State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Water Pollution Management Element
Bureau of Surface Water Permitting
P.O. Box 420 – 401 E State Street
Trenton, NJ 08625-0420
Phone: (609) 292-4860 / Fax: (609) 984-7938

BOB MARTIN
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7010 1870 0001 4760 9054
November 22, 2013

Richard Fitamant, Executive Director
Middlesex County Utilities Authority
PO Box 159
Sayerville, NJ 08872-0159

Re: Draft Surface Water Renewal Permit Action
Category: A - Sanitary Wastewater
CSM – Combined Sewer Management
NJPDES Permit No. NJ0020141
Middlesex County Utilities Authority
Sayreville Boro, Middlesex County

Dear Mr. Fitamant:

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. The renewal permit is being issued through an application dated March 26, 2010. This permit renewal action serves to renew the Middlesex County Utilities Authority's individual Category "A" Permit NJ0020141 as well as to incorporate updated CSO requirements. The permittee has authority to reuse it's effluent under an authorization (NJG0165832) of the reuse general permit (NJ0142581). This renewal permit proposes to revoke that authorization and authorize effluent reuse under this individual permit.

Notice of this draft permit action will appear in the *Star Ledger* and in the December 4, 2013 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will close sixty (60) days after its appearance in the newspaper or the *DEP Bulletin*, whichever is later.

A non-adversarial public hearing has been scheduled on January 15, 2014 from 3:00 pm to 5:00 pm or until the end of testimony (whichever comes first), at Elizabeth City's Council Chamber, located at 50 Winfield Scott Plaza, Elizabeth, NJ 07201, to provide an opportunity for interested persons to present and submit information on the proposed action.

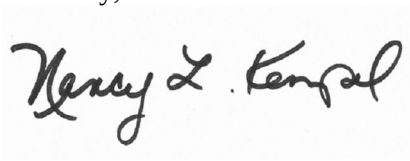
As detailed in the *DEP Bulletin* and aforementioned newspaper written comments must be submitted in writing to Pilar Patterson, Chief, Mail Code 401-02B, Division of Water Quality, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625-0420 by the close of the public comment period. All

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 Department 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 final decision to issue, revoke, or redraft the document.

If you have questions or comments regarding the draft action, please contact Magan Kanzaria at (609) 292-4860.

Sincerely,



Nancy Kempel
Supervising Environmental Engineer
Bureau of Surface Water Permitting

Enclosures

c: Permit Distribution List

Masterfile #: 5280; PI #: 46606

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

PUBLIC NOTICE

The New Jersey Department of Environmental Protection (NJDEP) is hereby giving Notice in accordance with N.J.A.C. 7:14A-15.10(d) of New Jersey Pollutant Discharge Elimination System (NJPDES) permit actions for four (4) permittees, a public hearing on those permits as well as a request for input on a related matter as described below.

The NJDEP proposes to revoke and reissue Joint Meeting of Essex and Union Counties' Discharge to Surface Water (DSW) Permit NJ0024741 to consolidate their Combined Sewer Overflow (CSO) General Permit Authorization NJG0108740 under the individual Category "A" Permit NJ0024741 as well as to incorporate updated CSO permit requirements. Also, NJDEP proposes to issue an individual permit to Elizabeth City for NJPDES number NJ0108782 to authorize discharges from their CSOs. Elizabeth City is in Joint Meeting of Essex and Union Counties' sewer service area. Upon the effective date of the individual permit, Elizabeth City's current authorization under the CSO Master General Permit will terminate.

In addition, the NJDEP proposes to renew Middlesex County Utilities Authority's Discharge to Surface Water (DSW) Permit NJ0020141 as well as to incorporate updated CSO permit requirements. Also, NJDEP proposes to terminate the authorization to discharge for Perth Amboy's NJPDES CSO Permit NJG0156132 which is presently authorized under the Master General Permit NJ0105023 and issue an individual permit with a new NJPDES number, NJ0156132, to authorize discharges from CSOs. Perth Amboy is in Middlesex County Utilities Authority's service area. Upon the effective date of the individual permit, Perth Amboy City's authorization under the Master General Permit will terminate.

The above action is executed 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:

Applicants/Permittees	Facilities
Joint Meeting of Essex & Union Counties 500 South First Street Elizabeth, NJ 07202	Joint Meeting of Essex & Union Counties Sewage Treatment Plant 500 South First Street Elizabeth, NJ 07202
Elizabeth City 50 Winfield Scott Plaza Elizabeth, NJ 07201	Elizabeth City CSOs 50 Winfield Scott Plaza Elizabeth, NJ 07201
Middlesex County Utilities Authority PO Box 159 Sayreville, NJ 08872-0159	Middlesex County Utilities Authority Water Reclamation Center 2571 Main Street Sayreville, NJ 08872
Perth Amboy City 260 High Street - City Hall Perth Amboy, NJ 08861	Perth Amboy City CSOs 260 High Street - City Hall Perth Amboy, NJ 08861

Combined Sewer Overflows are discharges from Combined Sewer Systems (CSS). CSSs are sewers that were designed many decades ago to collect rainwater and snowmelt runoff, domestic sewage, and industrial wastewater in the same pipe. CSSs are no longer permitted in New Jersey for new communities, but many older cities in the State continue to operate existing CSSs. Most of the time, the CSSs transport all wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. However, during periods of rainfall or snowmelt, the wastewater volume in a CSS can exceed the hydraulic capacity of the sewer system or treatment plant. For this reason, CSSs were designed to overflow during these periods and discharge excess wastewater directly from CSOs to nearby streams, rivers, or other water bodies prior to reaching the sewage treatment plant.

NJDEP has historically been regulating the majority of discharges from CSOs through authorizations under a Master General Permit NJ0105023 and others through individual permits, consistent with the National Policy for CSO Controls, N.J.A.C. 7:14A-11.12 Appendix C. NJDEP has determined that it is more appropriate to regulate all CSO discharges under individual permits in order to address the site-specific regulatory requirements of each of the permittees and to promote better coordination of a Long Term Control Plan (LTCP) among all permittees contributing to the hydraulically connected systems.

Joint Meeting of Essex & Union Counties Sewage Treatment Plant

The existing facility discharges treated, disinfected, domestic wastewater with industrial contribution from seventeen (17) towns in Essex and Union Counties, including one town with combined sewer overflows, Elizabeth City, into the Arthur Kill, classified as SE3 waters. The Arthur Kill is located within the New York/New Jersey Harbor Complex Basin. Please note that the facility's flow value is 85 MGD, but the flow value used for the calculation of the effluent loading limitations is 75 MGD. The higher flow value of 85 MGD was included at the request of the permittee in the 1996 permit and is used to better allow the facility to deal with wet weather flows.

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

Elizabeth City CSOs

Elizabeth City currently discharges combined sewage from twenty-eight (28) active CSO outfalls which have solids/floatables removal equipment installed just prior to the discharge. Elizabeth City has requested authorization to activate a new CSO outfall which will have solids/floatables removal equipment installed prior to activation. These CSO outfalls discharge into the Peripheral Ditch, Great Ditch, Elizabeth River, Newark Bay and Arthur Kill. The Peripheral Ditch, Great Ditch, Elizabeth River, Newark Bay and Arthur Kill are classified as FW2-NT(C2) and SE3(C2) waters and are located within the NY/NJ Harbor.

