details. The reported data will be reviewed to evaluate if the E. Coli criteria are consistently being achieved by the facility.

   The monitoring frequency is **quarterly** with a **grab** sample type.

8. Dissolved Oxygen (DO): The effluent limitation is carried forward from the existing permit pursuant to N.J.A.C. 7:14A-13.19 and is based on the SWQS at N.J.A.C. 7:9B-1.14(c). A weekly average limitation of 5.0 mg/L adequately protects the instream water quality for DO.

   The monitoring frequency is **once per week** with a **grab** sample type.

9. Oil and Grease: The effluent limitations are carried forward from the existing permit in accordance with N.J.A.C. 7:14A-13.19 and are based on N.J.A.C. 7:14A-12.8(c). The limitations are a monthly average of 10 mg/L and a maximum of 15 mg/L.

   The monitoring frequency is **once per month** with a **grab** sample type.

10. Chlorine Produced Oxidants (CPO): In the existing permit, WQBELs were included with daily maximum limitations of 0.02 mg/L and 0.11 kg/day. The enforceable quantification limitations were 0.1 mg/L and 0.56 kg/day. These WQBELs were in place in the 9/1/98 permit, which was in effect when the facility expanded in 2001. In order to obtain an amendment to the Lower Raritan/Middlesex County Wastewater Management Plan, United Water Princeton Meadows agreed to hold all existing concentration and loading limitations contained in the existing permit. As a result, the daily maximum CPO loading limitation remains based on a flow of 1.5 MGD rather than the current permitted flow of 1.64 MGD.

    A WQBEL analysis was conducted using current effluent data and site specific information to see if alternate limits are appropriate. Based on this analysis, NJDEP has determined that the daily maximum limitations in the existing permit are appropriate and shall be carried forward in this permit action in accordance with the anti-backsliding regulations at N.J.A.C 7:14A-13.19 and 40 CFR 122.44. In addition to the daily maximum limitations, monthly average limitations are included in this permit action of 0.01 mg/L and 0.06 kg/day. In order to be consistent with the calculation of the daily maximum loading limitation, the monthly average loading limitation was also calculated using 1.5 MGD. The above enforceable quantification limitations of 0.1 mg/L and 0.56 kg/day apply to both the daily maximum and monthly average limitations.

    The monitoring frequency is **twice per day** with a **grab** sample type.

11. Ammonia (Total as N): Ammonia-N in water exists in two forms: NH_3 and NH_4^+. As NH_3, ammonia-N is called "un-ionized"; as NH_4^+, ammonia-N is called "ionized". Generally, the un-ionized fraction is considered more toxic than the ionized fraction. The relative proportion that is found in each fraction is primarily dependent on the temperature and the pH of the solution. At a higher temperature and/or a higher pH, more ammonia-N exists in the un-ionized form as compared to a lower temperature and/or pH. Ammonia-N is usually measured as total ammonia-N, which includes both the ionized and the un-ionized fractions.

    The current SWQS set an instream limit on the concentration of un-ionized ammonia that may be allowed in the stream. The water quality criteria can be found at N.J.A.C. 7:9B-1.14. The criteria may be expressed as

calculations dependent on instream temperature and pH. Where this is the case the values for temperature and pH used to calculate the un-ionized ammonia criteria are those values that exist after any allowable mixing of the effluent and receiving water. There are criteria values for both acute and chronic toxicity effects. Permits limits to protect against the toxic effects of ammonia instream are based on the more stringent calculated long term average.

Limit Derivation:

The wasteload allocation was calculated by solving a series of simultaneous equations for the carbonate and ammonia equilibria according to the following methodology. It is assumed that there is complete and total mixing with the receiving stream. The input data in the solution of the equilibrium equations were derived from data obtained from the DMRs.

The final total ammonia-N wasteload allocation is calculated by mass balance from the instream un-ionized ammonia criteria. The effluent limitations are calculated using the procedures in the USEPA Technical Support Document for Water Quality Based Toxics Control (TSD) (EPA/505/2-90-001, March 1991) in accordance with N.J.A.C. 7:14A-13.6(a).

Carbonate Equilibrium: The simultaneous equilibrium (temperature corrected) for the first and second carbonate equilibrium for each pH value are solved to calculate the carbon species and the hydrogen ion concentrations. This is done separately for each stream, i.e. the effluent and the upstream receiving stream.

The downstream concentrations for the carbon fractions are then calculated by mass balance. The downstream final temperature is also calculated by mass balance.

The final downstream hydrogen ion concentration is then calculated by the carbonate equilibrium equations. The final pH is calculated from the final hydrogen ion concentration.

Equilibrium Equation:

$$\log K = -[A/T] + D - C \times T$$

$$C = 0.032786$$
$$D = 14.8435$$
$$A = 3404.71$$
$$T = \text{Temp in } °K$$

Ammonia-N Equilibrium: Using the final pH and the final temperature, the ammonia equilibrium of the final mixed stream is calculated.

Equilibrium Equation:

$$pK_a = 0.09018 + 2729.92/T$$

T= Temp in degrees K

The final total ammonia-N wasteload allocation is calculated by mass balance from the instream un-ionized ammonia criteria.

A “reserve capacity”, or “margin of safety”, is considered in setting the wasteload allocation in accordance with N.J.A.C. 7:15-7.1 and Section 4.2.1 of the USEPA TSD. In this permit, the Department has

determined that the ammonia toxicity analysis is a subset of a parameter specific TMDL as identified in N.J.A.C. 7:15-7.1.

The effluent limitations are calculated using the procedures in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.6(a).

The ammonia toxicity criteria adopted in January 2002 for FW2-NT waters includes separate spawning and non-spawning season equations for calculating the applicable instream criteria. The spawning season criteria apply for the months of March through October, while the non-spawning season criteria apply for the months of November through February. This is a significant departure from the historically used summer (May through October) and winter (November through April) seasons. By moving the traditional winter months of March and April into the spawning season, they are now grouped with the traditional summer months of May through October.

Due to cold weather effects on the nitrification process, some dischargers have indicated to the Department that the simple procedure of applying the summer season limits to the months of March and April could result in effluent limitation exceedances. Therefore, the Department has elected to evaluate the WQBELs for March and April using the spawning season criteria, winter season ambient stream information (where appropriate), and March/April effluent pH and temperature data. The analysis and results are shown in the right two columns in the table below. In order to keep March and April grouped with the other traditional winter months of November through February, the more stringent of the non-spawning or March/April WQBELs are applied to the traditional winter season. In this way, water quality is protected from the toxic effects of ammonia during both the non-spawning months of November through February and the spawning months of March and April. Additionally, the more stringent limitations for the other spawning months of May through October do not have to be applied to the cooler, wetter months of March and April.

Ammonia limits (rounded to the nearest whole number**, if > 5**) - - mg/L

Unnam. trib to Cranbury	Summer		Winter		March/April		Comments etc.
Brook, Millstone R basin	Acute	Chronic	Acute	Chronic	Acute	Chronic	
Criteria: unionized NH_3N	0.178	0.042	0.142	0.024	0.123	0.021	**FW2-NT**
Criteria: equiv. total NH_3N	12.96	4.04	11.98	4.96	10.38	4.46	Conc. required in water
Criteria: total NH_3N - 20%	**10.37**	**3.23**	**9.59**	**3.97**	**8.31**	**3.57**	Deduct reserve capacity
WLA (wasteload allocation)	**19.26**	**7.16**	**17.79**	**15.91**	**15.39**	**14.28**	**Cause to violate crit.*: YES**
LTA (long-term average)	12.92	6.64	11.93	14.75	10.33	13.24	
AML(average monthly limit)	**-**	**8.00**	**15.00**	**-**	**13.00**	**-**	
MDL (maximum daily limit)	**-**	**10.00**	**18.00**	**-**	**15.00**	**-**	
*** Max. effluent NH_3N value reported (3 yrs DMR data) = 28.5/25 mg/L (Dmax-summer/winter)** **Breach of criteria likely**							

The following data was used for the calculation of the foregoing ammonia criteria and/or the limits **(mg/L)**. The effluent data was obtained from the **most recent DMRs (36 months' data)**. The ambient data was obtained from " the Ammonia Toxicity Study - United Water Princeton Meadows, August 24, 2001 ", performed by TRC Omni Corp. The March-April period criteria and the limits, which are applicable **only to the FW2-NT waters,** are based on the **spawning criteria (summer-time) and the winter-time data** and the **more stringent** of the two limit sets, the winter or the March/April, are applicable for the entire winter period, i.e. Nov. to April. **The values are in mg/L or as indicated otherwise and at the 95% confidence levels (upper or lower, whichever is more conservative) on the means of the summer and the winter data sets.**

Parameter	Summer		Winter		March/April		Data sources
	Acute	Chronic	Acute	Chronic	Acute	Chronic	& comments etc.
Amb/upstream NH_3-N	0.12	0.12	0.13	0.13	0.13	0.13	TRC Omni NH_3 study, 2001
Amb/upstream pH - su	6.78	6.78	7.36	7.36	7.36	7.36	TRC Omni NH_3 study, 2001
Amb/upstream Temp ˚C	22.25	22.25	9.14	9.14	9.14	9.14	TRC Omni NH_3 study, 2001
Amb/upstream Alkalinity	17.39	17.39	18.90	18.90	18.90	18.90	TRC Omni NH_3 study, 2001
Amb/upstream salinity - ppt	0.05	0.05	0.05	0.05	0.05	0.05	Default
1Q10 flow - cfs	2.20	-	2.20	-	2.20	-	USGS
30Q10 flow - cfs	-	3.20	-	7.90	-	7.90	USGS
Dilution factors	-	-	-	-	-	-	Not applicable in this case
Facility (design) flow- **mgd**	1.640	1.640	1.640	1.640	1.640	1.640	2.538 cfs
Effluent pH - su	7.74	7.65	7.80	7.40	7.80	7.40	DMR
Effluent Temp ˚C	23.92	23.17	15.95	15.00	15.95	15.00	DMR
Effluent Alkalinity	125.00	125.00	137.00	137.00	137.00	137.00	TRC Omni NH_3 study, 2001
Effluent salinity - ppt	0.20	0.20	0.20	0.20	0.20	0.20	Default
Reserve capacity allow.%	20.00	20.00	20.00	20.00	20.00	20.00	Deducted
CV	0.18	0.18	0.18	0.18	0.18	0.18	TRC Omni NH_3 study, 2001
N - # of samples/month	4.00	4.00	4.00	4.00	4.00	4.00	Regulation

Note; If a cell indicates a dash (-), it means the subject condition is not applicable in this case or the drought flow is less than 0.1 cfs, and the ammonia criteria is applicable at the end of the discharge pipe.

The previous renewal permit that was issued October 4, 2005 and effective January 1, 2006 imposed new seasonal WQBELs that were more stringent than the year round limitations that were effective at that time. Based on a compliance schedule of 59 months, these new WQBELs were due to become effective on December 1, 2010. However, the new 2006 WQBELs were stayed prior to their effective date in a Stipulation of Settlement on November 5, 2008. This stay is pending the adoption of the Raritan TMDL. Since the Stipulation of Settlement was executed, the USGS stream flows increased and WQBELs were recalculated using the new stream flows. As a result of that stay, the newly calculated ammonia WQBELs in the table above are compared against the older limitations that were effective before the 2006 permit and are still effective at this time. As a result, the limitations that are newly calculated in this renewal will be incorporated into the permit via a major modification 36 months after the Raritan TMDL is adopted. Until that time, the limitations that were effective before 2006 and are bolded in the table below will remain in effect.

	Units	Averaging Period	**Effective before 2006 (January to December)**	Newly calculated in 2006 (never became effective)	Newly calculated in this renewal
Ammonia (Total as N) Summer	kg/d	Monthly Avg. Daily Max.	**144.8** **211**	24.83 31.04	49.70 62.07
Ammonia (Total as N) Summer	mg/L	Monthly Avg. Daily Max.	**25.5** **37.2**	4 5	8 10
Ammonia (Total as N) Winter	kg/d	Monthly Avg. Daily Max.	**144.8** **211**	55.87 68.28	80.70 93.11
Ammonia (Total as N) Winter	mg/L	Monthly Avg. Daily Max.	**25.5** **37.2**	9 11	13 15

The monitoring frequency is **once per week** with a **24 hour composite** sample type.

12. Phosphorus: The Department anticipates completing a TMDL for the Raritan River Basin in the very near future. This TMDL is based on a more comprehensive analysis and will provide a watershed based (rather than a site specific) phosphorus limit. In recognition of the fact that the TMDL based phosphorus limit will soon be available, the Department is retaining the existing monthly average limitation of 1 mg/L from the

permit that was issued 7/31/1998 and effective 9/1/1998, in accordance with N.J.A.C. 7:14A-13.19. Although the previous permit that was issued 10/14/2005 and effective 1/1/2006 contained more stringent WQBELs for Phosphorus, these limitations did not become effective and they were subsequently stayed in a Stipulation of Settlement executed 11/13/2008 and replaced with the previously effective limitation of 1 mg/L. In addition to the monthly average concentration limitation, monitoring is required for monthly average loading, weekly average concentration and weekly average loading.

The monitoring frequency is **once per week** with a **24 hour composite** sample type.

13. Nitrate (Total as N): In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department has determined that the discharge of a pollutant causes an excursion above a SWQS. In order to determine the need for nitrate WQBELs, the Department has analyzed the facility's effluent data from January 2006 through January 2010.

    After review of the applicable data set, nitrate was found to be discharged in quantifiable amounts in the effluent. Therefore, a cause analysis was conducted using the procedures specified in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.5. The cause analysis consists of a comparison between the pollutant's maximum effluent concentration value and the pollutant's applicable site specific wasteload allocation.

    Using the steady state mass balance equation, a wasteload allocation was developed utilizing the applicable criteria specified in the New Jersey SWQS at N.J.A.C. 7:9B, the permittee's design flow of 1.64 MGD, and the MA7CD10 (7Q10) stream design low flow value of 2.5 cfs.

    As a result of the cause analysis, the discharge of Nitrate in the facility's effluent **was not found to cause an excursion** of the SWQS (Refer to Table A at the back of the Fact Sheet for a summary of the WQBEL analysis). Therefore, a WQBEL is not proposed in the draft permit at this time. However, monitoring and reporting requirements have been included in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the EPA TSD).

    The monitoring frequency is **once per six months** with a **24 hour composite** sample type.

14. Whole Effluent Toxicity (WET): Section 101(a) of the Clean Water Act (CWA) establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines using site-specific WET data that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET. In order to satisfy the requirements of the CWA, the State's SWQS and the NJPDES Regulations, the need for a WQBEL for WET was evaluated for this discharge.

    In order to determine the need for a WET WQBEL, the Department has analyzed all available WET effluent data. In general, an acceptable data set consists of, at a minimum, 10 data values including the most recent 2½ years of data collection. Effluent data for the time period of March 2006 through April 2010 was utilized for this analysis. Based on the review of this data set, the Department has concluded the following:

    - After review of the applicable data set, WET was found in quantifiable amounts in the effluent. Therefore, further analyses have been conducted for WET.

    Cause Analysis:

    For WET, a cause analysis was conducted in accordance with N.J.A.C. 7:14A-13.5. When the maximum effluent value (in toxic units) exceeds the applicable site specific wasteload allocation (in toxic units), the discharge is shown to cause an exceedance of the SWQS.

Using the steady state mass balance equation, acute and chronic wasteload allocations of 0.56 TU_as and 1.99 TU_cs respectively, were developed utilizing the narrative criteria for toxic substances (general) specified in the New Jersey SWQS at N.J.A.C. 7:9B, the permittee's design flow of 1.64 MGD, and MA1CD10 (1Q10) and MA7CD10 (7Q10) stream design low flows values of 2.2 cfs and 2.5 cfs respectively. The 7Q10 stream design flow is utilized for the chronic calculations, while the 1Q10 stream design flow is utilized for acute calculations. Consistent with the recommendations of section 2.3.3 of the TSD, values of 0.3 acute toxic unit (TU_a) and 1.0 chronic toxic unit (TU_c) were used to interpret the narrative water quality criteria for WET contained at N.J.A.C. 7:9B-1.14(c) (see Response to Comments 13-74 through 13-89, 29 NJR 1861, (May 5, 1997)).