Middlesex County Utilities Authority Water Reclamation Center

The existing facility discharges treated disinfected, domestic wastewater with industrial contribution from thirty-five (35) towns in Middlesex, Somerset and Union Counties, including one town with combined sewer overflows, the City of Perth Amboy into the Raritan Bay and Raritan River, through outfalls DSN001 and DSN007 respectively, classified as SE1 waters. The existing facility has a NJPDES flow value of 147 million gallons per day (MGD) and currently discharges a monthly average flow of approximately 114 MGD. This action proposes effluent limitations based on a flow of 147 MGD.

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

Perth Amboy City CSOs

Perth Amboy City currently discharges combined sewage from seventeen (17) CSO outfalls, which have solids/floatables removal equipment installed just prior to the discharge. These CSO outfalls discharge into the Arthur Kill and Raritan River. The Arthur Kill and Raritan River are classified as SE2(C2) and SE1(C2)waters respectively.

These above mentioned draft NJPDES permit actions have been prepared for these facilities based on the administrative record filed at the NJDEP, 401 East State Street, Trenton, New Jersey 08625. Copies of the fact sheet which describes in more detail the principal facts and significant considerations examined during the preparation of the draft permit, and the draft permit are posted on NJDEP's website at http://www.nj.gov/dep/dwq/cso.htm. Draft documents 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 documents, contact the Bureau of Surface Water Permitting at (609) 292-4860.

A non-adversarial public hearing has also been scheduled for these four (4) permits on January 15, 2014, from 3:00 pm to 5:00 pm, or until the end of testimony (whichever comes first) at Elizabeth City's Council Chamber, located at 50 Winfield Scott Plaza, Elizabeth, NJ 07201.

Written comments on these proposals must be submitted in writing to Pilar Patterson, Chief, or Attention: Comments on Public Notice, specifically noted as comments on NJ0024741, NJ0108782, NJ0020141, or NJ0156132, Division of Water Quality, Mail Code: 401-02B, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625 by the close of the public comment period, which will close sixty calendar days after publication of this notice in the newspaper or the December 4, 2013 *DEP Bulletin*, whichever is later. 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, or oral comments at the public hearing, will receive notice of the Department's permit decision.

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: NJ0020141

Draft: Surface Water Renewal Permit Action

Permittee:
Middlesex County Utilities Authority
PO Box 159
Sayreville, NJ 08872-0159

Co-Permittee:

Property Owner:
Middlesex County Utilities Authority
PO Box 159
Sayreville, NJ 08872-0159

Location Of Activity:
Middlesex County Utilities Authority
Water Reclamation Center
2571 Main Street
Sayreville, NJ 08872-0159

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
A -Sanitary Wastewater CSM – Combined Sewer Management			

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)

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: NJ0165832

Draft: Surface Water Revocation Permit Action

Permittee:
Middlesex County Utilities Authority
PO BOX 159
Sayreville, NJ 08872-0159

Co-Permittee:

Property Owner:
Middlesex County Utilities Authority
PO BOX 159
Sayreville, NJ 08872-0159

Location Of Activity:
Middlesex County Utilities Authority
Water ReclamationCenter
2571 MAIN ST
Sayreville, NJ 08872-0159

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
ABR – Reuse General			

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)

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

FACT SHEET

Masterfile #: 5280 **PI #:** 46606

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 to renew the New Jersey Pollutant Discharge Elimination System (NJPDES) Permit through an application dated March 26, 2010. This Surface Water Renewal Permit Action serves to renew the Middlesex County Utilities Authority's individual Category "A" Permit NJ0020141 as well as to incorporate updated CSO requirements. The CSO fact sheet can be found in Section 13 beginning on page 28. The permittee has the authority to reuse it's effluent under an authorization (NJG0165832) of the reuse general permit (NJ0142581). This renewal permit proposes to revoke that authorization and authorize effluent reuse under this individual permit.

1 Name and Address of the Applicant:

Middlesex County Utilities Authority
PO Box 159
Sayreville, NJ 08872-0159

2 Name and Address of the Facility/Site:

Middlesex County Utilities Authority
Water Reclamation Center
2571 Main Street
Sayreville, NJ 08872

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(s) is included towards the end of this Fact Sheet.

Outfall Designator: 001A

General Information		Watershed Information	
Receiving Water:	Raritan Bay	Downstream Confluences:	Atlantic Ocean
Via :	Outfall pipe	Receiving River Basin:	Raritan River Basin
Classification (a):	SE1	WMA (b):	12
Latitude:	40° 28' 52.9"	Watershed:	Raritan Bay (west of Thomas Ck)
Longitude:	74° 15' 11.4"	Subwatershed:	Raritan Bay (west of Thomas Ck)
County:	Middlesex	HUC 14 (c):	02030104910010
Municipality:	Sayreville Borough	Water Quality Impairments (d)	DDT, Enterococcus, DO, PCBs, Dieldrin, DDE, DDD, Dioxin (including 2,3,7,8 TCDD), Benzo(a) pyrene (PAHs), and Chlordane

Outfall Description			
Outfall Configuration:	multi-port diffuser	Submerged Pipe Characteristics:	'H' shaped diffusers at the end of a 84" diameter outfall pipe. Approximately 2000' south of Great Beds Light

Applicable Receiving Water Dilution Factors (DF)	
Acute :	8 {acute DF for chlorine is 9.5}
Chronic :	13

Outfall Designator: 007A

General Information		Watershed Information	
Receiving Water:	Raritan River	Downstream Confluences:	Raritan Bay
Via :	Outfall pipe	Receiving River Basin:	Raritan River Basin
Classification (a):	SE1	WMA (b):	9
Latitude:	40° 29' 34.2"	Watershed:	Raritan River Lower (below Lawrence Bk)
Longitude:	74° 19' 42.0"	Subwatershed:	Raritan River Lower (below Lawrence Bk)
County:	Middlesex	HUC 14 (c):	02030105160100
Municipality:	Sayreville Borough	Water Quality Impairments (d)	DDT, DO, PCBs, Dieldrin, DDE, DDD, Dioxin (including 2,3,7,8 TCDD), Benzo(a) pyrene (PAHs), Chlordane, Heptachlor epoxide, Mercury in Fish Tissue and Cadmium.

Outfall Description			
Outfall Configuration:	multi-port diffuser	Submerged Pipe Characteristics:	Multi-port diffusers at the end of a132" diameter outfall pipe.