Review of the acute WET data set indicates non-quantifiable effluent data (i.e. all data values were LC50s > 100% effluent). Therefore, a cause analysis was not conducted for Acute WET.

Review of the chronic WET data set indicates the maximum effluent data value to be 37.04 TU_cs (i.e. an IC25 = 2.7 %). Since the maximum reported effluent data value exceeds the applicable site specific wasteload allocation of 1.99 TU_cs, the discharge causes an exceedance of the chronic interpretation of the narrative criteria for WET identified in the SWQS.

Water Quality Based Effluent Limitation Derivation:

Since the discharge was found to cause an exceedance of the acute and chronic interpretation of the narrative criteria for WET identified in the SWQS, a WQBEL has been calculated in accordance with N.J.A.C. 7:14A-13.6(a), 40 CFR 122.44(d), and USEPA's TSD.

To enable a comparison between acute and chronic WET limits, the acute WLA (WLA_a) was translated to equivalent chronic toxic units (WLA_{ac}) by multiplying the WLA_a by a default acute to chronic ratio (ACR) of 10.

The acute and chronic WLAs were then converted to an acute Long Term Average (LTA_{ac}) of 1.7985 TU_{ac}s and a chronic LTA (LTA_c) of 0.7667 TU_cs, using a default acute coefficient of variation (CV) of 0.6, a site-specific chronic coefficient of variation (CV) of 0.95, and multipliers of 0.321 and 0.386 for the acute and chronic LTAs respectively. Those multipliers are based on the 99th percentile consistent with Response to Comments 13-74 through 13-89, 29 NJR 1861 and are found on Page 102 of the TSD. The resultant long term average values were evaluated and the more protective (e.g. lower) value selected for translation into a daily maximum WET limit using the applicable 99th percentile multiplier, as found on Page 103 of the TSD.

The daily maximum chronic WET limit of 3.61 TU_cs was then converted to a permit limitation expressed as an IC25. The resultant limitation is an **IC25 = 28 %** effluent.

The monitoring frequency is **quarterly** with a **composite** sample type.

The test species method to be used for chronic testing shall be the *Ceriodaphnia dubia*, Survival and Reproduction Test, 40 CFR 136.3, method 1002.0]. Such selection is based on the freshwater characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program" document. This document is included as Appendix A of this permit, in accordance with N.J.A.C. 7:14A-6.5, 11.2(a)2.iv. and 40 CFR Part 136.

The Toxicity Reduction Implementation Requirements (TRIR) are included in accordance with N.J.A.C. 7:14A-13.17(a), 7:14A-6.2(a)5 and recommendations in Section 5.8 of the TSD. The requirements are necessary to ensure compliance with the applicable WET limitation on its effective date and to expedite compliance with the WET limitation should exceedances of the WET limitation occur. As included in section B.1 of the TRIR requirements, the initial step of the TRIR is to identify the variability of the effluent toxicity and to verify that a consistent toxicity problem does in fact exist.

Effluent samples for conducting WET testing are to be collected after the last treatment step, consistent with the collection location for all other parameters.

14. Foam: The narrative foam permit condition is based on N.J.A.C. 7:14A-12.6.

15. Toxic Metals, Organic Compounds, and Cyanide: In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

    In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. Acceptable data sets generally consist of, at a minimum, 10 data values including the most recent 2½ years of data collection. A pollutant is considered discharged in "quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis (refer to the "Discharge Monitoring Report (DMR), Instruction Manual, Revised December 1993" for further information). Based on the review of the data sets from September 2005 to June 2010, the Department has concluded the following:

    - After review of the applicable data sets, Acids, Base/Neutrals, Pesticides, Volatiles, and Metals including Antimony, Arsenic, Beryllium, Cadmium, Chromium, Chromium (+3), Chromium (+6), Cyanide, Lead, Mercury, Selenium, Silver, and Thallium **were not found** to be discharged in the effluent. These toxic pollutants do not have effluent limitations proposed in the draft permit at this time. However, monitoring and reporting requirements have been included in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the EPA TSD). The monitoring frequency shall be **annual** for the above parameters using a **grab** sample type for Volatiles and cyanide, and a **24 hour composite** sample type for the other parameters.

    - After review of the applicable data sets, Barium, Copper, Manganese, Nickel and Zinc **were found** to be discharged in quantifiable amounts in the effluent. Therefore, further analyses have been conducted on these pollutants with the exception of Manganese because there is no current applicable freshwater SWQS.

    Quantified Pollutant Analysis Methodology:

    For each pollutant discharged in quantifiable amounts in the effluent, a cause analysis was conducted using the procedures specified in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.5. The cause analysis consists of a comparison between the pollutant's maximum effluent concentration value (or average value of a long term data set in the case of criteria with an averaging period longer than one year) and the pollutant's applicable site specific wasteload allocation.

    Using the steady state mass balance equation, wasteload allocations were developed utilizing the applicable surface water quality criteria, pollutant specific upstream concentrations (when available), the permittee's design flow of 1.64 MGD, and MA1CD10 (1Q10), MA7CD10 (7Q10), and/or 75th percentile stream design low flows values of 2.2, 2.5, and 9.5 respectively. The 7Q10 stream design flow is utilized for all chronic and human health non-carcinogenic calculations, while the 1Q10 and 75th percentile stream design flows are utilized for acute and human health carcinogenic calculations respectively.

    For the applicable pollutants (Barium, Copper, Nickel, and Zinc), the applied criteria is based on a default hardness value of 100 mg/L of $CaCO_3$ and a water effect ratio (WER) of 1.0.

    For the applicable metals, default translators were utilized to convert total recoverable data to its dissolved equivalent for the cause analyses for aquatic criteria, and, if applicable, to convert the dissolved long term averages to total recoverable values for determining WQBELs. Translator values for the parameters listed

below, if not site specific, are based on the conversion factors for dissolved metals at 40 CFR Part 131 and N.J.A.C. 7:9B-1.5(c)6. The default metal translators used in the analyses are as follows:

Metal	Fresh Water	
	Translator (acute)	Translator (chronic)
Copper	0.960	0.960
Nickel	0.998	0.997
Zinc	0.978	0.986

Quantified Pollutant Analysis Results:

Cause analyses were conducted on Barium, Copper, Nickel and Zinc. As a result of the cause analyses, **none of the parameters were found** to cause an excursion of the SWQS. The Department's conclusions and results are listed below. Refer to Table A at the back of the Fact Sheet for a summary of the effluent limitation analyses for the Toxic Metals.

- Since the discharge of Barium, Copper, Nickel and Zinc in the permittee's effluent **was not found** to cause an excursion of the SWQS, WQBELs are not proposed in the draft permit for these parameters at this time. However, **semiannual** monitoring and reporting requirements using a **24 hour composite** sample type have been included in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the EPA TSD).

Consistent with the intent of 40 CFR 122.45(c) and N.J.A.C. 7:14A-13.14(b), monitoring data for toxic metals (excluding Hexavalent Chromium) shall be expressed as total recoverable. As authorized by N.J.A.C. 7:14A-13.14(b)3, the monitoring data for Hexavalent Chromium shall be expressed as dissolved.

C. Influent and Effluent Monitoring Requirements:

In order to calculate percent removals, influent monitoring is required for BOD_5 and TSS in accordance with N.J.A.C. 7:14A-6.5(b) and -11.2(a) 2. Consistent with the intent of 40 C.F.R. 403.5 and as authorized by the provisions of N.J.A.C. 7:14A-6.3(a), the monitoring requirements for influent pH and temperature are included in the permit.

D. Recommended Quantitation Levels Policy (RQLs):

The Department developed the RQLs to insure that useful data is provided to the Department in order to characterize the discharger's effluent. The Department recommends that the permittee achieve detection levels that are at least as sensitive as the RQLs found in Part III. The Department has determined that the quantitation levels listed therein can be reliably and consistently achieved by most state certified laboratories for most of the listed pollutants using the appropriate procedures specified in 40 CFR Part 136. FAILURE TO ATTAIN A QUANTITATION LEVEL AS SENSITIVE AS A LISTED RQL IS NOT A VIOLATION OF THE PERMIT, BUT DOES TRIGGER SOME ADDITIONAL REPORTING REQUIREMENTS FOR THE PERMITTEE AS SPECIFIED IN PART IV OF THE PERMIT.

E. Reporting Requirements:

All data requested to be submitted by this permit shall be reported on the Discharge Monitoring Reports (DMRs), Waste Characterization Reports (WCR), and Residual Transfer Reports (RTR) as appropriate and submitted to the Department as required by N.J.A.C. 7:14A-6.8(a).

F. General conditions:

In accordance with N.J.A.C. 7:14A-2.3 and 6.1(b), specific rules from the New Jersey Administrative Code have been incorporated either expressly or by reference in Part I and Part II.

G. Operator Classification Number:

The operator classification requirement is no longer included in the permit. To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Finance and Construction Permits: Engineering Section North (609) 292-3025.

H. Flow Related Conditions:

All flow related conditions are incorporated into the permit to implement the Treatment Works Approval Program (N.J.A.C. 7:14A-22), the Capacity Assurance Program (N.J.A.C. 7:14A-22.16), the Sewer Ban Program (N.J.A.C. 7:14A-22.17), the applicable Water Quality Management Plan (N.J.A.C. 7:15), and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C).

The numerical value used for flow as a permit condition is consistent with the Lower Raritan/Middlesex County Water Quality Management Plan in accordance with N.J.A.C. 7:14A-15.4(b).

I. Pretreatment Conditions:

This facility does not have any pretreatment conditions included in the permit at this time because the facility is a private sewage treatment plant that accepts sanitary wastewater from Plainsboro Township, including various housing and business complexes. United Water Princeton Meadows also accepts process wastewater from Integra Life Sciences located in Plainsboro.

J. Residuals/Sludge Conditions:

All treatment works with a discharge regulated under N.J.A.C. 7:14A must have permits that implement applicable technical standards for residuals management. Generally, the permit issued to the treatment works generating the residual will include applicable residual quality monitoring as well as other general conditions required by N.J.A.C. 7:14A-6. In addition, the permit may include conditions related to any aspect of residual management developed on a case-by-case basis where the Department determines that such conditions are necessary to protect public health and the environment.

The Department is granting a reduction in the number of parameters that must be reported on the annual residuals "production" WCR at monitoring location SLP3, pursuant to N.J.A.C. 7:14C-1.13(c). The new annual residuals WCR with reduced reporting parameters will replace the existing annual residuals WCR beginning the calendar year that the permit becomes effective.

Consistent with changes made to the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) in the Appendix at Table II, 2,3,7,8 Tetrachloro-dibenzo-p-dioxin (TCDD) is no longer a required parameter for testing in this permit. Therefore, it has been removed from the annual priority pollutant scan Residuals WCR found at Table III-B-3 of Part III, Limits and Monitoring Requirements, of the permit.

The permit may also include conditions establishing requirements for treatment works that send residual to other facilities for final use or disposal. Thus, **ALL** residual preparers (that is, generators as well as persons who manage the residual) are required to submit basic information concerning their residual use and disposal practices. This basic information is submitted by compliance with the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C).

The documents listed below have been used to establish the residual conditions of the Draft Permit:

a. United States Environmental Protection Agency "Standards for the use or disposal of sewage sludge" (40 CFR Part 503),
b. "New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A),
c. Technical Manual for Residuals Management, May 1998,
d. USEPA Part 503 Implementation Guidance, EPA 833-R-95-001, October 1995. This document is a compilation of federal requirements, management practices and EPA recommended permit conditions for sewage sludge use and management practices,
e. USEPA A Plain English Guide to the EPA Part 503 Biosolids Rule, EPA/832/R-93/003, September 1994,
f. New Jersey "Statewide Sludge Management Plan", January 2006 and
g. New Jersey "Sludge Quality Assurance Regulations" (SQAR), N.J.A.C. 7:14C.

K. Reclaimed Water for Beneficial Reuse (RWBR):

This draft permit contains conditions allowing the United Water Princeton Meadows wastewater treatment plant to beneficially reuse treated effluent identified as RWBR provided the effluent is in compliance with the criteria specified for the particular use. There are two main types of RWBR uses, Public Access Use and Restricted Access Use. Conditions applicable to both types of RWBR are included herein. However, currently approved types of RWBR are included in Appendix B of this permit. The currently approved reuse types/projects listed in Appendix B are governed by the 11/5/08 settlement agreement which is reiterated in section E.8.f of Part IV. Any new reuse projects shall meet the RWBR conditions contained in sections E.8.c and E.8.d of Part IV. As specified in Part IV, the permittee must obtain approval from the Department for each additional RWBR application prior to implementation. Approval shall be granted via a minor modification to the permit for any newly requested applications and included in Appendix B of this permit.

1. Effluent Limitations and Monitoring Requirements for Distribution of Reclaimed Water for Beneficial Reuse for **Public Access**

When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Public Access reuse identified in Part IV of this permit shall be met. In addition, the following system, operational and monitoring conditions shall be applicable.

Reclaimed water shall not exceed 5.0 mg/L of Total Suspended Solids (TSS) at a point before application of disinfection. The sample type shall be grab. The facility shall provide continuous on-line monitoring for turbidity before application of disinfection. These requirements are consistent with the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and EPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse", EPA # 430/09-91-022, September 1991 and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

Where chlorine is utilized for disinfection, chlorine-produced oxidants (CPO) of at least 1.0 mg/ L shall be maintained for a minimum acceptable contact time of 15 minutes at peak hourly flow. The treatment facility shall provide continuous on-line monitoring for CPO at the reuse compliance monitoring point, which shall be prior to distribution to an approved reuse location. This requirement is consistent with the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and EPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" EPA # 430/09-91-022, September 1991 and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

Where ultraviolet light is utilized for disinfection, a design UV dose of 100 mJ/cm^2 under maximum daily flow shall be used. This dose shall also be based on continuous monitoring of UV lamp intensity, UV transmittance and UV flow rate. All aspects of the UV system shall meet the requirements of the December 2000 National Water research Institute's Ultraviolet Disinfection

Guidelines for Drinking Water and Water Reuse and the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse."

Fecal coliform concentrations shall not exceed 14 fecal coliforms per 100 mL at any given time (as an instantaneous maximum level). Fecal coliform concentrations shall also meet a weekly (7 day) median value of 2.2 fecal coliforms per 100 mL. This is consistent with a report entitled "Regulations Governing Agricultural Use of Municipal Wastewater and Sludge", National Academy Press, Washington, D.C. 1996, Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

RWBR limitations shall not exceed a total nitrogen (NO3 + NH3) concentration of 10.0 mg/L. This is the Ground Water Quality Standard (as per N.J.A.C. 7:9-6) and consistent with the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse." This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area. The permittee may demonstrate that a concentration greater than 10 mg/l is protective of the environment by submitting and receiving approval of the information stated in the Engineering Report section of the "Technical Manual for Reclaimed Water for Beneficial Reuse."

2. Effluent Limitations and Monitoring Requirements for Distribution of Reclaimed Water for Beneficial Reuse for **Restricted Access – Land Application and Non Edible Crops**

When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Non Edible Crops reuse identified in Part IV of this permit shall be met. In addition, the following system, operational and monitoring conditions shall be applicable.

Where chlorine is utilized for disinfection, chlorine-produced oxidants (CPO) of at least 1.0 mg/ L shall be maintained for a minimum acceptable contact time of 15 minutes at peak hourly flow. The treatment facility shall provide continuous on-line monitoring for CPO at the reuse compliance monitoring point, which shall be prior to distribution to an approved reuse location. This requirement is consistent with the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and EPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" EPA # 430/09-91-022, September 1991 and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

Where ultraviolet light is utilized for disinfection, a design UV dose of 100 mJ/cm^2 under maximum daily flow shall be used. This dose shall also be based on continuous monitoring of UV lamp intensity, UV transmittance and UV flow rate. All aspects of the UV system shall meet the requirements of the December 2000 National Water research Institute's Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse and the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse."