Applicable Receiving Water Dilution Factors	
Acute :	8
Chronic :	11

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

As per the Surface Water Quality Standards at N.J.A.C. 7:9B, the designated uses for the Saline Estuary 1 (SE1) receiving waters are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses

As noted in Section 3 above, the segment of the Raritan Bay to which outfall DSN 001A discharges is impaired for Dissolved Oxygen (DO), Enterococcus, DDT, PCBs, Dieldrin, DDE, DDD, Dioxin (including 2,3,7,8 TCDD), Benzo(a) pyrene (PAHs), and Chlordane. Limits are included in this permit for Dissolved Oxygen (DO), Enterococcus and Mercury. The permittee's effluent data indicates that the remaining parameters are not discharged in the effluent in detectable amounts and the Department has included semi-annual monitoring requirements for these pollutants. Pollutant specific requirements are further explained in Sections 6.B. below.

Similarly the segment of the Raritan River to which outfall DSN 007A discharges is impaired for DDT, DO, PCBs, Dieldrin, DDE, DDD, Dioxin (including 2,3,7,8 TCDD), Benzo(a) pyrene (PAHs), Chlordane, Heptachlor epoxide, Mercury in Fish Tissue and Cadmium. As explained in Section 6.C. below, the wastewater treatment facility at MCUA treats all flows discharged from outfalls 001A and 007A uniformly. Therefore, the Department has determined that monitoring requirements for these pollutants shall be imposed only at DSN 001A, as explained above.

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 147 million gallons per day (MGD). This POTW has a delegated pretreatment program.

Sanitary wastewater with industrial contribution is processed through the following units:

1. aerated grit chambers
2. primary settling tanks
3. oxygenation tanks
4. final settling tanks
5. chlorine contact main outfall for DSN 001A
6. chlorine contact channel for DSN 007A

A schematic of the plant flow diagram and facility's treatment site plan of the facility are included at the end of the fact sheet.

Sludge is managed on and off-site at an approved residuals management operation. The permittee also holds NJPDES permit number NJ0080713 to produce and distribute the alkaline stabilized sludge product "MeadowLife". All applicable conditions for residuals management are included in NJPDES Permit No. NJ0080713.

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 2010 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) and
11. Pretreatment Requirements (N.J.A.C. 7:14A-19).

When existing effluent quality limitations are appropriate in accordance with N.J.A.C. 7-14A-13.3(e), the maximum daily limit shall be set equal to the maximum projected effluent concentration, which shall be calculated using an approved statistical method, a 95% confidence interval, a 95% probability basis, and at least 10 data points. The average monthly limitation shall be calculated from the maximum daily limitation if deemed necessary. Specific procedures concerning the calculation of existing effluent quality limitations are contained in the USEPA's Technical Support Document.

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 147 million gallons per day (MGD) by the conversion factor of 3.785 (L/gal) and the appropriate concentration limitation (mg/L or µg/L).

B. Basis and Derivation for Effluent Limitations and Monitoring Requirements for Outfall 001A Specific:

All permit limitations and conditions in this permit action, are equal to or more stringent than those contained in the existing permit action, with the exception of fecal coliform and chlorine produced oxidants 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.

2. 5-Day Biochemical Oxygen Demand (BOD_5): The concentration limitations are based on the definition of secondary treatment at 40 CFR 133.102(a) (1) and (2) and N.J.A.C. 7:14A-12.2 (b) 1. and 2. and are consistent with the antibacksliding provisions as cited in N.J.A.C 7:14A-13.19.

   Percent removal limitations are 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 is 1/day with a 24 hour composite sample type.

3. Total Suspended Solids (TSS): The concentration limitations are based on the definition of secondary treatment at 40 CFR 133.102 (b) (1) and (2). and N.J.A.C. 7:14A-12.2(e) 1. and 2. and the antibacksliding provisions as cited in N.J.A.C 7:14A-13.19.

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 is 1/day with a 24 hour composite sample type.

4. pH: The effluent limitations are based on the definition of secondary treatment at 40 CFR 133.102(c) and N.J.A.C. 7:14A-12.2 (f) and the antibacksliding provisions as cited in N.J.A.C 7:14A-13.19.

   The monitoring frequency is 6/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.

   The monitoring frequency is 6/day with a Grab sample type.

6. Bacterial Indicator: Fecal Coliform and Enterococci

   Historically, the Department imposed Fecal Coliform as the bacterial standard for effluent control. The limitations for Fecal Coliform were based on N.J.A.C. 7:14A-12.5(b) 1. and 2. In October 2006, the Surface Water Quality Standards (SWQs), for Enterococci were adopted for SE1 waters in New Jersey at N.J.A.C. 7:9B.

   In order to reflect the change in the adopted SWQS, the Department is proposing to replace the bacterial standard for effluent control from Fecal Coliform to Enterococci in this permit.

   Consistent with N.J.A.C. 7:9B-1.14(d)1, the draft permit proposes to include a geometric mean limit of 35/100 mL as a monthly average for Enterococci. In accordance with N.J.A.C. 7:9B-1.5(c)7, the single sample maximum shall be used for beach notification and to identify where additional ambient water quality sampling is needed to calculate a geometric mean. Therefore, a monitoring and reporting requirement is included for a single sample as a instantaneous maximum.

   The Department has determined that since the facility has no reported enterococci data, the permit includes a 12 month compliance schedule for the permittee to achieve compliance with the final limit. Therefore, the enterococci limitation shall become effective on the effective date of the permit (EDP) + 12 months. During the "1-Initial" phase, the Fecal Coliform limitations shall continue to be effective. The Fecal Coliform limits are based on N.J.A.C. 7:14A-12.5(b) 1 and 2.

   The monitoring frequency for Fecal Coliform shall be 1/day consistent with N.J.A.C. 7:14A-14-2 (Table 14-4).

   The monitoring frequency for Enterococci from EDP through EDP+12 months shall be 1/Month consistent with N.J.A.C. 7:14A-14-2 (Table 14-4) since no limit is imposed during this period.

   The monitoring frequency for Enterococci beginning on EDP+12 months shall be 1/day consistent with N.J.A.C. 7:14A-14-2 (Table 14-4) with a Grab sample type.

   Antidegradation/Antibacksliding Analysis:
   The draft permit proposes to delete the Fecal Coliform limitations that were included in the current final permit and replace them with the Enterococci limitation.

   In order to reflect the change to the SWQS adopted in 2006, the draft permit proposes to change the bacterial indicator from fecal coliform to Enterococci. The SWQS for bacterial indicators was adopted consistent with the USEPA's recommendation that the use of Enterococcus was a better pathogen indicator for marine waters (USEPA's draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria, November 2003).

In addition, similar to the existing final permit, this draft permit proposes "criteria end-of-pipe" as effluent limitations in order to protect primary contact recreation uses in the receiving water.

Therefore, the Department has determined that the change from fecal coliform limits to Enterococci limit will not lower water quality relative to the existing final permit and satisfies the antidegradation requirements.

7. Dissolved Oxygen (DO): The effluent limitation is based on the Surface Water Quality Standards at N.J.A.C. 7:9B-1.14(c).

   The monitoring frequency is 1/day with a Grab sample type.

8. Oil and Grease: The effluent limitations are based on N.J.A.C. 7:14A-12.8(c).

   The monitoring frequency is 2/month with a Grab sample type.