Fecal coliform concentrations shall not exceed 400 fecal coliforms per 100 mL at any given time (as an instantaneous maximum level). Fecal coliform concentrations shall also meet a weekly (7 day) median value of 200 fecal coliforms per 100 mL. This is consistent with a report entitled "Regulations Governing Agricultural Use of Municipal Wastewater and Sludge", National Academy Press, Washington, D.C. 1996, Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

RWBR limitations shall not exceed a total nitrogen (NO3 + NH3) concentration of 10.0 mg/L. This is the Ground Water Quality Standard (as per N.J.A.C. 7:9-6) and consistent with the Department's

"Technical Manual for Reclaimed Water for Beneficial Reuse." This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area. The permittee may demonstrate that a concentration greater than 10 mg/l is protective of the environment by submitting and receiving approval of the information stated in the Engineering Report section of the "Technical Manual for Reclaimed Water for Beneficial Reuse."

3. Effluent Limitations and Monitoring Requirements for Distribution of Reclaimed Water for Beneficial Reuse for **Restricted Access – Construction and Maintenance Operations and Restricted Access – Industrial Systems**

When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Construction and Maintenance Operation Systems and/or Industrial Systems reuse identified in Part IV of this permit shall be met.

Other Applicable Conditions for RWBR:

The following conditions are consistent with the requirements of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" and the EPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" EPA # 430/09-91-022, September 1991 and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

Only reclaimed water meeting high level treatment and the conditions detailed in the approved Operations Protocol shall be diverted for beneficial reuse. Diversion of acceptable quality reclaimed water to the reuse location shall occur only during periods of operator presence, unless other provisions for increased facility reliability are detailed in the Operations Protocol. The Operations Protocol must be reviewed and updated as required. Changes to the Operations Protocol must be submitted to the Department and approved by the Department prior to implementation. Reclaimed water produced at the treatment facility that fails to meet the criteria established in the Operations Protocol shall not be diverted for beneficial reuse and must instead, be discharged in compliance with the NJPDES/DSW permitted outfall.

The application of reclaimed water shall not produce surface runoff or ponding of the reclaimed water. Land application sites shall not be frozen or saturated when applying RWBR. All setback distances shall be consistent with the requirements of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse".

The permittee must post advisory signs designating the nature of the project in the area where beneficial reuse is practiced. Examples of methods for notification are identified in the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse".

No cross-connections to potable water systems shall be allowed. All reuse system valves and outlets must be appropriately tagged or labeled to warn the public and employees that the water is not intended for drinking. All piping, pipelines, valves, and outlets must be color coded, or otherwise marked, to differentiate reclaimed water from domestic or other water, as detailed in the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse".

The permittee is required to submit a Beneficial Reuse Annual Report on February 1 of each year. The annual report shall compile the total flow of reuse water distributed to each approved reuse site for each approved type of reuse for the previous calendar year. Specific requirements for the annual report are identified in the Departments "Technical Manual for Reclaimed Water for Beneficial Reuse". In addition a daily log noting the

volume of water supplied, the name of the user, date of pick-up, the location and type of reuse (e.g. sewer jetting, landscape irrigation, etc…). and where it is being distributed shall be maintained on-site.

The permittee is required to submit a copy of all Reuse Supplier and User Agreements for existing reuses with its permit application package. Additional Reuse Supplier and User Agreements shall be submitted for each additional user prior to start-up of that use. A Reuse Supplier and User Agreement is a binding agreement between the permittee that supplies the RWBR and the entity that beneficially reuses this water. This agreement is required to ensure that all parties involved work to ensure that construction, operation, maintenance and monitoring of the RWBR system is in compliance with the Technical Manual, all applicable rules and regulations, this permit and the permittee's NJPDES discharge permit. A The requirement for submittal of this document is consistent with N.J.A.C. 7:14A-2.11(a). Please note that a Reuse Supplier and User Agreement is not required if the supplier of the RWBR and the user are the same entity.

The permittee is required to submit and receive approval of an Engineering Report in support of RWBR approval requests for new or expanded RWBR projects as detailed in the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse"

7 Variances to Permit Conditions:

To date, the Department has not received a variance request from the permittee.

8 Description of Procedures for Reaching a Final Decision on the Draft Action:

Please refer to the procedures described in the public notice that is part of the draft permit. The public notice for this permit action is published in the Home News Tribune and in the DEP Bulletin.

9 Contact Information

If you have any questions regarding this permit action, please contact Heather Genievich, Bureau of Surface Water Permitting at (609) 292-4860.

10 Calculation Equations:

A. Steady State Mass Balance Equation: $C_d = C_i = (Q_{up} \times C_{up} + Q_w \times WLA)/ (Q_{up} + Q_w)$

where,
- C_d = downstream concentration
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Q_{up} = upstream design low flow value, cfs
- Q_w = wastewater flow, cfs
- WLA = wasteload allocation

B. Wasteload Allocation: $WLA = [C_i \times (Q_{up} + Q_w) - (Q_{up} \times C_{up})]/ Q_w$

where,
- WLA = wasteload allocation
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Q_w = wastewater flow, cfs
- Q_{up} = upstream design low flow value, cfs

C. Long Term Average: LTA = (WLA) × [WLA multiplier (LTA)]

where,	LTA	=	long term average
	WLA	=	wasteload allocation
	WLA multiplier (LTA)	=	wasteload allocation multiplier for long term average, the 99th percentile multiplier, (see Table 5-1 in TSD, page 102)

D. Maximum Daily Limitation: MDL = (LTA) × [LTA multiplier (MDL)]

where,	MDL	=	maximum daily limitation
	LTA	=	long term average
	LTA multiplier (MDL)	=	long term average multiplier for the maximum daily limitation , the 99th percentile multiplier, (see Table 5-2 in TSD, page 103)

E. Average Monthly Limitation: AML = (LTA) × [LTA multiplier (AML)]

where,	AML	=	average monthly limitation
	LTA	=	long term average
	LTA multiplier (AML)	=	long term average multiplier for the average monthly limitation, the 99th percentile multiplier, (see Table 5-2 in TSD, page 103)

11 Permit Summary Table

Unless otherwise noted, all effluent limitations are expressed as maximums. Dashes (--) indicate there is no effluent data, no limitations, or no monitoring for this parameter depending on the column in which it appears.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1)	EXISTING LIMITS	FINAL LIMITS
Flow	MGD	Monthly Avg. Daily Max.	1.36 2.42	MR MR	MR MR
5 Day Biochemical Oxygen Demand (BOD_5)	kg/d	Monthly Avg. Weekly Avg.	36.6 59.3	85.1 142	85.1 142
5 Day Biochemical Oxygen Demand (BOD_5)	mg/L	Monthly Avg. Weekly Avg.	7.1 11.2	15 25	15 25
Influent BOD_5	mg/L	Monthly Avg. Weekly Avg.	229.4 287.7	MR MR	MR MR
BOD_5 Minimum Percent Removal	%	Monthly Avg.	93	85	85
Total Suspended Solids (TSS)	kg/d	Monthly Avg. Weekly Avg.	39.5 62.2	170 255	170 255
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Weekly Avg.	7.7 12.0	30 45	30 45
Influent Total Suspended Solids (TSS)	mg/L	Monthly Avg. Weekly Avg.	290.6 469.2	MR MR	MR MR
TSS Minimum Percent Removal	%	Monthly Avg.	90	85	85
Nitrate (Total as N)	kg/d	Monthly Avg. Daily Max.	5.8 6.7	MR MR	MR MR
Nitrate (Total as N)	mg/L	Monthly Avg. Daily Max.	1.1 1.2	MR MR	MR MR
Phosphorus (Total as P)	kg/d	Monthly Avg. Weekly Avg.	3.0 4.1	MR MR	MR MR
Phosphorus (Total as P)	mg/L	Monthly Avg. Weekly Avg.	0.6 0.8	1 MR	1 MR
Fecal Coliform (geometric mean)	# per 100mL	Monthly Avg. Weekly Avg.	17.4 17.4	200 400	200 400
E. Coli (2) (geometric mean)	# per 100mL	Monthly Avg. Instant Max	-- --	-- --	MR MR
Dissolved Oxygen (minimum)	mg/L	Weekly Avg.	5.7	5.0	5.0
Oil and Grease	mg/L	Monthly Avg. Instant Max.	6 6	10 15	10 15
Influent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max.	10 18 25	MR MR MR	MR MR MR
Effluent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max.	5 16 26	MR MR MR	MR MR MR
Influent pH	su	Instant. Min. Instant. Max.	6.7 8.6	MR MR	MR MR
Effluent pH	su	Instant. Min. Instant. Max.	6.6 8	6.0 9.0	6.0 9.0
Ammonia (Total as N)	kg/d	Monthly Avg. Daily Max.	98.5 159	144.8 211	144.8 211
Ammonia (Total as N)	mg/L	Monthly Avg. Daily Max.	19.8 31	25.5 37.2	25.5 37.2
Chlorine Produced Oxidants	kg/d	Month Avg. Daily Max.	<0.56 <0.56	MR 0.11 (3)	0.06 (3) 0.11 (3)
Chlorine Produced Oxidants	mg/L	Month Avg. Daily Max.	<0.1 <0.1	MR 0.02 (3)	0.01 (3) 0.02 (3)
Total Recoverable Barium	g/day	Monthly Avg. Daily Max.	-- --	MR MR	MR MR
Total Recoverable Barium	µg/L	Monthly Avg. Daily Max.	26.1 31.1	MR MR	MR MR
Total Recoverable Copper	g/day	Monthly Avg. Daily Max.	-- --	MR MR	MR MR
Total Recoverable Copper	µg/L	Monthly Avg. Daily Max.	7.9 13.5	MR MR	MR MR
Total Recoverable Nickel	g/day	Monthly Avg. Daily Max.	-- --	MR MR	MR MR
Total Recoverable Nickel	µg/L	Monthly Avg. Daily Max.	2.5 2.8	MR MR	MR MR

Total Recoverable Zinc	g/day	Monthly Avg. Daily Max.	-- --	MR MR	MR MR
Total Recoverable Zinc	µg/L	Monthly Avg. Daily Max.	53.4 72.3	MR MR	MR MR
Acute Toxicity, LC50	% effluent	Minimum	>100	--	--
Chronic Toxicity, IC25	% effluent	Minimum	2.7	40	40

Footnotes and Abbreviations:

MR Monitor and report only

(1) Wastewater data originates from the information submitted on the monitoring report forms (9/05 to 6/10).

(2) The samples shall be collected at a minimum frequency of five (5) in any chosen month during the semi-annual monitoring period starting from the effective date of the permit (EDP). Each month that E. Coli is sampled, the permittee shall conduct split sample analyses with Fecal Coliform. The split sample analyses for E. Coli shall be conducted, at a minimum, at the same sampling frequency required for Fecal Coliform during that month.

(3) The permittee shall comply with the enforceable quantification limit of 0.1 mg/L as a monthly average and daily maximum concentration and 0.56 kg/d as a monthly average and daily maximum loading.

12 Contents of the Administrative Record

The following items are used to establish the basis of the Draft Permit:

Rules and Regulations:

1. 33 U.S.C. 1251 et seq., Federal Water Pollution Control Act. [C]
2. 40 CFR Part 131, Federal Water Quality Standards. [A] [C]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System. [C]
4. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A] [B]
5. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A] [B]
6. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A] [B]
7. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A] [B]
8. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [B]

Guidance Documents / Reports:

1. "Field Sampling Procedures Manual", published by the NJDEP. [A]
2. "NJPDES Monitoring Report Form Reference Manual", updated December 2007, and available on the web at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf.
3. "EPA Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991. [A]
4. New Jersey's 2008 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). [A] [B]
5. Draft "Technical Manual for Reclaimed Water for Beneficial Reuse", published by NJDEP, October 2002. [A] [B]
6. Compliance Inspection Reports from February 2006 to March 2010.

Permits / Applications:

1. NJPDES/DSW Permit Application dated 6/28/2010. [A]
2. Existing NJPDES/DSW Permit NJ0024104, issued 10/14/2005 and effective 1/1/2006. [A]
3. Major Modification to NJPDES/DSW Permit NJ0024104, issued 4/28/2009 and effective on 7/1/2009.[A]

Correspondences:

1. Settlement agreement executed November 5, 2008 for adjudicated final permit that was issued 10/14/2005 and effective 1/1/2006.

Footnotes:

[A] Denotes items that may be found in the NJPDES/DSW Administrative Record Library located in the NJDEP Central File Room, 401 East State Street, Trenton, New Jersey.

[B] Denotes items that may be found on the New Jersey Department of Environmental Protection (NJDEP) website located at "http://www.state.nj.us/dep/".

[C] Denotes items that may be found on the United States Environmental Protection Agency (USEPA) website at "http://www.epa.gov/".

Table A: Effluent limitation analysis for the Toxic Metals, Organic Compounds, Cyanide, and other pollutants; effluent flow of 1.64 MGD and stream hardness of 100 mg/L.

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Maximum reported data value (µg/L) (1) **A**	Calculated instream WLA (µg/L) **B**	"Cause" Y = yes N = no **A > B ?**	Aquatic criteria LTA (µg/L)	Water quality based limit, if applicable (µg/L)	Calculated EEQ maximum daily limit, if applicable (µg/L)
Barium**	9/05 to 7/09	(dt) = 6 (nd) = 0	0.60 (d)	31.1 (max)	(a) = N/A (c) = N/A (h) = 3970 (hc) = N/A	(a) = N/A (c) = N/A (h) = N (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A
Copper**	9/05 to 1/10	(dt) = 10 (nd) = 0	0.44 (ca)	13.5 (max)	(a) = 23.73 (c) = 16.82 (h) = 2581 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A
Nickel**	9/05 to 7/09	(dt) = 4 (nd) = 2	0.60 (d)	3 (max)	(a) = 741.10 (c) = 87.62 (h) = 992.69 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A
Nitrate	1/06 to 1/10	(dt) = 8 (nd) = 2	0.85 (ca)	2.11 (max)	(a) = N/A (c) = N/A (h) = 19.85 (hc) = N/A	(a) = N/A (c) = N/A (h) = N (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A
Zinc**	9/05 to 1/10	(dt) = 9 (nd) = 1	0.29 (ca)	72.3 (max)	(a) = 212.54 (c) = 226.00 (h) = 14691.85 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A

(1) For human health carcinogen (hc) water quality based calculations, the data set's long-term average equivalent is used instead of the maximum reported data value. For human health carcinogen (hc) existing effluent quality limitations, the maximum reported data value is used.