9. Chlorine Produced Oxidants (CPO):

   The water quality based effluent limitations were calculated by the procedures set forth in the USEPA Technical Support Document. Consistent with the recommendations set forth in Appendix E of the USEPA Technical Support Document, the Department utilized a default Coefficient of Variation (CV) based on the lognormal distribution statistics.

   Using the steady state mass balance equation, wasteload allocations were developed utilizing the applicable criteria specified in the New Jersey Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B, pollutant specific upstream concentrations (when available), and dilution factors from the water quality study titled "Effluent Outfall Plume Study" dated February 1990 and prepared by Jacobs Environmental, Inc.

   For acute and chronic calculations, long term average values were developed using the 99th percentile multiplier and the more stringent results were utilized in calculating the maximum daily limitation (MDL) and average monthly limitations (AML). As per N.J.A.C. 7:14-A-13.14(a)2, limitations shall be expressed as concentration and mass loading. Refer to the table below for the input data and calculation results.

Data Input and Calculation Results :

All concentration units in mg/L	Acute	Chronic
Predetermined Dilution Factors (Df)	9.5	13
Surface Water Quality Criteria, (Ci)	0.013	0.0075
Wasteload Allocation, (WLA)	0.124	0.098
Coefficient of Variation (CV)	0.60	0.60
WLA multiplier for LTA	0.321	0.527
Long Term Average, (LTA)	0.04	0.05
More stringent LTA	Acute	
LTA multiplier for MDL	3.114	
LTA multiplier for AML	1.282	
Maximum Daily Limitation, (MDL)	0.124	
Average Monthly Limitation, (AML)	0.051	

Where the WQBELs are more stringent than the quantification limit (i.e. 0.1 mg/L), effluent compliance will be determined by comparing the reported value against the applicable quantification limit. Therefore, the enforceable daily maximum concentration limitation is 0.1 mg/L and the enforceable daily maximum loading limitation is 55.6 kg/day.

Since the previous permit limit was below the level of detectability, the permit included language that the permittee was only required to demonstrate compliance with the enforceable permit levels of 0.10 mg/L and

55.6 kg/day for the 147 MGD flow as the daily maximum concentration and loading, it was never documented that the permitee complied with the limits of 0.051 mg/L and 28.38 kg/d. Additionally, the reported effluent concentration was all <0.1 mg/L. Therefore, since the permittee never documented compliance with these WQBELs, no further antibacksliding nor anti-degradation analysis is required. This final permit retains the 0.10 mg/L and enforceable daily maximum concentration and loading of 55.6 kg/day for the 147 MGD flow as the effective limits in accordance with the federal and state anti-backsliding and anti-degradation regulations at 40 CFR Part 122.44 and N.J.A.C. 7:14A-13.19 and 40 CFR Part 131 and N.J.A.C. 7:9B-1.5(d).

MCUA is working on a series of water quality projects designed to address the Authority's CPO compliance issues. These ongoing projects will explore alternate approaches for attaining compliance with the relevant CPO criteria based on the outcome of the these studies. For example, chlorine demand study to provide assessment of the existing chlorine demand within the Raritan Bay, Residual chlorine studies to evaluate the fate of CPO within the main outfall 001A and the supplemental outfall 007A, Re-evaluation of dilution at MCUA's outfall 001A and evaluation of dilution at the supplemental outfall 007A, and a CPO & fecal coliform bench test to evaluate fecal coliform kill vs. chlorine dosage. These studies will also evaluate the feasibility of limiting the flow through the main outfall 001A while transferring the remaining flow to the supplemental outfall 007A.

Therefore, after evaluating the results of these studies, once completed, the Department may propose to modify the permit at that time if appropriate.

Reporting for CPO for outfalls 001A and 007A is as follows:
Under normal discharge conditions, when MCUA is not discharging from Outfall 007A, CPO loading and concentration shall be limited through the DMR for outfall 001A under Option 1.

Under other discharge conditions, when MCUA is discharging from outfall 007A, CPO concentration only shall be limited through the DMR for outfall 001A under Option 2. Additionally, CPO concentration shall be limited through the DMR for outfall 007A, while CPO loading shall be limited through the DMR for outfall 007A as an "Effluent Adjusted Value".

The monitoring frequency is 6/day with a Grab sample type.

10. <u>Ammonia (Total as N</u>

The concentration limitations are based on the Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B-1.14(c).

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 State Water Quality Standards 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.

<u>Limit Derivation:</u>

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 “Technical Support Document for Water Quality-based Toxics Control” (TSD) (EPA/505/2-90-001, March 1991). 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).

Middlesex County Utility Authority (MCUA) WWTF, NJPDES # NJ0020141
Toxicity-based Ammonia Limits Analysis

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

Raritan Bay	Summer		Winter		March/April		Comments etc.
Raritan Bay Area	Acute	Chronic	Acute	Chronic	Acute	Chronic	SWQS classification :
Criteria: unionized NH_3N	0.115	0.030	0.115	0.030	-	-	**SE waters**
Criteria: equiv. total NH_3N	14.01	3.71	17.67	4.54	-	-	Conc. required in water
Criteria: total NH_3N - 20%	**11.21**	**2.97**	**14.14**	**3.64**	-	-	Deduct reserve capacity
WLA (wasteload allocation)	87.35	34.62	109.74	41.50	-	-	**Cause to violate crit: NO***
LTA (long-term average)	47.87	30.78	60.15	36.90	-	-	
AML (average monthly limit)	-	**35.00**	-	**41.00**	-	-	
MDL (maximum daily limit)	-	**56.00**	-	**67.00**	-	-	

***Max. effluent NH_3N value reported (3 yrs DMR data) = 29.90/26.40 mg/L (Dmax-s/w) - - Breach of the new criteria unlikely**

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 ', March 2008, Middlesex County UA (MCUA) performed by the Najarian Associates. **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	0.33	0.33	0.48	0.48	-	-	Ammonia toxt study-2008
Amb/upstream pH - su	7.63	7.63	7.79	7.79	-	-	Ammonia toxt study-2008
Amb/upstream Temp ˚C	24.00	23.00	15.70	15.70	-	-	Ammonia toxt study-2008
Amb/upstream Alkalinity	100.00	100.00	100.00	100.00	-	-	Default
Amb/upstream salinity - ppt	23.30	23.30	21.60	21.60	-	-	Ammonia toxt study-2008
1Q10 flow - cfs**	-	-	-	-	-	-	USGS
30Q10 flow - cfs**	-	-	-	-	-	-	USGS
Dilution factors**	8.00	13.00	8.00	13.00	-	-	Reevaluation August 2013
Facility (design) flow- **mgd**	147.000	147.000	147.000	147.000	-	-	227.453 cfs
Effluent pH - su	7.05	6.97	7.15	7.05	-	-	To-date DMRs
Effluent Temp ˚C	25.55	24.63	20.57	19.62	-	-	To-date DMRs
Effluent Alkalinity	240.00	240.00	240.00	240.00	-	-	Ammonia toxt study-2008
Effluent salinity - ppt	0.59	0.59	0.59	0.59	-	-	Ammonia toxt study-2008
Reserve capacity allow.%	20.00	20.00	20.00	20.00	-	-	- = Not applicable
CV - of effluent ammonia-N	0.28	0.28	0.28	0.28	-	-	Ammonia tox study-2008
N - # of samples/month	30.00	30.00	30.00	30.00	-	-	As per regs. or existing***