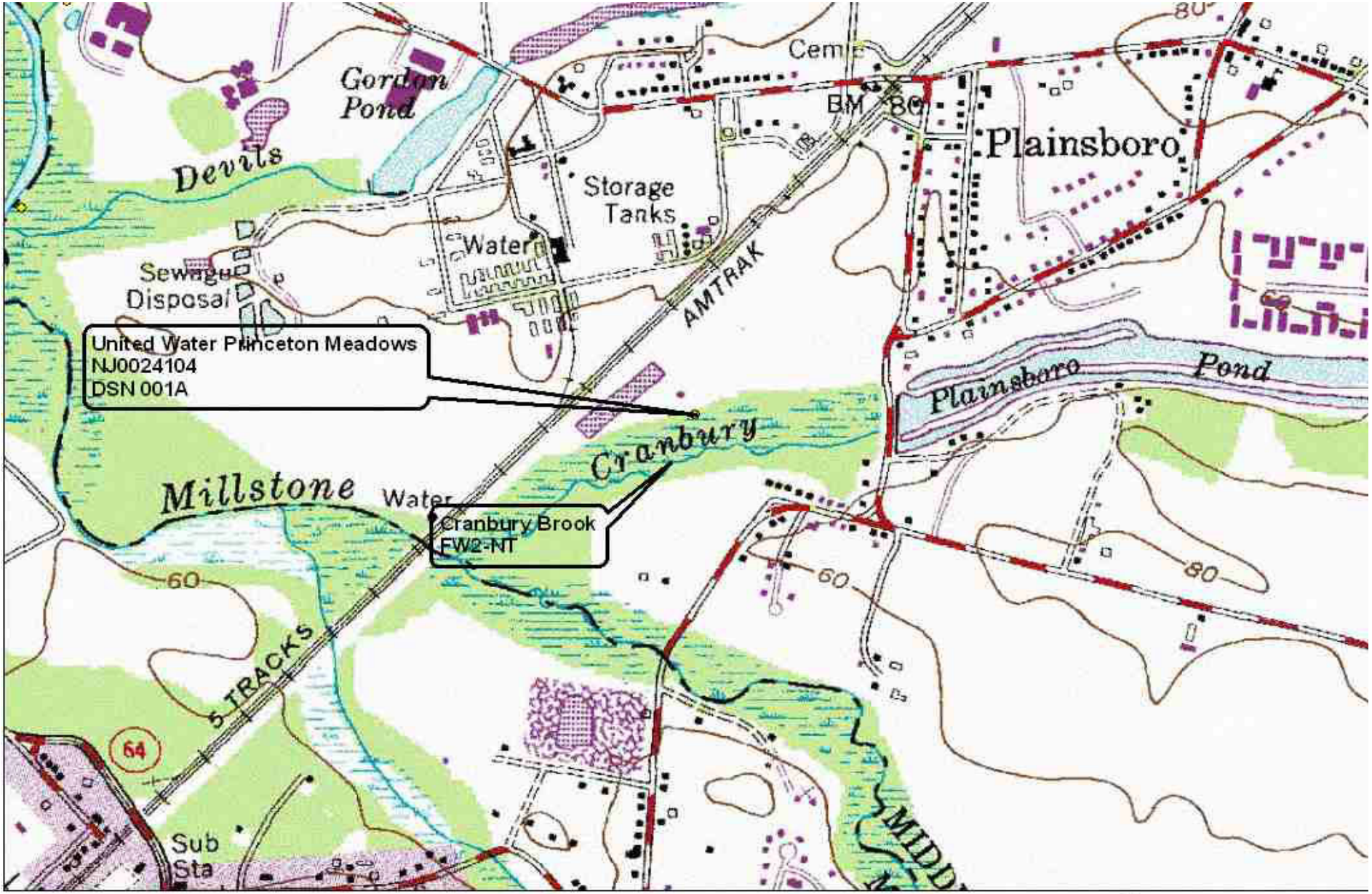
Footnotes and Abbreviations:

(dt) = Data values detected.
(nd) = Data values non-detected.
(d) = Default CV
(ca) = Calculated from data set.
(max) = Maximum
(LTAeq) = Long Term Average equivalent

(a) = acute aquatic
(c) = chronic aquatic
(h) = human health non-carcinogen
(hc) = human health carcinogen
(*) = Dissolved
(**) = Total Recoverable

LTA = Long Term Average
WLA = Waste Load Allocation
MDL = Maximum Daily Limit
AML = Average Monthly Limit
EEQ = Existing Effluent Quality
N/A = Not Applicable

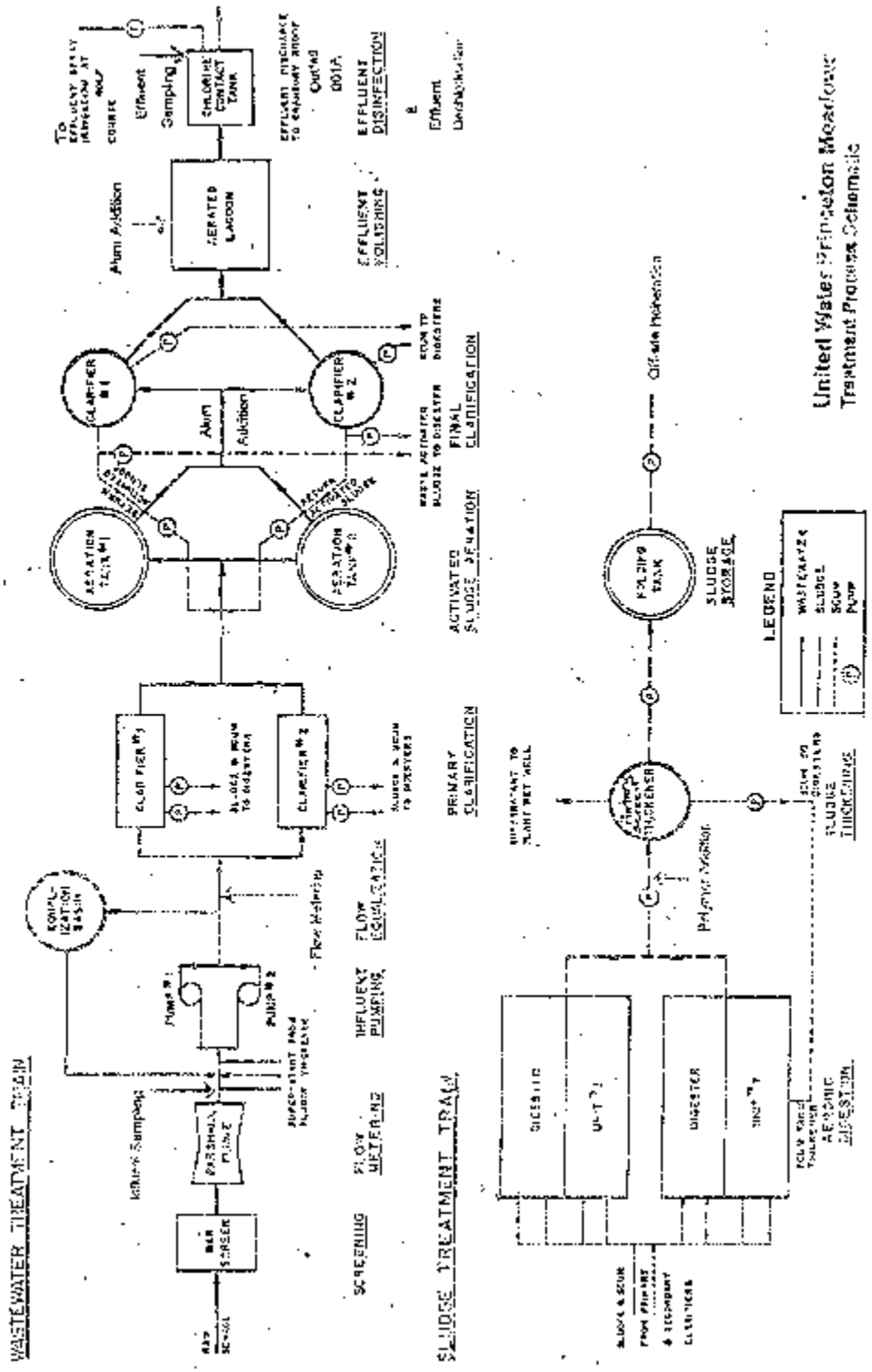
MR = Monitor and Report



Hightstown - NJ USGS Topographical Map

0 0.05 0.1 0.2 Miles

N


WASTEWATER TREATMENT TRAIN
SCREENING
FLOW METERING
INFLUENT PUMPING
FLOW EQUALIZATION
PRIMARY CLARIFICATION
ACTIVATED SLUDGE AERATION
FINAL CLARIFICATION
EFFLUENT POLISHING
EFFLUENT DISINFECTION
SLUDGE TREATMENT TRAIN
AEROBIC DIGESTION
SLUDGE THICKENING
SLUDGE STORAGE
LEGEND
Offsite Hydration
Alum Addition
Effluent Sampling
Influent Sampling
Flow Metering
Polymer Addition
United Water Princeton Meadows
Treatment Process Schematic

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0024104

Draft: Surface Water Renewal Permit Action

Permittee:

United Water Princeton Meadows
PO Box 336
Plainsboro, NJ 08536

Property Owner:

United Water Princeton Meadows
PO Box 336
Plainsboro, NJ 08536

Location Of Activity:

United Water Princeton Meadows
31 Maple Ave
Plainsboro, NJ
Middlesex County

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
A -Sanitary Wastewater	Pending	Pending	Pending

By Authority of:
Commissioner's Office

DEP AUTHORIZATION
Pilar Patterson, Chief
Bureau of Surface Water Permitting
Division of Water Quality

(Terms, conditions and provisions attached hereto)

PART I
GENERAL REQUIREMENTS:
NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.

b. General Conditions

Penalties for Violations	N.J.A.C. 7:14-8.1 et seq.
Incorporation by Reference	N.J.A.C. 7:14A-2.3
Toxic Pollutants	N.J.A.C. 7:14A-6.2(a)4i
Duty to Comply	N.J.A.C. 7:14A-6.2(a)1 & 4
Duty to Mitigate	N.J.A.C. 7:14A-6.2(a)5 & 11
Inspection and Entry	N.J.A.C. 7:14A-2.11(e)
Enforcement Action	N.J.A.C. 7:14A-2.9
Duty to Reapply	N.J.A.C. 7:14A-4.2(e)3
Signatory Requirements for Applications and Reports	N.J.A.C. 7:14A-4.9
Effect of Permit/Other Laws	N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
Severability	N.J.A.C. 7:14A-2.2
Administrative Continuation of Permits	N.J.A.C. 7:14A-2.8
Permit Actions	N.J.A.C. 7:14A-2.7(c)
Reopener Clause	N.J.A.C. 7:14A-6.2(a)10
Permit Duration and Renewal	N.J.A.C. 7:14A-2.7(a) & (b)
Consolidation of Permit Process	N.J.A.C. 7:14A-15.5
Confidentiality	N.J.A.C. 7:14A-18.2 & 2.11(g)
Fee Schedule	N.J.A.C. 7:14A-3.1
Treatment Works Approval	N.J.A.C. 7:14A-22 & 23

c. Operation And Maintenance

Need to Halt or Reduce not a Defense	N.J.A.C. 7:14A-2.9(b)
Proper Operation and Maintenance	N.J.A.C. 7:14A-6.12

d. Monitoring And Records

Monitoring	N.J.A.C. 7:14A-6.5
Recordkeeping	N.J.A.C. 7:14A-6.6
Signatory Requirements for Monitoring Reports	N.J.A.C. 7:14A-6.9

e. Reporting Requirements

Planned Changes	N.J.A.C. 7:14A-6.7
Reporting of Monitoring Results	N.J.A.C. 7:14A-6.8
Noncompliance Reporting	N.J.A.C. 7:14A-6.10 & 6.8(h)
Hotline/Two Hour & Twenty-four Hour Reporting	N.J.A.C. 7:14A-6.10(c) & (d)
Written Reporting	N.J.A.C. 7:14A-6.10(e) &(f) & 6.8(h)
Duty to Provide Information	N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
Schedules of Compliance	N.J.A.C. 7:14A-6.4
Transfer	N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. Requirements for Discharges to Surface Waters

a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.

i. Surface Water Quality Standards N.J.A.C. 7:9B-1

ii. Water Quality Management Planning Regulations N.J.A.C. 7:15

B. General Conditions

1. Scope

a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

2. Permit Renewal Requirement

a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.

b. Submit a complete permit renewal application: 180 days before the Expiration Date.

3. Notification of Non-Compliance

a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).

b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

4. Notification of Changes

a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.

b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access / copy any records that must be kept under the conditions of this permit.

6. Operator Certification

a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.

i. Notifications shall be submitted to:
NJDEP
Examination and Licensing Unit
P.O. Box 417
Trenton, New Jersey 08625
(609)777-1012.

b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

7. Operation Restrictions

a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condition for water or waste, except as specifically authorized by a valid NJPDES permit.

8. Residuals Management

a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:

i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;

ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;

iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;

iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;

v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and

vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.

vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)

b. If any applicable standard for residual use or disposal is promulgated under section 405(d)of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.

c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.

d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.

e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C 7:14A-20.7(j).

f. The preparer who provides biosolids to another person who further prepares the biosolids for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.

g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to submit to the Department written proof of compliance with or satisfaction of all applicable statutes, regulations, and guidelines of the state in which land application will occur.

PART III
LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
001A SW Outfall	Cranbury Brook	FW2-NT(C2)	A - Sanitary Wastewater

Location Description

Influent sampling shall be performed before any treatment, other than degritting, and before the addition of any internal waste streams. Effluent monitoring shall be post disinfection from EDP until 36 months after the Raritan TMDL is adopted. Upon 36 months after the Raritan TMDL is adopted, effluent monitoring shall be after the last treatment step. DSN001A discharges into an unnamed tributary of Cranbury Brook (FW2-NT) at Lat=40d19'36.4" and Long=74d36'26.8".

Contributing Waste Types

Sanitary

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Comments:

The "5 per month" monitoring requirement for E. Coli is applicable at a quarterly frequency. That is, 5 samples shall be collected in only one chosen month during the quarterly monitoring period starting from EDP. For those months that it is not monitored, please report "Code=N". Please refer to Part IV, Section A.2. for further details.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	85.1 Monthly Average	142 Weekly Average	KG/DAY	*****	15 Monthly Average	25 Weekly Average	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Week	Calculated
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Comments:

The "5 per month" monitoring requirement for E. Coli is applicable at a quarterly frequency. That is, 5 samples shall be collected in only one chosen month during the quarterly monitoring period starting from EDP. For those months that it is not monitored, please report "Code=N". Please refer to Part IV, Section A.2. for further details.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Report Per Maximum	SU	1/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6 Report Per Minimum	*****	9 Report Per Maximum	SU	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	170 Monthly Average	255 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	144.8 Monthly Average	211 Daily Maximum	KG/DAY	*****	25.5 Monthly Average	37.2 Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Comments:

The "5 per month" monitoring requirement for E. Coli is applicable at a quarterly frequency. That is, 5 samples shall be collected in only one chosen month during the quarterly monitoring period starting from EDP. For those months that it is not monitored, please report "Code=N". Please refer to Part IV, Section A.2. for further details.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Nitrate Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/6 Months	24 Hour Composite
January thru December	QL	***	***		***	***	***			
E. Coli	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Geo Avg	REPORT Weekly Geometric	#/100ML	5/Month	Grab
January thru December	QL	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Month	Grab
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	28 Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	0.06 Monthly Average	0.11 Daily Maximum	KG/DAY	*****	0.01 Monthly Average	0.02 Daily Maximum	MG/L	2/Day	Grab
January thru December	MDL	0.56	0.56		***	0.1	0.1			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	1/Day	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Comments:

The "5 per month" monitoring requirement for E. Coli is applicable at a quarterly frequency. That is, 5 samples shall be collected in only one chosen month during the quarterly monitoring period starting from EDP. For those months that it is not monitored, please report "Code=N". Please refer to Part IV, Section A.2. for further details.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	5 Weekly Av Minimum	*****	MG/L	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Phosphorus, Total (as P)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	1 Monthly Average	REPORT Weekly Average	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	24 Hour Composite
January thru December	RQL	***	***		***	20	20			
Nickel, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	24 Hour Composite
January thru December	RQL	***	***		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	24 Hour Composite
January thru December	RQL	***	***		***	30	30			
Copper, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	24 Hour Composite
January thru December	RQL	***	***		***	10	10			

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT RQL = 8	UG/L	24 Hour Composite	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	24 Hour Composite	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	24 Hour Composite	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	24 Hour Composite	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	24 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachlorocyclo-pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	24 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	24 Hour Composite	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	24 Hour Composite	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro- methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro- ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro- ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Methoxychlor	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-Nitrosodi- n-butylamine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	24 Hour Composite	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	24 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	24 Hour Composite	January thru December
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	24 Hour Composite	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	24 Hour Composite	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	24 Hour Composite	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	24 Hour Composite	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	24 Hour Composite	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	24 Hour Composite	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	24 Hour Composite	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	24 Hour Composite	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	24 Hour Composite	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	24 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	24 Hour Composite	January thru December
Phenol Single Compound	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
RWBR Reuse	Cranbury Brook	FW2-NT(C2)	A - Sanitary Wastewater

Location Description

Reclaimed Water for Beneficial Reuse sampling shall be performed only when effluent is diverted for reuse. From EDP until 36 months after the Raritan TMDL is adopted, RWBR sampling shall be performed prior to dechlorination and immediately before removing the RWBR for reuse application, as detailed in Part IV Section E.8.(f)vi. Upon 36 months after the Raritan TMDL is adopted, RWBR sampling shall be performed as specified in Part IV Section E.8.(f)vii.

Contributing Waste Types

Sanitary

Surface Water WCR - Monthly Reporting Requirements:

Submit a Monthly WCR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - B - 1: Surface Water WCR - Monthly Limits and Monitoring Requirements

PHASE: 1 Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Flow, In Conduit or Thru Treatment Plant	Beneficial Reuse	REPORT	MGD	Calculated	January thru December
Solids, Total Suspended	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Nitrogen, Kjeldahl Total (as N)	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Nitrogen, Nitrate Total (as NO3)	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Coliform, Fecal General	Beneficial Reuse	REPORT	#/100ML	Grab	January thru December
Chlorine Produced Oxidants	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Turbidity	Beneficial Reuse	REPORT	NTU	Grab	January thru December

Surface Water WCR - Monthly Reporting Requirements:

Submit a Monthly WCR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - B - 2: Surface Water WCR - Monthly Limits and Monitoring Requirements

PHASE: 2 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Flow, In Conduit or Thru Treatment Plant	Beneficial Reuse	REPORT	MGD	Calculated	January thru December
Solids, Total Suspended	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Nitrogen, Kjeldahl Total (as N)	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Nitrogen, Nitrate Total (as NO3)	Beneficial Reuse	REPORT	MG/L	Grab	January thru December
Coliform, Fecal General	Beneficial Reuse	REPORT	#/100ML	Grab	January thru December
Chlorine Produced Oxidants	Beneficial Reuse	REPORT	MG/L	Continuous	January thru December
Turbidity	Beneficial Reuse	REPORT	NTU	Continuous	January thru December

MONITORED LOCATION: SL3A Sludge Holding Tank

DISCHARGE CATEGORY(IES): A - Sanitary Wastewater

Location Description

SQAR information shall be collected on the residual being discharged from the sludge holding tank. Said information shall be representative of the chemical and physical characteristics of the residual leaving the treatment plant for use or disposal.

Contributing Waste Types

Dom Residual-Other

Residuals DMR Reporting Requirements:

Submit a Quarterly DMR: due 60 calendar days after the end of each calendar quarter.

Table III - C - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Nitrate Nitrogen, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Kjeldahl Total, Dry Wt	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Potassium Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Quarterly DMR: due 60 calendar days after the end of each calendar quarter.

Table III - C - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Ammonia Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Calcium Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Molybdenum Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Phosphorus Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Arsenic, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Selenium, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Copper, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Quarterly DMR: due 60 calendar days after the end of each calendar quarter.

Table III - C - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Beryllium Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Cadmium, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Zinc, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Lead, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Nickel, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Mercury, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:
Submit a Quarterly DMR: due 60 calendar days after the end of each calendar quarter.

Table III - C - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chromium, Dry Weight	Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Silver, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Antimony, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Thallium, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Acenaphthylene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Acenaphthene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Anthracene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzo(k)fluoranthene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzo(a)pyrene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Bis(2-chloroethyl) ether, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Bis(2-chloroethoxy)-methane, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Bis(2-chloroiso-propyl)-ether,Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Butyl benzyl-phthalate, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Chrysene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Diethyl phthalate, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Dimethyl phthalate, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,2-Diphenyl-hydrazine, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Fluoranthene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Fluorene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Hexachlorocyclo-pentadiene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Hexachloroethane, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Indeno(1,2,3-cd)-pyrene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
N-nitrosodi-n-propylamine, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
N-nitrosodi-phenylamine, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
N-nitrosodi-methylamine, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Naphthalene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Nitrobenzene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Phenanthrene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Pyrene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzo(ghi)perylene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzo(a)anthracene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,2-Dichlorobenzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,2,4-Trichloro-benzene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Dibenzo(a,h) anthracene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,3-Dichlorobenzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,4-Dichlorobenzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2-Chloronaphthalene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Di-n-octyl Phthalate Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2,4-Dinitrotoluene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2,6-Dinitrotoluene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
3,3'-Dichloro-benzidine, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
4-Bromophenyl phenyl ether, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Bis(2-ethylhexyl) phthalate, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Di-n-butyl phthalate Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Benzidine Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Hexachlorobenzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Hexachlorobutadiene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
trans-1,3-Dichloro-propene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
3,4 Benzo-fluoranthene	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Acrolein, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Acrylonitrile Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Bromoform Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Carbon Tetrachloride Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Chlorobenzene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Chlorodibromomethane Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Chloroethane Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Chloroform Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Dichlorobromomethane Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Ethylbenzene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Methyl Bromide, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Methyl Chloride, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Methylene Chloride, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Tetrachloroethylene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Toluene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Trichloroethylene, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Vinyl Chloride Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,1-Dichloroethane, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,1-Dichloroethylene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,1,1-Trichloro-ethane, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
1,1,2-Trichloro-ethane, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
1,1,2,2-Tetrachloro-ethane	Residuals	REPORT	MG/KG	Composite	January thru December
1,2-Dichloroethane, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,2-Dichloropropane, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
1,2-trans-Dichloro ethylene, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
2-Chloroethyl Vinyl Ether, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Cyanide, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Isophorone Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Phenol, Single Compound, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
BHC Delta Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Endosulfan Sulfate, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Beta Endosulfan	Residuals	REPORT	MG/KG	Composite	January thru December
Alpha Endosulfan	Residuals	REPORT	MG/KG	Composite	January thru December
Endrin Aldehyde, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
4,4'-DDT, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
4,4'-DDD, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
4,4'-DDE, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Aldrin, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Gamma BHC (lindane), Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Chlordane(Tech Mix & Metabolites), Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
Dieldrin, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Toxaphene Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Heptachlor Epoxide, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1232, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1242, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1248, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1254, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1260, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1016, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
PCB-1221, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Alpha BHC Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Beta BHC, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Heptachlor Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Endrin, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
p-chloro-m-cresol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2-Chlorophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2-Nitrophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2,4-Dichlorophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2,4-Dimethylphenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
2,4 Dinitrophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals WCR - Annual Reporting Requirements:
Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - C - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2,4,6 Trichloro-phenol, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
4-Chlorophenyl pheny lether, Dry Wt	Residuals	REPORT	MG/KG	Composite	January thru December
4-Nitrophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
Pentachlorophenol, Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December
4,6-Dinitro-o-cresol Dry Weight	Residuals	REPORT	MG/KG	Composite	January thru December

Residuals Transfer Reporting Requirements:

Submit a Monthly RTR: due 60 calendar days after the end of each calendar month.

MONITORED LOCATION: SLP3 Production

DISCHARGE CATEGORY(IES): A - Sanitary Wastewater

Location Description

SQAR information representative of the residual use or disposal practices shall be collected. This monitored location (SLP3) is identical to SL3A.

Contributing Waste Types

Dom Residual-Other

Residuals WCR - Annual Reporting Requirements:

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - D - 1: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Amt Sludge Rmvd, Wet Cubic Yards	Residuals	REPORT	WCY/YR	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Residuals	REPORT	WMT/YR	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Residuals	REPORT	GAL/YEAR	Calculated	January thru December
Total Amount of Sludge Removed	Residuals	REPORT	DMT/YR	Calculated	January thru December
Solids, Total	Residuals	REPORT	%TS	Composite	January thru December

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Sanitary Wastewater

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.

b. The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136, unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

c. The permittee shall utilize analytical methods that will ensure compliance with the Quantification Levels (QLs) listed in PART III. If the permittee and/or contract laboratory determines that the QLs achieved for any pollutant(s) generally will not be as sensitive as the QLs specified in PART III, the permittee must submit a justification of such to the Bureau of Surface Water Permitting. For limited parameters with no QL specified, the sample analysis shall use a detection level at least as sensitive as the effluent limit.

d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.

e. All monitoring shall be conducted as specified in Part III.

f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.

g. Annual and semi-annual wastewater testing shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.

h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

i. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.

j. The permittee shall perform all residual analyses in accordance with the analytical test procedures specified in 40 CFR 503.8 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

k. When E. coli sampling is conducted, split samples shall be collected for fecal coliform and E. coli.

2. E. Coli Sampling Requirement

a. The samples for E. Coli shall be collected at a minimum frequency of five (5) in any chosen month during the quarterly monitoring period starting from the effective date of the permit (EDP). For other months during the monitoring period when sampling is not required, the permittee shall report CODE = N. Each month that E. Coli is sampled, the permittee shall conduct split sample analyses with Fecal Coliform. The split sample analyses shall be conducted, at a minimum, at the same sampling frequency required for Fecal Coliform during that month.

B. RECORDKEEPING

1. Standard Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.

b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

C. REPORTING

1. Standard Reporting Requirements

a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.

b. Any MRFs in paper format shall be submitted to the following addresses:

i. NJDEP
Division of Water Quality
Office of Permit Management
P.O. Box 420
Trenton, New Jersey 08625-0029.

ii. (if requested by the Water Compliance and Enforcement Bureau)
NJDEP: Central Bureau of Water Compliance and Enforcement
P.O. Box 420
Trenton, New Jersey 08625-0407.

c. Any electronic data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.

d. All monitoring report forms shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

e. The highest ranking official may delegate responsibility to certify the monitoring report forms in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

f. Monitoring results shall be submitted in accordance with the current Discharge Monitoring Report Manual and any updates thereof.

g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.

h. If there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic verson of the monitoring report submittal form.

D. SUBMITTALS

1. Standard Submittal Requirements

a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

2. E. Coli and Fecal Coliform Split Sample Report

a. The permittee shall submit to the Department electronic versions of the summary report containing E. Coli and Fecal Coliform split sample data including the dates the samples were taken, along with the renewal application forms. The data submitted in the electronic versions shall be provided in a spread sheet format (i.e. Microsoft Word, Microsoft Access, etc.) and submitted on a 3.5 inch diskette or a CD-ROM.

E. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location specified in PART III of this permit.

b. The permittee shall not discharge foam or cause foaming of the receiving water that 1) forms objectionable deposits on the receiving water, 2) forms floating masses producing a nuisance, or 3) interferes with a designated use of the waterbody.

c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.

d. The discharge shall not exhibit a visible sheen.

e. When quantification levels (QL) and effluent limits are both specified for a given parameter in Part III, and the QL is less stringent than the effluent limit, effluent compliance will be determined by comparing the reported value against the QL.

f. When an average of three (3) consecutive rolling monthly average values of the committed flow (actual flow and approved allocated flow) reaches or exceeds 80% of 1.64 MGD (the permitted capacity of the facility), the permittee shall:.

i. Develop a Capacity Assurance Program (CAP) in accordance with N.J.A.C. 7:14A-22.16.

ii. For more information concerning the CAP, please contact the Bureau of Engineering and Construction Permitting North at (609) 292-6894.

iii. Contact the Division of Watershed Management to discuss whether an amendment to the Water Quality Management Plan (WQMP) or Wastewater Management Plan (WMP) will be necessary.

2. Applicability of Discharge Limitations and Effective Dates

a. Surface Water Discharge Monitoring Report (DMR) Form Requirements

i. The final effluent limitations and monitoring conditions in Part III for DSN001A apply for the full term of this permit action.

b. Wastewater Characterization Report (WCR) Form Requirements

i. The final effluent monitoring conditions contained in PART III for DSN001A apply for the full term of this permit action.

3. Operation, Maintenance and Emergency conditions

a. The permittee shall operate and maintain treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit as specified in the Operation & Maintenance Manual.

b. The permittee shall develop emergency procedures to ensure effective operation of the treatment works under emergency conditions in accordance with N.J.A.C. 7:14A-6.12(d).

4. Toxicity Testing Requirements

a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.

b. Chronic Toxicity Testing Requirements

i. Chronic toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

ii. Any test that does not meet the specifications contained in the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Program" document must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

iii. The permittee shall collect and analyze the concentration of ammonia-N in the effluent on the day a sample is collected for WET testing. This result is to be reported on the Biomonitoring Report Form.

iv. IC25 - Inhibition Concentration - Concentration of effluent which has an inhibitory effect on 25% of the test organisms for the monitored effect, as compared to the control (expressed as percent effluent).

v. Test results shall be expressed as the IC25 for each test endpoint. Where a chronic toxicity testing endpoint yields IC25's from more than one test endpoint, the most sensitive endpoint will be used to evaluate effluent toxicity.

vi. The permittee shall resubmit a Chronic Methodology Questionnaire within 60 days of any change in laboratory.

vii. Submit a chronic whole effluent toxicity test report: within twenty-five days after the end of every quarterly monitoring period beginning from the effective date of the permit (EDP). The permittee shall submit toxicity test results on appropriate forms.

viii. Test reports shall be submitted to:
New Jersey Department of Environmental Protection
Division of Water Quality, Bureau of Surface Water Permitting
P.O. Box 420
Trenton, New Jersey 08625.

5. Toxicity Reduction Implementation Requirements (TRIR)

a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit specified in Part III of this permit.

i. If the exceedence of the toxicity limit is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.

b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits in Part III. The monitoring frequency for toxicity testing shall be increased to semi-monthly (i.e. every two months). Up to 12 additional tests may be required.

i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit.

ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit in Part III, the permittee shall repeat Toxicity Reduction Implementation Requirements.

c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the fourth exceedence of the toxicity limit specified in Part III during toxicity characterization.

i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.

ii. As appropriate, the PTI shall include:
(1) treatment plant performance evaluation,
(2) pretreatment program information,
(3) evaluation of ammonia and chlorine produced oxidants levels and their effect on the toxicity of the discharge,
(4) evaluation of chemical use and processes at the facility, and
(5) an evaluation of incidental facility procedures such as floor washing, and chemical spill disposal which may contribute to effluent toxicity.

iii. If the permittee demonstrates that the cause of toxicity is the chlorine added for disinfection or the ammonia concentration in the effluent and the chlorine and/or ammonia concentrations are below the established water quality based effluent limitation for chlorine and/or ammonia, the permittee shall identify the procedures to be used in future toxicity tests to account for chlorine and/or ammonia toxicity in their preliminary toxicity identification report.

iv. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.

d. The permittee must demonstrate compliance with the WET limitation in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.

e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit in Part III can not be made.

i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.

ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit in Part III , a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.

iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.

iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.

f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.

i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit in Part III in four consecutive toxicity tests.

ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit in Part III, the permittee shall submit a plan for resuming the CTI.

6. Introduction to RWBR Requirements

a. The following RWBR sections contain the conditions for the permittee to beneficially reuse treated effluent or Reclaimed Water for Beneficial Reuse (RWBR), provided the effluent is in compliance with the criteria specified for the particular use specified below.

b. There are two levels of RWBR uses. Public Access and Restricted Access.

7. Inactive RWBR Requirements

a. The following RWBR sections are included in this permit for various reuse applications. These sections are inactive and not effective unless the status column in Appendix B states the reuse activity is approved. Any specific RWBR type not approved in the Appendix, may be approved at a later date by a minor modification permit action once the appropriate submittal requirements have been received and approved by the Department. The permittee is authorized to distribute treated wastewater for public access land application for irrigation.