Notes; If a cell indicates a dash (-), it means the subject condition is not applicable in this case or the drought flow is < 0.1 cfs, and the ammonia criteria is applicable at the end of the discharge pipe. s = summer, w = winter. * * For new or expanding facilities, no dilution is allowed for discharges into the waterbodies, supporting threatened or endangered species, i.e., ambient flow is considered = 0 cfs. * N = 4 for computation, if sampling frequency = 1/month or less (as per EPA directive).**

These calculated limitations are less stringent than the existing permit limitations. Therefore, the Department is proposing to retain the existing permit limitations which are based on the analysis that was completed with the previous renewal permit in accordance with the antibacksliding (N.J.A.C. 7:14A-13.19) and antidegradation (N.J.A.C. 7:9B-1.5(d) provisions.

The monitoring frequency is 1/Quarter with a 24 Hour Composite sample type.

11. 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 Surface Water Quality Standards (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 water quality based effluent limitation (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. Based on the review of the applicable 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 surface water quality standards.

Using the steady state mass balance equation, acute and chronic wasteload allocations of 1.5 TU_as and 10 TU_cs respectively, were developed utilizing the narrative criteria for toxic substances (general) specified in the New Jersey Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B, and acute and chronic dilution factors of 8 and 13 respectively, from the water quality study dated August 2013, titled "Re-evaluation of Dilution at the Middlesex County Municipal Utilty Authority's Main Outfall (#001)" and submitted by Najarian associates.. 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)).

Effluent data for the time period of 1/2010 through 1/2013 was utilized for this analysis.

Review of the acute WET data set indicates the maximum effluent data value to be 1.0 TU_as (i.e. an LC50 = 100 %). Since the maximum reported effluent data value does not exceed the applicable site specific wasteload allocation of 2.4 TU_as, the discharge does not cause an exceedance of the acute interpretation of the narrative criteria for WET identified in the surface water quality standards.

Reasonable Potential to Cause:

For WET, a reasonable potential to cause analysis was conducted in accordance with N.J.A.C. 7:14A-13.5. When the projected maximum effluent value (in toxic units) exceeds the applicable site specific wasteload allocation (in toxic units), the discharge is shown to have reasonable potential to cause or contribute to an exceedance of the surface water quality standards.

The projected maximum effluent value was calculated utilizing the procedures specified in section 3.0 of the USEPA *Technical Support Document for Water Quality-based Toxics Control* (TSD).

For this analysis, the acute reasonable potential multiplying factor (R.P.M.F.) of 1.581 was based on the number of data values in the applicable database specified above (13 data values), a default coefficient of variation (CV) of 0.6, a 95% confidence level and a 95% probability basis (refer to Table 3.1 of USEPA's TSD). Multiplying the R.P.M.F. with the maximum data value of 1.00 TU_as from the above cause analysis, results in a projected maximum data value of 1.58 TU_as. Since the projected maximum data value does not exceed the applicable site specific wasteload allocation of 2.4 TU_as, the discharge does not have reasonable potential to cause an exceedance of the acute interpretation of the narrative criteria for WET identified in the surface water quality standards.

The test species method to be used for acute testing shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the saline characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

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.

As authorized by N.J.A.C. 7:14A-6.2(a)14, the quarterly monitoring frequency for acute WET is retained in this permit renewal.

12 <u>Mercury:</u>

The mercury limitation has been carried forward in this draft permit in accordance with antibacksliding requirements at N.J.A.C. 7:14A-13.19 and 40 CFR 122.44. The mercury limitation was first included in the 1996 Group Modification for New York/New Jersey Harbor Facilities. The concentration/loading based limitation option of the mercury limitation was negotiated between the NJDEP, the affected permittees and USEPA for Phase I of the NY/NJ Harbor mercury TMDL only. Since the limitation was incorporated into the permit as a requirement of the USEPA's Harbor Estuary program, the USEPA was free to implement the limitation as appropriate under their regulatory framework. Unfortunately, the other EEQ limitations at N.J.A.C 7:14-13.8 do not allow for a concentrartion/loading-based limitation option.

Please note, as in the previous permit and as explained in Part IV.C.2. of this permit, the mercury limitations are applicable as follows:

If on the day the 24-hour average composite sample for compliance is collected, the 24 hour daily average flow value is less than or equal to the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the actual calculated loading value on the DMR under Option 1 and "CODE=N" under option 2.

If on the day the 24-hour average composite sample for compliance is collected, the 24 hour daily average flow value is greater than the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the measured concentration value on the DMR under Option 2 and "CODE=N" under option 1.

The monitoring frequency for mercury is 1/Month with a 24 hour composite sampling type.

13. Toxic Metals, Organic Compounds, and Cyanide:

In accordance with N.J.A.C. 7:14A-13.6(a), a water quality based effluent limitation (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 Surface Water Quality Standards (SWQS). Furthermore, The New Jersey Water Pollution Control Act as amended (N.J.S.A. 58:10A-7b(3)), commonly called the Clean Water Enforcement Act (CWEA) and N.J.A.C. 7:14A-6.16(a) direct the Department to include in NJPDES permits issued to delegated POTWs with an approved pretreatment program, effluent limitations for all regulated pollutants listed under the USEPA's Categorical Pretreatment Standards, adopted pursuant to 33 U.S.C., section 1317, and such other pollutants for which local discharge limitations have been established for a permittee discharging into the MCUA's Wastewater Treatment Plant that are discharged from the facility above detectable levels. MCUA has an approved pretreatment program and is a delegated POTW. All priority pollutants are regulated by the permittee on its users.

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 3 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 NJPDES Monitoring Report Form Reference Manual at http://www.state.nj.us/dep/dwq/MRF_Manual.pdf for further information). Based on the review of the data sets, the Department has concluded the following:

- All the priority pollutants except those 19 listed below 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 since there is no cause or reasonable potential to cause an exceedance of water quality ctriteria. However semi-annual 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 permit renewal (based on the recommendations of section 3.1 of the EPA Technical Support Document).

  - After review of the applicable data sets, **1,1,1-trichloroethane, 1,4-dichlorobenzene, arsenic, bis (2-ethylhexyle) phthalate, chloroform, cyanide, dichlorobromomethane, methylene chloride, phenols, selenium, tetrachloroethylene, toluene, zinc, di-n-butylphthalate, chromium, copper, lead, manganese** and **nickel** were found to be discharged in quantifiable amounts in the effluent. Therefore, further analyses have been conducted on these pollutants.

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 Technical Support Document 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), and dilution factors from the water quality study dated February 1990, titled "Effluent Outfall Plume Study" and submitted by Jacobs Environmental, Inc.