8. RWBR Requirements for Public Access

a. The Public Access reuse types authorized by this permit are those approved in Appendix B. Other Public Access reuse types may be added by minor modification of this permit.

b. The hydraulic loading rate for land application of RWBR shall not exceed 2 inches per week.

c. Any water diverted for RWBR (except for that diverted to the Meadows at Middlesex golf course) shall be monitored and comply with the high level treatment requirements listed below and the operational requirements in the approved Operations Protocol. If any of these requirements are not achieved, the effluent shall not be diverted for RWBR.

   i. Total Suspended Solids (TSS): Instantaneous maximum of 5.0 mg/L prior to disinfection.

   ii. Nitrogen, Total (NO3 + NH3): Daily maximum of 10.0 mg/L. This requirement only applies when RWBR is land applied.

   iii. Fecal Coliform: 7-day median maximum of 2.2 colonies per 100 mL and an instantaneous maximum of 14 colonies per 100 mL.

   iv. Chlorine Produced Oxidants (CPO): If the permittee disinfects utilizing chlorine, an instantaneous minimum of 1.0 mg/L after fifteen minutes contact time at peak hourly flow must be met.

   v. Ultraviolet Disinfection: If the permittee disinfects utilizing UV disinfection, a minimum design UV dose of 100 mJ/cm2 under maximum daily flow must be used. All aspects of the UV system must meet the requirements of the May 2003 (or most recent) National Water Research Institute's Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse, second edition.

   vi. Turbidity for UV systems: Instantaneous maximum of 2.0 NTU.

d. Monitoring of the diverted public access RWBR (except for that diverted to the Meadows at Middlesex golf course) shall be conducted in the following manner:.

   i. Sampling for TSS shall be immediately prior to disinfection. Monitoring for TSS shall be a grab sample once per week.

   ii. Sampling for Turbidity in systems shall be sampled immediately prior to disinfection. The permittee shall establish a correlation between Turbidity and TSS in their effluent as detailed in the Reuse Technical Manual. A statistically significant correlation between Turbidity and TSS shall be established prior to commencement of the RWBR program and shall be incorporated into the Operations Protocol and updated annually. The initial correlation should be done as part of a daily monitoring program for at least 30 days. To ensure continuous compliance with the 5.0 mg/L TSS level, Turbidity must be monitored continuously and achieve the level established in the Operations Protocol.

   iii. For chlorine disinfection, monitoring for CPO shall be continuous and shall be monitored after the appropriate contact time is achieved.

   iv. For UV systems, UV lamp intensity, UV transmittance and UV flow rate shall be monitored continuously after full disinfection treatment.

   v. Monitoring for Fecal Coliform shall be a grab sample, taken in accordance with Part III, at least a minimum of once per week taken immediately after disinfection. Fecal coliform shall be monitored immediately after disinfection.

   vi. Monitoring for Total Nitrogen (NO3 + NH3) shall be a composite sample, taken in accordance with Part III, at least once per week taken prior to RWBR diversion. Total Nitrogen (NO3 + NH3) shall be monitored after the appropriate disinfection treatment is achieved.

e. All monitoring results of the RWBR shall be reported each month on Wastewater Characterization Reports (WCR). Unless noted otherwise, the highest of all measured values for diverted RWBR shall be reported.

   i. If chlorine is used for disinfection, the lowest sampling result obtained during the reporting month shall be reported for CPO.

   ii. If ultraviolet disinfection is used, the lowest sampling results obtained during the reporting month shall be reported for lamp intensity and UV transmittance.

f. Specific requirements for approved irrigation of Meadows at Middlesex golf course.

   i. Final effluent limitations included in item iv below must be achieved by 36 months after the date the Raritan TMDL is adopted.

   ii. The hydraulic loading rate for land application of RWBR shall not exceed 2 inches per week. Alternate limitations may be feasible by modification of this permit.

   iii. Interim limitations and monitoring requirements will be in effect from EDP to 36 months after the date the Raritan River TMDL is adopted. During this interim period sampling shall be performed prior to dechlorination and before diverting effluent for RWBR. Any water diverted for RWBR shall be monitored and comply with the treatment requirements and limitations listed below and the operational requirements in Part IV Section E.13 of this permit. If any of these limitations are not achieved the effluent shall not be diverted for RWBR:

      Total Suspended Solids (TSS): Instantaneous maximum of 20 mg/L.

      Fecal Coliform: 7-day median maximum of 20 colonies per 100 mL.

      Total Chlorine Residual/ Chlorine Produced Oxidants (CPO): Monitor and report.

      Nitrogen, Kjeldahl Total (as N): Monitor and report.

      Nitrogen, Nitrate Total (as NO3): Monitor and report.

   iv. Final limitations will be in effect upon 36 months after the date the Raritan River TMDL is adopted. When final limitations are in effect, any water diverted for RWBR shall be monitored and comply with the high level treatment requirements and limitations listed below and the operational requirements in the approved Operations Protocol/ Standard Operations Procedure. If any of these limitations are not achieved the effluent shall not be diverted for RWBR:

      Total Suspended Solids (TSS): Instantaneous maximum of 5.0 mg/L.

      Fecal Coliform: 7-day median maximum of 2.2 colonies per 100 mL and an instantaneous maximum of 14 colonies per 100 mL.

      Total Chlorine Residual/ Chlorine Produced Oxidants (CPO): Instantaneous minimum of 1.0 mg/L after fifteen minutes contact time at peak hourly flow.

      Nitrogen, Kjeldahl Total (as N): Monitor and report.

      Nitrogen, Nitrate Total (as NO3): Monitor and report.

v. In accordance with 7:14A-6.4(a), a schedule of compliance has been included for RWBR limitations including interim deadlines for annual progress reports that outline the progress towards compliance with the conditions of the permit.

Submit a Compliance Schedule Progress Report: within 12 months from the date the Raritan TMDL is adopted.

Submit a Compliance Schedule Progress Report: within 24 months from the date the Raritan TMDL is adopted.

vi. From EDP to 36 months after the Raritan TMDL is adopted monitoring of the diverted public access RWBR shall be conducted in the following manner:

Flow sampling in Part III shall be performed prior to diverting effluent for RWBR. Flow volume monitoring for RWBR shall be accomplished on the water diverted for RWBR.

Sampling for TSS shall be prior to dechlorination. Monitoring for TSS shall be a grab sample once per week.

Monitoring for Turbidity shall be a grab sample taken prior to dechlorination. After commencing operation of the treatment plant upgrades, a correlation between turbidity and TSS shall be established as part of a daily monitoring program for at least 30 days. When at least 30 days of data have been collected this correlation shall be completed and submitted within 90 days after commencing operation of the treatment plant upgrades. The correlation must be updated at a minimum on an annual basis.

Monitoring for CPO, Fecal Coliform, Total Kjeldahl Nitrogen and Total Nitrate Nitrogen shall be a grab sample once per week and shall be monitored prior to dechlorination.

The reported values for TSS, Total Kjeldahl Nitrogen, Total Nitrate Nitrogen and Fecal Coliform shall be the highest sampling result obtained during the reporting month.

The value reported for CPO shall be the minimum sampling result obtained during the reporting month.

All monitoring results of the RWBR shall be reported each month on Wastewater Characterization Reports (WCRs).

vii. Beginning 36 months after the date the Raritan TMDL is adopted, monitoring of the diverted public access RWBR shall be conducted in the following manner:

Flow sampling shall be performed prior to diverting effluent for RWBR. Flow volume monitoring for RWBR shall be accomplished on the water diverted for RWBR.

Sampling for TSS shall be immediately prior to disinfection. Monitoring for TSS shall be a grab sample once per week.

Monitoring for Turbidity shall be continuous and immediately prior to disinfection. After commencing treatment plant upgrades, a correlation between turbidity and TSS shall be established as part of a daily monitoring program for at least 30 days. This correlation shall be completed and submitted within 90 days after commencing operation of the treatment plant upgrades, and updated on an annual basis.

Monitoring for CPO shall be continuously monitored immediately after the chlorine contact chamber. Monitoring for Fecal Coliform, Total Kjeldahl Nitrogen and Total Nitrate Nitrogen shall be a grab sample once per week taken immediately after the chlorine contact chamber.

The reported values for TSS, Total Kjeldahl Nitrogen, Total Nitrate Nitrogen and Fecal Coliform shall be the highest sampling result obtained during the reporting month. The value reported for CPO shall be the minimum sampling result obtained during the reporting month.

All monitoring results of the RWBR shall be reported on Wastewater Characterization Reports (WCRs).

9. RWBR Requirements for Restricted Access--Land Application and Non Edible Crops

a. The Restricted Access--Land Application and Non Edible Crops reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Land Application and Non Edible Crops reuse types may be added by minor modification of this permit.

b. The hydraulic loading rate for land application of RWBR shall not exceed 2 inches per week.

c. Any water diverted for RWBR shall be monitored and comply with the high level treatment requirements listed below and the operational requirements in the approved Operations Protocol. If any of these requirements are not achieved, the effluent shall not be diverted for RWBR.

d. Nitrogen, Total (NO3 + NH3): Daily maximum of 10 mg/L. Frequency of sampling for Total Nitrogen shall be in accordance with Part III of this permit. The sample shall be collected as a composite sample taken prior to diversion for RWBR. Nitrogen, Total (NO3 + NH3) shall be monitored after the appropriate disinfection treatment time is achieved. This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area.

e. Fecal Coliform: 200 colonies per 100 ml monthly average Geometric Mean, 400 colonies per 100 ml maximum in any one sample. Frequency of sampling for Fecal Coliform shall be in accordance with Part III of this permit. The sample shall be collected as a grab sample taken immediately after disinfection.

f. Chlorine Produced Oxidants (CPO): For chlorine disinfection, instantaneous minimum of 1.0 mg/L after fifteen minutes contact time at peak hourly flow. Frequency of sampling for CPO shall be in accordance with Part III of this permit. The sample shall be collected as a grab sample taken immediately after disinfection. The value reported for CPO shall be the minimum sampling result obtained during the reporting month for diverted RWBR. Chlorine Produced Oxidants (CPO) shall be monitored after the appropriate contact time is achieved.

g. Ultraviolet Disinfection: For UV disinfection, a minimum design UV dose of 75 mJ/cm2 under maximum daily flow must be used. This dose must also be based on continuous monitoring of UV lamp intensity, UV transmittance and UV flow rate. All aspects of the UV system must meet the requirements of the May 2003 (or most recent) National Water Research Institute's Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse, second edition. UV lamp intensity, UV transmittance and UV flow rate shall be monitored continuously after full disinfection treatment.

h. All monitoring results of the RWBR shall be reported each month on Wastewater Characterization Reports (WCR). Unless noted otherwise, the highest of all measured values for diverted RWBR shall be reported.

10. RWBR Requirements for Restricted Access--Construction and Maintenance Operations

a. The Restricted Access--Construction and Maintenance Operations reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Construction and Maintenance Operations reuse types may be added by minor modification of this permit.

b. Fecal Coliform: 200 colonies per 100 ml monthly average Geometric Mean, 400 colonies per 100 ml maximum in any one sample. Frequency of sampling for Fecal Coliform shall be in accordance with Part III of this permit. Fecal coliform shall be monitored immediately after disinfection. This requirement does not apply to sanitary sewer jetting.

11. RWBR Requirements for Restricted Access--Industrial Systems

a. The Restricted Access--Industrial Systems reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Industrial Systems reuse types may be added by minor modification of this permit.

12. RWBR Submittal Requirements

a. For all types of RWBR, with the exception of sanitary sewer jetting and STP washdown water, the permittee shall submit and receive approval of an Operations Protocol or modify the existing Operations Protocol as detailed in the most recent version of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" (Reuse Technical Manual) prior to the commencement of any RWBR activity. A copy of the approved Operations Protocol shall be maintained onsite. Specific requirements for the Operations Protocol are identified in the Reuse Technical Manual.

For irrigation at the Meadows at MIddlesex golf course, the permittee shall submit and receive approval of an Operations Protocol as detailed in the most recent version of the Department's Technical Manual for Reclaimed Water for Beneficial Reuse (Reuse Technical Manual) 60 days prior to commencing operation of the treatment plant upgrades.

b. The permittee shall submit a copy of the Reuse Supplier and User Agreement with each request for authorization to distribute RWBR in which the user is a different entity than the supplier. Specific requirements for the Reuse Supplier and User Agreement are identified in the Reuse Technical Manual.

   For irrigation at the Meadows at Middlesex golf course, the permittee shall submit a copy of the Reuse Supplier and User Agreement 60 days prior to commencing operation of the treatment plant upgrades. The permittee shall also submit a copy of the Reuse Supplier and User Agreement with each request for authorization to distribute RWBR. Specific requriememts for the Reuse Supplier and User Agreement are identified in the Reuse Technical Manual.

c. For Public Access RWBR on Edible Crops, the permittee shall submit an annual inventory of edible crop irrigation with the Beneficial Reuse Annual Report. Specific requirements for the annual inventory are identified in the Reuse Technical Manual.

d. Submit a Beneficial Reuse Annual Report: by February 1 of each year beginning from the effective date of the permit (EDP). The permittee shall compile the total volume of RWBR distributed to each type of authorized RWBR activity for the previous calendar year. Specific requirements for the Annual Reuse Report are identified in the Reuse Technical Manual.

e. The permittee shall submit and receive approval of an Engineering Report in support of RWBR authorization requests for new or expanded RWBR projects as detailed in the most recent version of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" (Reuse Technical Manual) prior to the commencement of this/these type/s of RWBR activity. A copy of the approved Engineering Report shall be maintained onsite. Specific requirements for the Engineering Report are identified in the Reuse Technical Manual.

f. All submittals shall be mailed or delivered to: New Jersey Department of Environmental Protection, Division of Water Quality, Bureau of Surface Water Permitting, P.O. Box 029, Trenton, New Jersey 08625.

13. RWBR Operational Requirements

a. Effluent that does not meet the requirements for RWBR established in Part III, Part IV and the operational requirements specified in the facility's approved Operations Protocol shall not be diverted for RWBR.

b. The land application of RWBR shall not produce surface runoff or ponding.

c. All setback distances shall be consistent with the distances outlined in the Reuse Technical Manual.

d. Land application sites shall not be frozen or saturated when applying RWBR.

e. A daily log noting the volume of RWBR distributed to each approved application site shall be maintained on-site by the permittee and made available to the Department upon request. The volume of RWBR to be distributed shall be determined through the use of a totalizing flow meter, or other means of accurate flow measurement.

f. Any vehicle used to transport and/or distribute RWBR shall be appropriately marked. The vehicle shall not be used to transport water or other fluid that does not meet all limitations and requirements as specified in this permit for water diverted for RWBR, unless the tank has been emptied and adequately cleaned prior to the addition of the RWBR.

g. The permittee shall post Access Control and Advisory Signs in accordance with the requirements of the Reuse Technical Manual.

h. There shall be no cross-connections to potable water systems.

i. All RWBR piping, pipelines, valves, and outlets shall be appropriately color coded, tagged or labeled to warn the public and employees that the water is not intended for drinking. Worker contact with RWBR shall be minimized.

j. The issuance of this permit for the use of RWBR shall not be considered as a waiver of any applicable federal, state or local rule, regulation or ordinance.

F. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. Applicability

a. As a privately owned treatment works, the permittee is not subject to Industrial Pretreatment Program requirements. However, this does not relieve the permittee of the responsibility to control discharges into its treatment plant which alone or in combination may cause the permittee to violate the limits or conditions of this permit.

G. CONDITIONS FOR MODIFICATION

1. Notification requirements

a. The permittee may request a minor modification for a reduction in monitoring frequency for a non-limited parameter when four consecutive test results of "not detected" have occurred using the specified QL.

2. Causes for modification

a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.

b. The permittee may request a minor modification to eliminate the monitoring requirements associated with a discharge authorized by this permit when the discharge ceases due to changes at the facility.

APPENDIX A:

CHRONIC TOXICITY TESTING SPECIFICATIONS

FOR USE IN THE NJPDES PERMIT PROGRAM

Version 2.1

May 1997

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VIII. REFERENCES

Notice: Mention of trade names or commercial products do not constitute endorsement or recommendation for use.

I. AUTHORITY AND PURPOSE

These methods specifications for the conduct of whole effluent chronic toxicity testing are established under the authority of the NJPDES permitting program, N.J.A.C. 7:14A-6.5(a)2 and 40 CFR 136, for discharges to waters of the State. The methods referenced herein are included by reference in 40 CFR 136, Table 1.A. and, therefore, constitute approved methods for chronic toxicity testing. The information contained herein serves to clarify testing requirements not sufficiently clarified in those methods documents and also serves to outline and implement the interlaboratory Standard Reference Toxicant Program until a formal laboratory certification program is established under N.J.A.C. 7:18. As such these methods are intended to be used to determine compliance with discharge permits issued under the authority of the NJPDES permit program. Tests are to be conducted in accordance with the general conditions and test organism specific method specifications contained in this document. All other conditions and specifications can be found in 40 CFR 136 and USEPA methodologies.

Until a subchapter on chronic toxicity testing within the regulations governing the certification of laboratories and environmental measurements (N.J.A.C. 7:18) becomes effective, tests shall be conducted in conformance with the methodologies as designated herein and contained in 40 CFR 136. The laboratory performing the testing shall be within the existing acute toxicity testing laboratory certification program established under N.J.A.C. 7:18, as required by N.J.A.C. 7:9B-1.5(c)5.

Testing shall be in conformance with the subchapter on chronic toxicity testing within the N.J.A.C. 7:18 when such regulations become effective. The laboratory performing the toxicity testing shall be within the chronic toxicity testing laboratory certification program to be established under that subchapter, when it becomes effective.

These methods are incorporated into discharge permits as enforceable permit conditions. Each discharge permit will specify in Part IV of the permit, the test species specific methods from this document that will be required under the terms of the discharge permit. Although the test species specific methods for each permit are determined on a case-by-case basis, the purpose of this methods document is to assure consistency among dischargers and to provide certified laboratories with information on the universe of tests to be utilized so that they can make the necessary preparations, including completing the required Standard Reference Toxicant testing. Please note that these methodologies are required for compliance testing only. Facilities and/or laboratories conducting testing under the requirements of a Toxicity Identification Evaluation or for informational purposes are not bound by these methods.

This document constitutes the second version of the NJDEP's interim chronic methodologies. This version contains no significant changes to the test methods themselves. However, in keeping with the Department's continued emphasis on good laboratory practices and quality control, the areas addressing the Standard Reference Toxicant Program, data analysis and data reporting, have been significantly revised.

II. GENERAL CONDITIONS

A. LABORATORY SAFETY, GLASSWARE, ETC.

All safety procedures, glassware cleaning procedures, etc., shall be in conformance with 40 CFR 136 and USEPA's "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms" and N.J.A.C. 7:18.

B. TEST CONCENTRATIONS / REPLICATES

All testing is to be performed with a minimum of five effluent concentrations plus a dilution water control. A second reference water control is optional when a dilution water other than culture water is used. The use of both a 0.5 or 0.75 dilution factor is acceptable for the selection of test concentrations. If hypothesis testing will be used to determine the test endpoint, one effluent concentration shall be the chronic permit limitation, unless the existing data for the discharge indicate that the NOEC is expected to be significantly less than the permit limit. The use of the 0.5 dilution factor may require more than five dilutions to cover the entire range of effluent concentrations as well as the chronic permit limit, since the permit limit will often not be one of the nominal concentrations in a 0.5 dilution series. In such an instance, the 0.5 dilution series may be altered by including an additional test concentration equal to the permit limit in the dilution series, or by changing the concentration closest to the permit toxicity limit to be equal to that limit. The Department recommends the use of the 0.75 dilution factor using Table 1.0 to determine test concentrations. That table establishes test concentrations based on the chronic toxicity limitation.

For either the 0.5 or 0.75 dilution factor, there shall be at least one test concentration above the permit limitation and at least three test concentrations below the permit limit along with the dilution water control unless the permit limitation prohibits such (e.g., limitations greater than 75% effluent). An effort shall be made to bracket the anticipated test result.

To use Table 1.0, locate the permit limit in column 4. The dilution series becomes the row that corresponds to the permit limit in column 4. For example, a permit limit of 41 would require a dilution series of the dilution water control, 17%, 23%, 31%, 41% and 55% effluent.

The number of replicates used in the test must, at a minimum, satisfy the specifications of the applicable methods contained herein. Increased data sensitivity can be obtained by increasing the number of replicates equally among test concentrations and thus an increased number of replicates is acceptable. Further, the use of nonparametric statistical analysis requires a minimum of four replicates per test concentration. If the data for any particular test is not conducive to parametric analyses and if less than four replicates were included, the test may not be considered acceptable for compliance purposes.

The use of single concentration tests consisting of the permit limitation as a concentration and a control is not permitted for compliance purposes, but may be used by a permittee in the conduct of a Toxicity Investigation Evaluation (TIE) or for information gathering purposes. Such a test would be considered a "pass" if there was no significant difference in test results, using hypothesis testing methods.

Table 1.0: 0.75 DILUTION SERIES INDEXED BY PERMIT LIMIT

				Permit Limit						Permit Limit	
Col #	1	2	3	4	5	**Col #**	1	2	3	4	5
	0.4	0.6	0.8	1	1.3		22	29	38	51	68
	0.8	1.1	1.5	2	2.7		22	29	39	52	69
	1.3	1.7	2.3	3	4		22	30	40	53	71
	1.7	2.3	3	4	5.3		23	30	41	54	72
	2.1	2.8	3.8	5	6.7		23	31	41	55	73
	2.5	3.4	4.5	6	8		24	32	42	56	75
	3	4	5	7	9		24	32	43	57	76
	3	5	6	8	11		24	33	44	58	77
	4	5	7	9	12		25	33	44	59	79
	4	6	8	10	13		25	34	45	60	80
	5	6	8	11	15		26	34	46	61	81
	5	7	9	12	16		26	35	47	62	83
	5	7	10	13	17		27	35	47	63	84
	6	8	11	14	19		27	36	48	64	85
	6	8	11	15	20		27	37	49	65	87
	7	9	12	16	21		28	37	50	66	88
	7	10	13	17	23		28	38	50	67	89
	8	10	14	18	24		29	38	51	68	91
	8	11	14	19	25		29	39	52	69	92
	8	11	15	20	27		30	39	53	70	93
	9	12	16	21	28		30	40	53	71	95
	9	12	17	22	29		30	41	54	72	96
	10	13	17	23	31		31	41	55	73	97
	10	14	18	24	32		31	42	56	74	99
	11	14	19	25	33		32	42	56	75	100
	11	15	20	26	35	24	32	43	57	76	
	11	15	20	27	36	24	32	43	58	77	
	12	16	21	28	37	25	33	44	59	78	
	12	16	22	29	39	25	33	44	59	79	
	13	17	23	30	40	25	34	45	60	80	
	13	17	23	31	41	26	34	46	61	81	
	14	18	24	32	43	26	35	46	62	82	
	14	19	25	33	44	26	35	47	62	83	
	14	19	26	34	45	27	35	47	63	84	
	15	20	26	35	47	27	36	48	64	85	
	15	20	27	36	48	27	36	48	65	86	
	16	21	28	37	49	28	37	49	65	87	
	16	21	29	38	51	28	37	50	66	88	
	16	22	29	39	52	28	38	50	67	89	
	17	23	30	40	53	28	38	51	68	90	
	17	23	31	41	55	29	38	51	68	91	
	18	24	32	42	56	29	39	52	69	92	
	18	24	32	43	57	29	39	52	70	93	
	19	25	33	44	59	30	40	53	71	94	
	19	25	34	45	60	30	40	53	71	95	
	19	26	35	46	61	30	41	54	72	96	
	20	26	35	47	63	31	41	55	73	97	
	20	27	36	48	64	31	41	55	74	98	
	21	28	37	49	65	31	42	56	74	99	
	21	28	38	50	67	32	42	56	75	100	

* Select the dilution series by finding the row which contains the permit limit in column #4.
NOTE: All values are in units of "% effluent" not toxic units.

C. DILUTION WATER

1. Marine and Estuarine Waters

A high quality natural water, such as the Manasquan River Inlet is strongly recommended as the dilution water source for chronic toxicity testing with marine and estuarine organisms. The use of the receiving water as the dilution water source is not required. Saline waters prepared with hypersaline brine and deionized water may also be used as dilution water. Hypersaline brines shall be prepared from a high quality natural seawater and shall not exceed a concentration of 100 ppt. The type of a dilution water for a permittee may not be changed without the prior approval of the Department.

The standard test salinity shall be 25 ppt, except for *Champia parvula*, which shall be tested at 30 ppt. Since most effluents are freshwater based, in most cases it will be necessary to adjust the salinity of the test concentrations to the standard test salinity.

2. Fresh Waters

A high quality natural water, such as Round Valley Reservoir (if access is allowed) or Lake Hopatcong, is strongly recommended as the dilution water source for chronic toxicity testing with freshwater organisms. It is not required to perform the toxicity testing with the receiving water as dilution water. Tests performed with a reconstituted water or up to 20% Diluted Mineral Water (DMW) as dilution water is acceptable. For testing with *Ceriodaphnia dubia*, the addition of 5 µg/l selenium (2 µg/l selenium with natural water) and 1 µg/l vitamin B12 is recommended (Keating and Dagbusan, 1984: Keating, 1985 and 1988). The source of a dilution water for a permittee may not be changed without the prior approval of the Department. Reconstituted water and DMW should be prepared with Millipore Super Q^{R} or equivalent, meet the requirements of N.J.A.C. 7:18-6 and should be aerated a minimum of 24 hrs prior to use, but not supersaturated.

D. EFFLUENT SAMPLE COLLECTION

Effluent samples shall be representative of the discharge being regulated. For each discharge serial number (DSN), the effluent sampling location shall be the same as that specified in the NJPDES permit for other sampling parameters unless an alternate sampling point is specified in the NJPDES discharge permit. For industrial dischargers with a combined process/sanitary waste stream, effluent sampling shall be after chlorination, unless otherwise designated in the permit.

For continuous discharges, effluent sampling shall consist of 24 hour composite samples consisting either of equal volumes taken once every hour or of a flow-proportionate composite sample, unless otherwise approved by the Department. At a minimum, three samples shall be collected as specified above, one every other day. The first sample shall be used for test initiation and the first renewal. The second sample for the next two renewals. The third sample shall be used for the final three renewals. For the *Champia* and *Selenastrum* tests, a single sample shall be collected not more than 24 hours prior to test initiation. No effluent sample shall be over 72 hours old at the time of its use to initiate or renew solutions in a test. It is acceptable to collect samples more frequently for chronic WET testing and if samples are collected daily for acute toxicity testing conducted concurrently, available samples may be used to renew the test solutions as appropriate.

For all other types of discharges, effluent sampling shall be conducted according to specifications contained within the discharge permit, methodology questionnaire or as otherwise specified by the Department. The use of grab samples or other special sampling procedures will be based on time of occurrence and duration of intermittent discharge events.

If a municipal discharger has concerns that the concentrations of ammonia and/or chlorine in an effluent are adequate to cause violations of the permit limit for chronic toxicity testing, the permittee should conduct analyses, as specified in USEPA's toxicity investigation methods documents, to illustrate the relationship between chronic effluent toxicity and chlorine and/or ammonia as applicable. This data may then be submitted to

the Department as justification for a request to use modified test procedures, which account for ammonia and/or chlorine toxicity, in future chronic toxicity tests. The Department may, where adequate justification exists, permit the adjustment of these pollutants in the effluent sample if discharge limits for these pollutants are contained in the NJPDES permit and those permit limitations are adequate for the protection of water quality. Any proposed modified test procedures to adjust effluent chlorine and/or ammonia shall be approved by the Department prior to use of those test procedures for any compliance testing.

Except for filtration through a 2 mm or larger screen or an adjustment to the standard test salinity, no other adjustments to the effluent sample shall be made without prior written approval by the Department. Aeration of samples prior to test start shall be minimized where possible and samples shall not be aerated where adequate saturation exists to maintain dissolved oxygen.

E. PHYSICAL CHEMICAL MEASUREMENTS

At a minimum, the physical chemical measurements shall be as follows:

- pH and dissolved oxygen shall be measured at the beginning and end of each 24 hour exposure period, in at least one chamber, of the high, medium and low test concentrations and the control. In order to ensure that measurements for these parameters are representative of the test concentrations during the test, measurements for these parameters should be taken in an additional replicate chamber for such concentrations which contains no test organisms, but is subject to the same test conditions.

- Temperature shall either be monitored continuously, measured daily in at least two locations in the environmental control system, or measured at the beginning of each 24 hr exposure period in at least one replicate for each treatment.

- Salinity shall be measured in all salt water tests at the beginning of each 24 hour exposure period, in at least one replicate for each treatment.

- For all freshwater tests, alkalinity, hardness and conductivity shall be measured in each new sample (100% effluent) and control.

- Nitrite, nitrate and ammonia shall be measured in the control before each renewal in the mysid test only.

- For samples of discharges where concentrations of ammonia and/or chlorine are known or are suspected to be sufficient to cause toxicity, it is recommended that the concentrations of these pollutants be determined and submitted with the standardized report form. The laboratory is advised to consult with the permittee to determine if these parameters should be measured in the effluent. Where such measurements are deemed appropriate, measurements shall be conducted at the beginning of each 24 hour exposure period. Also, since a rise in the test pH can affect the toxicity of ammonia in the effluent, analysis of ammonia during the test may be appropriate if a rise in pH is accompanied by a significant increase in mortality.

F. STATISTICS

The use of both hypothesis testing techniques and point estimate techniques are currently in use by the Department or by permittees for compliance purposes. The NJPDES permit should be checked to determine which type of analysis is required and appropriate for each specific facility. It is not acceptable to simply evaluate any data by "visual data review" unless in the analysis of survival data, no mortality occurred in the test. All data sets must be appropriately statistically evaluated.

For hypothesis testing techniques, statistical analysis shall follow the protocols in USEPA (1988, 1989) to evaluate adverse effects. A significance level of 0.05 shall be utilized to evaluate such effects. Use of a protocol not contained in these documents must be accompanied by a reference and explanation addressing its

applicability to the particular data set. Please note the following when evaluating data using hypothesis testing techniques.

Special attention should be given to the omission and inclusion of a given replicate in the analysis of mysid fecundity data (USEPA 1994, p. 275) and *Ceriodaphnia* reproduction data (USEPA 1994, page 174).

Determination of acceptability criteria and average individual dry weight for the growth endpoints must follow the specifications in the applicable documents (e.g., p.84 for saltwater methods document.)

Use of nonparametric statistical analyses requires a minimum of four replicates per test concentration. If the data for any particular test are not conducive to parametric analyses and if less than four replicates were included, the test may not be acceptable to the Department.

Where hypothesis testing is used for compliance purposes, if the results of hypothesis testing indicate that a deviation from the dose response occurs such that two test concentrations are deemed statistically significant from the control but an intermediate test concentration is not, the test is deemed unacceptable and cannot be used for compliance testing purposes.

For point estimate techniques, statistical analysis should follow the protocol contained in "A Linear Interpolation Method for Sublethal Toxicity: The Inhibition Concentration (ICp) Approach (Version 2.0), July 1993, National Effluent Toxicity Assessment Center Technical Report 03-93." Copies of the program can be obtained by contacting the Department. The linear interpolation estimate ICp values and not the bootstrap mean ICp, shall be reported for permit compliance purposes. The ICp value reported on the Discharge Monitoring Report shall be rounded off as specified in the Department's "Discharge Monitoring Report (DMR) Instruction Manual, December 1993." IC25 values shall be reported under the parameter code listed as "NOEC" on the DMR, until the DMR's are adjusted accordingly.

If the result reported by the ICp method is greater than the highest concentration tested, the test result is reported as "greater than C" where "C" is the highest tested concentration. If the ICp is lower than the lowest concentration tested, the test result is reported as "less than C" where "C" is the lowest tested concentration.

If separate NOEC's/IC25's can be calculated from multiple test endpoints, for example a reproductive endpoint and a growth endpoint, the lowest NOEC/IC25 value expressed in units of "% effluent" will be used to determine permit compliance and should, therefore, be reported as the NOEC/IC25 value for the test. If the NOEC value for growth and/or reproduction is not lower than that for survival, the NOEC/IC25 value reported for the test shall be as survival. For saltwater tests, where additional controls are used in a test (i.e. brine and/or artificial sea salt control), a T-test shall be used to determine if there is a significant difference between the original test control and the additional controls. If there is a significant difference between any of the controls, the test may be deemed unacceptable and if so, will not be used for permit compliance.