For the applicable pollutants Chromium, Lead, Nickel and Zinc, the applied criteria is based on 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	Saline Water	
	Translator (acute)	Translator (chronic)
Lead	0.951	0.951
Mercury	0.850	0.850
Nickel	0.990	0.990
Selenium	0.998	0.998
Zinc	0.946	0.946

Quantified Pollutant Analysis Results:

Cause analyses were conducted on 19 parameters that were found to be detected in four or more of the samples. As a result of the cause analyses, only **arsenic** was 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 analysis for the Toxic Metals, Organic Compounds, and/or Cyanide.

- Since the discharge of **arsenic** in the permittee's effluent was found to cause an excursion of the SWQS, a WQBEL is proposed in the draft permit in accordance with N.J.A.C. 7:14A-13.6(a).

- Since the discharge of **1,1,1-trichloroethane, 1,4-dichlorobenzene, bis (2-ethylhexyle) phthalate, chloroform, cyanide, dichlorobromomethane, methylene chloride, phenols, selenium, tetrachloroethylene, toluene, zinc, di-n-butylphthalate, total recoverable chromium, copper, lead, manganese and nickel** in the permittee's effluent were not found to cause or have reasonable potential to cause an excursion of the SWQS, WQBELs are not proposed in the draft permit for the parameters at this time. However, consistent with the antibacksliding provisions at N.J.A.C. 7:14A-13.9(a) and the antidegradation requirements at N.J.A.C. 7:9B-1.5(d), the existing daily maximum concentration and loading effluent limitations have been retained in this permit action.

In accordance with N.J.A.C. 7:14A-6.4(a), a schedule to achieve compliance with the new more stringent WQBELs for **arsenic** has been included in this permit. Interim monthly average and daily maximum monitoring and reporting requirements have been included as authorized by N.J.A.C. 7:14A-6.2(a)14. During the compliance schedule period, the permittee is required to submit progress reports in accordance with N.J.A.C. 7:14A-6.4(a)2ii and 13.17(a)7. Refer to the Compliance Schedule section of this fact sheet for further clarification.

WQBEL Derivation Procedures (non 303(d) listed pollutants):

Consistent with N.J.A.C. 7:14A-13.6(a), the water quality based effluent limitations were calculated using the procedures set forth in the USEPA Technical Support Document (TSD). Consistent with the recommendations set forth in Appendix E of the USEPA Technical Support Document, the Department utilized a site-specific Coefficient of Variation (CV) based on the delta-lognormal distribution statistics for arsenic.

For aquatic criteria based calculations (i.e. acute and chronic), long term average values are developed from the waste load allocations using the 99th percentile multipliers calculated using the equations set forth in Table 5-1 of the USEPA TSD. The more stringent long term average value was then utilized in

calculating the maximum daily limitation (MDL) and average monthly limitations (AML). For human health criteria based calculations (carcinogenic and non-carcinogenic), the waste load allocation is set equal to the average monthly limitation (AML) consistent with the recommendations of Section 5.4.4 of the USEPA TSD. The maximum daily limitation (MDL) is developed from the AML utilizing a MDL-to-AML multiplier calculated in accordance with the equations set forth in Table 5-3 of the USEPA TSD based on a 99th percentile exceedance probability for the MDL and AML. The more stringent MDL/AML combination resulting from a comparision between the aquatic and human health results is established as the applicable WQBELs. In accordance with N.J.A.C. 7:14A-13.14(a)2, effluent limitations are expressed as concentration and mass loading. The limitations for the metal parameters are expressed in the total recoverable form in accordance with 40 CFR 122.45(c). As authorized by N.J.A.C. 7:9B-1.5(e)5, where the WQBEL is more stringent then the quantification limit, effluent compliance will be determined by comparing the reported value against the applicable quantification limit.

As authorized by N.J.A.C. 7:14A-6.2(a)14, the monitoring frequency for **1,1,1-trichloroethane, 1,4-dichlorobenzene, arsenic, bis (2-ethylhexyl) phthalate, chloroform, cyanide, dichlorobromomethane, methylene chloride, phenols, selenium, tetrachloroethylene, toluene, zinc, and di-n-butyl phthalate,** have been established at monthly based on the existing permit conditions. In satisfying the recommendations of section 3.1 of the EPA Technical Support Document, it is the Department's position that monthly monitoring for the specified pollutants will provide sufficient up-to-date data to re-evaluate the necessity for WQBELs upon renewal of the permit.

As authorized by N.J.A.C. 7:14A-6.2(a)14, the monitoring frequency for **chromium, copper, lead, manganese and nickel** (all total recoverable**)** have been established at once per quarter. In satisfying the recommendations of section 3.1 of the EPA Technical Support Document, it is the Department's position that quarterly monitoring for the specified pollutants will provide sufficient up-to-date data to re-evaluate the necessity for WQBELs upon renewal of the permit.

Because of the delegated status of the facility, effluent monitoring of at least annually for the priority pollutants as noted under N.J.A.C. 7:14A-4 et seq, Appendix A, Table II and III, is required in accordance with N.J.S.A. 58:10A-6(n) and N.J.A.C. 7:14A-19.3(c)7. The effluent characterization monitoring data will be used at the time of the next permit action to evaluate whether effluent limitations need to be incorporated into the permit based on the Clean Water Enforcement Act.

C. Basis and Derivation for Effluent Limitations and Monitoring Requirements for Outfall 007A Specific:

The wastewater treatment facility at MCUA treats all flows discharged from outfalls 001A and 007A uniformly with the exception of chlorination. Effluent samples are taken for most parameters before the treated flows are divided into that which is discharged from outfall 001A and outfall 007A. The difference in treatment of wastewaters from outfalls 001A and 007 is solely in chlorination. Flows from both of these outfalls are chlorinated separately. Given that outfall 001A is limited for the parameters listed in the Permit Summary Table, it is only necessary to limit outfall 007A separately for chlorination and disinfection parameters. Limitations for these parameters are given below.

All permit limitations and conditions in this permit action, are equal to or more stringent than those contained in the existing permit action, with the exception of fecal coliform and chlorine produced oxidants 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.

The permittee has submitted a water quality study for outfall 007A entitled, "Water Quality Model Analysis for Raritan River Estuary" (July 2003) and an addendum, dated May 2004, both prepared by Najarian Associates. The analysis reviewed water quality under critical temperature and flow conditions during wet weather conditions. After reviewing the study, the Department concluded: 1) that the current level of treatment will be sufficient for the protection of water quality in the river estuary during wet weather conditions. 2) the dissolved oxygen criteria will be satisfied. 3) the impact on the concentrations of other parameters, except ammonia, will not be discernable. 4) The ammonia concentration will be elevated within the vicinity of the outfall but these concentrations have been

shown not to contravene the criteria. An ammonia toxicity study was performed by Middlesex County Utilities Authority in March 2008, titled "Ammonia Toxicity Study", by Najarian Associates.

1. Flow: This permit does not include a numerical limitation for flow. Monitoring conditions are applied pursuant to N.J.A.C. 7:14A-13.13. In addition to the typical flow monitoring, the total monthly flow and duration of discharge will be required to be reported.

2. Bacterial Indicator: Fecal Coliform and Enterococci

   Historically, the Department imposed Fecal Coliform as the bacterial standard for effluent control. The limitations for Fecal Coliform were based on N.J.A.C. 7:14A-12.5(b)1 and 2. In October 2006, the Surface Water Quality Standards (SWQs), for Enterococci were adopted for SE1 waters in New Jersey at N.J.A.C. 7:9B.

   In order to reflect the change in the adopted SWQS, the Department proposes to replace the bacterial standard for effluent control from Fecal Coliform to Enterococci in this permit.

   Consistent with N.J.A.C. 7:9B-1.14(d)1, the draft permit proposes to include a geometric mean limit of 35/100 mL as a monthly average for Enterococci. In accordance with N.J.A.C. 7:9B-1.5(c)7, the single sample maximum shall be used for beach notification and to identify where additional ambient water quality sampling is needed to calculate a geometric mean. Therefore, a monitoring and reporting requirement is included for a single sample as an instantaneous maximum.

   The Department has determined that since the facility has no reported enterococci data, the permit includes a 12 month compliance schedule for the permittee to achieve compliance with the final limit. Therefore, the enterococci limitation shall become effective on the effective date of the permit (EDP) + 12 months. During the "1-Initial" phase, the Fecal Coliform limitations shall continue to be effective. The Fecal Coliform limits are based on N.J.A.C. 7:14A-12.5(b) 1 and 2.

   The monitoring frequency for Fecal Coliform shall be 1/day consistent with N.J.A.C. 7:14A-14-2 (Table 14-4).
   The monitoring frequency for Enterococci from EDP through EDP+12 months shall be 1/Month consistent with N.J.A.C. 7:14A-14-2 (Table 14-4) since no limit is imposed during this period.

   The monitoring frequency for Enterococci beginning on EDP+12 months shall be 1/day consistent with N.J.A.C. 7:14A-14-2 (Table 14-4) with a Grab sample type.

   Antidegradation/Antibacksliding Analysis:
   The draft permit proposes to delete the Fecal Coliform limitations that were included in the current final permit and replace them with the Enterococci limitation.

   In order to reflect the change to the SWQS adopted in 2006, the draft permit proposes to change the bacterial indicator from fecal coliform to Enterococci. The SWQS for bacterial indicators was adopted consistent with the USEPA's recommendation that the use of Enterococcus was better pathogen indicator for marine waters (USEPA's draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria, November 2003). In addition, similar to the existing final permit, this draft permit proposes "criteria end-of-pipe" as effluent limits in order to protect primary contact recreation uses in the receiving water.

   Therefore, the Department has determined that the change from fecal coliform limits to Enterococci limit will not lower water quality relative to the existing final permit and satisfies the antidegradation requirements.

3. Chlorine Produced Oxidants (CPO):

   The water quality based effluent limitations were calculated by the procedures set forth in the USEPA Technical Support Document. Consistent with the recommendations set forth in Appendix E of the USEPA

Technical Support Document, the Department utilized a default Coefficient of Variation (CV) based on the lognormal distribution statistics.

Using the steady state mass balance equation, wasteload allocations were developed utilizing the applicable criteria specified in the New Jersey Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B, pollutant specific upstream concentrations (when available), and dilution factors from the study titled "Middlesex County Utilities Authority Supplemental Outfall Dilution Study" dated November 29, 1993 and prepared by Omni Environmental Corporation.

For acute and chronic calculations, long term average values were developed using the 99th percentile multiplier and the more stringent results were utilized in calculating the maximum daily limitation (MDL) and average monthly limitations (AML). As per N.J.A.C. 7:14-A-13.14(a)2, limitations shall be expressed as concentration and mass loading. Refer to the table below for the input data and calculation results.

Data Input and Calculation Results:

All concentration units in mg/L	Acute	Chronic
Predetermined Dilution Factors (Df)	8	11
Surface Water Quality Criteria, (Ci)	0.013	0.0075
Wasteload Allocation, (WLA)	0.065	0.075
Coefficient of Variation (CV)	0.60	0.60
WLA multiplier for LTA	0.321	0.527
Long Term Average, (LTA)	0.021	0.04
More stringent LTA,	acute	
LTA multiplier for MDL	3.114	
LTA multiplier for AML	1.282	
Maximum Daily Limitation, (MDL)	0.065	
Average Monthly Limitation, (AML)	0.027	

Where the WQBELs are more stringent than the quantification limit (i.e. 0.1 mg/L), effluent compliance will be determined by comparing the reported value against the applicable quantification limit. Therefore, the enforceable daily maximum concentration limitation is 0.1 mg/L and the enforceable daily maximum loading limitation is 55.6 kg/day.

Please see section B.9. above for a description of the ongoing studies for CPO.

In accordance with N.J.A.C. 7:14A-6.4(a), a schedule to achieve compliance with the new effluent limitations been included in this permit. Interim monitoring and reporting requirements have been included based on N.J.A.C. 7:14A-6.2(a)14. During the compliance schedule period, the permittee is required to submit progress reports in accordance with N.J.A.C. 7:14A-6.4(a)2ii and 13.17(a)7. Refer to the Compliance Schedule section of this fact sheet for further clarification.

The monitoring frequency is 1/discharge with a Grab sample type.

D. 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.

The annual influent monitoring requirement of the priority pollutants as noted under N.J.A.C. 7:14A-4 et seq, Appendix A, Table II and III, is required in accordance with N.J.S.A. 58:10A-6(n) and N.J.A.C. 7:14A-19.3(c)7.

The influent monitoring is required to evaluate the loading to the treatment plant to generate the percent removal data.

E. 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.

F. 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).

G. 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.

H. 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 Construction and Connection Permits at (609) 633-1169.

I. 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).

J. Pretreatment Conditions:

The Department has approved Middlesex County Utilities Authority’s industrial pretreatment program on June 18, 1984. The Permittee is a local agency that owns or operates the MCUA as defined under N.J.S.A. 58:10A-3.x and y, and 40 CFR 403.8(a). Therefore, the treatment plant operated by the Permittee is subject to the industrial pretreatment program requirements noted in this NJPDES permit NJ0020141. This program shall enable the permittee to detect and enforce against violations of the categorical pretreatment standards promulgated under Section 307 (b) and (c) of the Federal Clean Water Act and prohibited discharge standards as set forth in 40 CFR Part 403.5.

The Department intends to monitor the conduct and effectiveness of the Permittee's pretreatment program by use of an on-site audit to be scheduled in January of each year. The on-site audit will be a discussion of the Permittee's pretreatment program operational status, industrial compliance status, enforcement activities (if any), industrial

monitoring activities, an evaluation of the IPP record keeping system, and a general discussion of the miscellaneous topics related to the pretreatment program.
The program shall comply with N.J.A.C. 7:14A-19, and be implemented in accordance with the approved pretreatment program submitted by Middlesex County Utilities Authority.