III. TEST ACCEPTABILITY CRITERIA

Any test that does not meet these acceptability criteria will not be used by the Department for any purpose and must be repeated as soon as practicable, with a freshly collected sample.

1. Tests must be performed by a laboratory approved for the conduct of chronic toxicity tests and certified for acute toxicity testing under N.J.A.C. 7:18.

2. Test results may be rejected due to inappropriate sampling, including the use of less than three effluent samples in a test and/or use of procedures not specified in a permit or methodology questionnaire, use of frozen or unrefrigerated samples or unapproved pretreatment of an effluent sample.

3. Controls shall meet the applicable performance criteria specified in the Table 2.0 and in the individual method specifications contained herein.

4. Acceptable and applicable Standard Reference Toxicant Data must be available for the test.

5. No unapproved deviations from the applicable test methodology may be present.

6. When using hypothesis testing techniques, a deviation from the dose response as explained in the statistical portion of this document shall not be present in the data.

Table 2.0: CONTROL PERFORMANCE

TEST ORGANISM	MINIMUM SURVIVAL	MINIMUM WEIGHT GAIN	MINIMUM FECUNDITY/ REPRODUCTION
Pimephales promelas	80%	0.25 mg avg	N/A
Ceriodaphnia dubia	80%	N/A	Average of $\geq$15 young per surviving female
Selenastrum capricornutum	Density $\geq 2 \times 10^5$ cells/ml	N/A	Variability in controls not to exceed 20%.
Cyprinodon variegatus	80%	0.60 mg (unpreserved) avg 0.50 mg (preserved) avg	N/A
Menidia beryllina	80%	0.50 mg (unpreserved) avg 0.43 mg (preserved) avg	N/A
Mysidopsis bahia	80%	0.2 mg per mysid avg	egg production by 50% of control females if fecundity is used as an endpoint.
Champia parvula	100%	N/A	$\geq$10 cystocarps per plant Plants in controls and lower test concentrations shall not fragment so that individual plants cannot be identified.

THE DETERMINATION OF A TEST AS UNACCEPTABLE DOES NOT RELIEVE THE FACILITY FROM MONITORING FOR THAT MONITORING PERIOD

IV. STANDARD REFERENCE TOXICANT TESTING

All chronic testing shall be accompanied by testing with a Standard Reference Toxicant (SRT) as a part of each laboratory's internal quality control program. Such a testing program should be consistent with the quality assurance/quality control protocols described in the USEPA chronic testing manuals. Laboratories may utilize the reference toxicant of their choice and toxicants such as cadmium chloride, potassium chloride, sodium dodecyl sulfate and copper sulfate are all acceptable. However, Potassium chloride has been chosen by several laboratories and is recommended by the Department. The concentration of the reference toxicant shall be verified by chemical analysis in the low and high test concentrations once each year or every 12 tests, whichever is less. It is not necessary to run SRT tests, for all species using the same SRT.

A. INITIAL STANDARD REFERENCE TOXICANT (SRT) TESTING REQUIREMENTS

At a minimum, this testing shall include an initial series of at least five SRT tests for each test species method. Acceptable SRT testing for chronic toxicity shall be performed utilizing the short term chronic toxicity test methods as specified herein. Reference toxicant tests utilizing acute toxicity testing methods, or any method other than those contained in this document are not acceptable. The laboratory should forward results of the initial SRT testing, including control charts, the name of the reference toxicant utilized, the supplier and appropriate chemical analysis of the toxicant to either address listed in the reporting requirements section herein. The initial series of a least five SRT tests for a specific test species method shall be completed and approved in writing by the Department prior to the conduct of any chronic toxicity testing for compliance purposes.

B. SUBSEQUENT SRT TESTING REQUIREMENTS

After receiving the initial approval from the Department to conduct chronic toxicity tests for compliance purposes, subsequent SRT testing shall be conducted as follows:

1. Where organisms used in testing are cultured at the testing laboratory, SRT testing should be conducted once per month for each species/method.

2. Where the laboratory purchases organisms from a laboratory certified in New Jersey for the conduct of acute toxicity testing and approved for the conduct of chronic toxicity testing for the test organism in question (i.e. the "supplier laboratory"), SRT data provided by the "supplier laboratory" for each lot of organisms purchased is acceptable as long as the SRT test result falls within the control limits of the control chart established by the "supplier laboratory" for that organism. The laboratory using purchased organisms is responsible for the results of any compliance tests they perform.

3. A testing laboratory purchasing organisms from a supplier laboratory must still perform SRT testing on a quarterly basis at a minimum, for each species they test with, in order to adequately document their own interlaboratory precision.

4. If a testing laboratory purchasing organisms elects not to use the SRT data from a "supplier laboratory" or such data is unavailable or where organisms are purchased from another organism supplier, the testing laboratory must conduct SRT testing on each lot of organisms purchased.

5. For industrial laboratories certified under N.J.A.C. 7:18 to conduct acute toxicity tests, only the SRT testing conditions specified in 2. through 4. above apply. Where that laboratory/facility cultures their own test organisms, the frequency of SRT testing required will be determined on a case by case basis, based on the frequency of testing for that facility.

NOTE: Based on these requirements, SRT data are considered applicable to a compliance test when the SRT test results are acceptable and the SRT test is conducted within 30 days of the compliance test, for the test species and SRT in question. Therefore, it is not necessary for an approved laboratory to run an SRT test every month if the laboratory is not conducting compliance tests for a particular species.

C. CHANGING OF AN ESTABLISHED REFERENCE TOXICANT

The SRT used for any species by a laboratory may be changed at any time provided that the following conditions have been satisfied:

1. A series of at least three reference toxicant tests are conducted with the new reference toxicant and the results of those tests are identified as satisfactory, in writing, by the Department.

2. Laboratories must continue using the already approved SRT in their ongoing QA/QC program, until such time as the letter referenced above, is received by the laboratory.

D. CONTROL CHARTS

Control charts shall be established from SRT test results in accordance with the procedures outlined in the USEPA methods documents. Control charts shall be constructed using IC25's using the following methods:

1. The upper and lower control limits shall be calculated by determining +/- two standard deviations above and below the mean.

2. SRT test results which exhibit an IC25 that is greater than the highest concentration tested or less than the lowest concentration tested (i.e. a definitive endpoint cannot be determined), shall not be used to establish control charts.

3. SRT tests which do not meet the acceptability criteria for a specific species shall not be used to establish control charts.

4. All values used in the control charts should be as nominal concentrations. However, the control charts shall be accompanied by a chart tabulating the test results as measured concentrations.

5. An outlier (i.e. values which fall outside the upper and lower control limits) should be included on the control chart unless it is determined that the outlier was caused by factors not directly related to the test organisms (e.g., test concentration preparation) as the source of variability would not be directly applicable to effluent tests. In such case, the result and explanation shall be reported to the Department within 30 days of the completion of the SRT test.

The control chart established for the initial series of SRT data submitted will be used by the laboratory and the Department to determine outliers from SRT test results reported in the "NJPDES Biomonitoring Report Form - Chronic Toxicity Test" submitted by the permittees for the test species. These initial control limits will remain unchanged until twenty SRT tests have been completed by the laboratory.

The following procedures shall be used for continually updating control charts after twenty acceptable SRT tests have been completed:

1. Once a laboratory has completed twenty acceptable SRT tests for a test species, the upper and lower control limits shall be recalculated with those twenty values.

2. For each successive SRT test conducted after these first twenty tests, a moving average shall be calculated and the control limits reevaluated using the last twenty consecutive test results.

3. The upper and lower control limits shall be reported on the "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" along with the SRT test result.

E. UNACCEPTABLE SRT TEST RESULTS

If a laboratory produces any SRT test results which are outside the established upper and lower control limits for a test species at a frequency greater than one test in any ten tests, a report shall be forwarded to the Department at the address contained herein. This report shall include any identified problem which caused the values to fall outside the expected range and the corresponding actions that have been taken by the laboratory. The Department may not accept or may require repeat testing for any toxicity testing that may have been affected by such an occurrence.

If a laboratory produces two consecutive SRT test results or three out of any ten test results which are outside the established upper and lower limits for a specific test species, the laboratory shall be unapproved to conduct chronic toxicity tests for compliance purposes for that test species. Reapproval shall be contingent upon the laboratory producing SRT test results within the established upper and lower control limits for that test species in two consecutive SRT tests. If one or both of those test results again fall outside the established control levels, the laboratory is unapproved for that test species until five consecutive test results within the established upper and lower control limits are submitted and approved by the Department.

F. ANNUAL SUBMITTALS

Control charts shall be forwarded to the Department on an annual basis, on the anniversary of approval for the test species.

The Department may request, at any time, any information which is essential in the evaluation of SRT results and/or compliance data.

V. TEST CANCELLATION / RESCHEDULING EVENTS

A lab may become aware of QA problems during or immediately following a test that will prevent data from being submitted or a lab may be unable to complete a tests due to sample collection or shipping problems. If for any reason a chronic toxicity test is initiated and then prematurely ended by the laboratory or at the request of the permittee, the laboratory shall submit the form entitled "Chronic Whole Effluent Toxicity Testing Test Cancellation / Rescheduling Event Form" contained herein. This form shall be used to detail the reason for prematurely ending the test. This completed form and any applicable raw data sheets shall be submitted to the appropriate biomonitoring program at the address above within 30 days of the cessation of the test.

Tests are considered to be initiated once test organisms have been added to all test chambers.

Submission of this form does not relieve the facility from monitoring for that monitoring period.

VI. REPORTING

The report form entitled "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" should be used to report the results of all NJPDES chronic compliance biomonitoring tests. Laboratory facsimiles are acceptable but must contain all information included on any recent revisions of the form by the Department. Statistical printouts and raw data sheets for all endpoints analyzed shall be included with the report submitted to the Department. Two copies of all chronic toxicity test report forms shall be submitted to the following address as applicable:

Bureau of Surface Water Permitting
New Jersey Department of Environmental Protection
Division of Water Quality
PO Box 29
Trenton, NJ 08625-0029

It is not necessary to attach a copy of a test report form to the Discharge Monitoring Report (DMR) form when submitting this form to the Department. However, the results of all chronic toxicity tests conducted for compliance purposes must be reported on the DMR form under the appropriate parameter code in the monitoring period in which the test was conducted.

VII. METHOD SPECIFICATIONS

The following method specifications shall be followed as specified in the NJPDES permit. Any changes to these methods will not be considered acceptable unless they are approved in writing by the Department, prior to their use.

A. Fathead Minnow (*Pimephales promelas*), Larval Survival and Growth Test, method 1000.0
B. *Ceriodaphnia dubia*, Survival and Reproduction Test, method 1002.0
C. Algal, (*Selenastrum capricornutum*), Growth Test, method 1003.0
D. Sheepshead Minnow (*Cyprinodon variegatus*), Larval Survival and Growth Test, method 1005.0
E. Inland Silverside (*Menidia beryllina*), Larval Survival and Growth Test, method 1006.0
F. *Mysidopsis bahia*, Survival, Growth, and Fecundity Test, method 1007.0
G. *Champia parvula*, Sexual Reproduction Test, method 1009.0

VIII. REFERENCES

1. Keating, K. 1985. The influence of Vitamin B12 deficiency on the reproduction of Daphnia pulex Leydig (Cladocera). J. Crustacean Biology 5:130-136.

2. Keating, K. 1988. N.J.D.E.P. Project C29589, Fiscal 1988 Third Quarter Summary Report. Producing Nutritionally Competent Daphnids for Use in Bioassay. 44p.

3. Keating, K., and B. Dagbusan. 1984. Effect of selenium deficiency on cuticle integrity in Cladocera (Crustacea). Proc. Natl. Acad. Sci. USA 81:3433-3437.

4. NJDEP, 1993. Discharge Monitoring Report (DMR) Instruction Manual.

5. USEPA. 1994. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA-600/4-91-003. July 1994. Second Edition.

6. USEPA. 1994. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA/600/4-91/002. July 1994. Third Edition.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
PO Box 29
TRENTON, NEW JERSEY 08625-0029
BIOMONITORING PROGRAM

CHRONIC WHOLE EFFLUENT TOXICITY TESTING
TEST CANCELLATION / RESCHEDULING EVENT FORM

THIS FORM IS TO BE COMPLETED AND SUBMITTED TO THE DEPARTMENT DIRECTLY BY THE LABORATORY CONDUCTING CHRONIC TOXICITY TESTS WHENEVER A CHRONIC TOXICITY TEST IS PREMATURELY ENDED FOR ANY REASON

NJPDES No.: _____

FACILITY NAME: _____

LOCATION: _____

CONTACT: _____ PHONE: _____

CANCELLATION EVENT:

LABORATORY NAME / NUMBER: _____

CONTACT: _____

TEST START DATE: _____/_____/_____ TEST END DATE: _____/_____/_____

REASON FOR CANCELLATION: _____

_____

_____

_____

_____

_____

EFFLUENT SAMPLING:

SAMPLING POINT / DESCRIPTION OF SAMPLING SITE: _____

_____

SAMPLING INITIATED: DATE: ____/____/____ TIME: _____

SAMPLING ENDED: DATE: ____/____/____ TIME: _____

NUMBER OF EFFLUENT SAMPLES COLLECTED: _____

SAMPLE TYPE (GRAB/COMPOSITE): _____

RECEIVED IN LAB BY/FROM: _____

_____

METHOD OF SHIPMENT: _____

(ALL APPLICABLE RAW DATA SHEETS MUST BE ATTACHED)

c: Permittees authorized agent.

Masterfile #: 5335 **PI #:** 46800

RWBR Approval Status List

The permittee is only authorized to utilize RWBR for the specific category, type and location that has been approved in the table below.

RWBR Category	Specific RWBR Type	Location	Status
PA	Spray Irrigation (Golf Course)	Meadows at Middlesex Golf Course	Approved
PA	Spray Irrigation (Athletic Fields, Playgrounds)	None	Not Approved
PA	Spray Irrigation (Residential Lawns)	None	Not Approved
PA	Vehicle Washing	None	Not Approved
PA	Hydroseeding/Fertilizing	None	Not Approved
PA	Decorative Fountains	None	Not Approved
PA	Toilet Flushing	None	Not Approved
RA-LA	Sod Irrigation	None	Not Approved
RA-LA	Spray Irrigation within a fenced perimeter or otherwise restricted area	None	Not Approved
RA-LA	Spray Irrigation within a fenced perimeter or otherwise restricted area (Without NH3 + NO3)	None	Not Approved
RA-LA	Spray Irrigation (not fenced or restricted area)	None	Not Approved
RA-CM	Street Sweeping	None	Not Approved
RA-CM	Dust Control	None	Not Approved
RA-CM	Fire Protection	None	Not Approved
RA-CM	Vehicle Washing (at STP or DPW)	None	Not Approved
RA-CM	Composting	None	Not Approved
RA-IS	Sanitary Sewer Jetting	United Water Princeton Meadows	Approved
RA-IS	Non-Contact Cooling Water	None	Not Approved
RA-IS	Boiler Makeup Water	None	Not Approved
RA-IS	Road Milling	None	Not Approved
RA-IS	Hydrostatic Testing	None	Not Approved
RA-IS	Parts Washing	None	Not Approved
RA-IS	Lawn Mower Rinsing	Meadows at Middlesex Golf Course	Approved
RA-IS	STP Washdown	United Water Princeton Meadows	Approved

Categories:

PA Public Access
RA-LA Restricted Acess-Land Application and Non-Edible Crops
RA-CM Restricted Access--Construction and Maintenance Operations
RA-IS Restricted Access--Industrial Systems

Abbreviations:

NH3 - Ammonia
NO3 - Nitrate
STP - Sewage Treatment Plant
DPW - Dept. of Public Works