All industrial pretreatment program related plant monitoring requirements have been incorporated into the Monitoring Section of the permit and should be reported in the Pretreatment Annual Report.

K. 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. All applicable conditions for residuals management are included in NJPDES Permit No. NJ0080713.

L. Compliance Schedule: Since there is no effluent data available to determine if the permittee's effluent is in compliance with the final enterococci limitations, the Department has included a 12 month compliance schedule to allow the permittee to come into compliance with this limitation. Since the permittee's effluent data indicates that they are unable to consistently comply with the final effluent limitations for **arsenic and CPO** for Outfall 001A and **CPO** for Outfall 007A, a schedule of compliance is included in the permit, including interim deadlines for progress or reports of progress towards compliance with the conditions of this permit, in accordance with N.J.A.C. 7:14A-6.4(a). The compliance schedule for **enterococci** is established at 12 months from the effective date of the permit (EDP) and **arsenic and CPO** are established at 36 months from the EDP to allow the permittee sufficient time to achieve compliance with the newly established effluent limitations. This schedule is provided in consideration of the time it would require for the permittee to undertake steps needed to modify or install treatment facilities, operations or other required measures.

Beginning on EDP + 1 year and every subsequent year after, until the final effluent limitations becomes effective, the permittee must submit a progress report to the Department on the steps taken towards compliance with the final effluent limitations. The progress report must include but is not limited to the following information:

- Investigative work as to what type of treatment options or other means of compliance are considered;
- Decision on the chosen method of treatment;
- Progress on design, bidding and construction schedule.

1. Compliance Schedule for **arsenic, CPO and enterococci** :

   a. During the "1-Initial" phase, from the effective date of the permit (EDP) to EDP + 12 months, the permittee shall comply with the specified initial phase effluent limitations.

   b. During the "2-Interim" phase, from the EDP + 12 months to EDP + 36 months, the permittee shall comply with the specified interim phase effluent limitations for **arsenic and CPO** and meet the final limitations for **enterococci**.

   c. During the "3-Final" phase, beginning EDP + 36 months, the permittee shall meet the final effluent limitations for **arsenic and CPO.**

M. Reclaimed Water for Beneficial Reuse (RWBR):

This draft permit contains conditions allowing the Middlesex County Utilities Authority 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 A of this permit. As specified in Part IV, the permittee must obtain approval from the

Department for each 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 A of this permit.
The permittee was issued an individual authorization (NJG0165832) under the ABR – Wastewater Beneficial Reuse General Permit identified as NJ0142581. This authorization allowed the permittee to reuse treated wastewater under the restricted access category, which included the uses of sanitary sewer jetting, street sweeping, sewage treatment plant washdown water, fire protection water, and irrigation of landscaped areas within a secured permiter. This permit proposes to include approved RWBR activities of the general permit authorization into this individual permit and will revoke NJPDES/DSW permit NJG0165832 upon finalization 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/Enterococci shall comply with permit limitations as specified in the Effluent Limitations Table in Part III of the permit. 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. The requirement for submittal of this document is consistent with N.J.A.C. 7:14A-2.11(a). <u>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</u>.

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".

N. Polychlorinated Biphenyl (PCB) Sampling and Pollutant Minimization Plan (PMP)

The United States Environmental Protection Agency and the International Agency for Research on Cancer have concluded that PCBs are carcinogenic to humans. The primary non-occupational source of human PCB exposure is food, especially fish and shellfish from contaminated waters. PCBs persist in the environment, accumulate in the tissue of fish and other animals, and biomagnify through the food chain. The Department has, therefore, adopted rules at N.J.A.C. 7:14A-11.13 and 14.4 on December 18, 2006 to reduce discharges of PCBs to New Jersey's surface waters from industrial facilities and sewage treatment plants. The regulations at N.J.A.C. 7:14A-11.13 outline the PCB monitoring requirements and the regulations at N.J.A.C. 7:14A-14.4 outline the monitoring frequency requirements.

The *New Jersey 2010 Integrated Water Quality Monitoring and Assessment Report (integrated report)* lists pollutants that are currently not meeting the surface water criteria in stream segments throughout the state. Since this facility discharges to a subwatershed that is listed as impaired for PCBs under a Fish Advisory in the Integrated Report, more specifically, Sublist 5 of the New Jersey List Of Water Quality Limited Waters (also known as the 303(d) List or as the Impaired Waterbodies List), this facility is subject to the rules at N.J.A.C. 7:14A-11.13 and 14.4.

Since this facility is subject to these rules, the permittee is required to monitor its effluent for the 209 PCB congeners, using the most recent version of EPA Method 1668 as found at EPA 40 CFR Part 136. Sampling will consist of up to 6 samples during a period of 24 months, not to exceed three dry samples and three wet samples, and will be performed using a 24 hour composite sample method for dry weather events and grab sample for wet weather events. Sanitary wastewater treatment plants and publicly owned treatment works shall perform three dry weather and three wet weather samples on the facility's main outfall by 24 months after the effective date of the permit.

Based on the results of the monitoring, which is to be submitted to the Department when all sampling is completed, the Department will make a determination regarding whether this facility will be required to develop and implement a PCB Pollutant Minimization Plan, or PMP. The purpose of the PMP is to help identify and eliminate discrete sources of PCBs. A facility discharging at or close to background levels is far less likely than a facility discharging at significantly higher levels to be able to identify discrete sources of PCBs. Therefore, the Department will require PMPs for this facility if it is found to be discharging more elevated levels of PCBs in the effluent, but not if the permittee is discharging PCB levels at or close to background.

The Department has developed a PMP Technical Manual to help permittees with the development of the PMP, which can be found on the Department's web site at http://www.state.nj.us/dep/dwq/techman.htm.

If based on the monitoring for PCBs, it is determined that the permittee must develop and implement a PCB PMP, the permittee will be required to submit an Annual PMP Progress Report. These reports will be used to update the Department regarding any revisions to the PMP, measures taken to achieve reductions, and changes to the baseline loading.

These conditions have been incorporated into the permit at Part IV, Section D.

7 Variances to Permit Conditions:

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

Procedures for modifying a water quality based effluent limitation are found in the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B-1.8 and 1.9. If a water quality based effluent limitation has been proposed in this permit action, the permittee may request a modification of that limitation in accordance with N.J.A.C. 7:14A-11.7(a). This request must be made prior to the close of the public comment period. The information that must be submitted to support the request may be obtained from the Bureau of Water Quality Standards and Assessment at (609) 777-1753.

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 *Star Ledger* and in the DEP Bulletin.

9 Contact Information

If you have any questions regarding the Surface Water conditions in this permit action, please contact Magan Kanzaria, 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: $WLA = C_i \times Df - C_{up}(Df - 1)$

where,
- WLA = wasteload allocation
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Df = dilution factor

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 for Outfall 001A

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	WASTE WATER DATA 1/2010 – 12/2012	EXISTING LIMITS	1-INITIAL LIMITS (2)	2-INTERIM LIMITS (2)	3-FINAL LIMITS (2)	MONITORING	
								Freq.	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	114 425.6	MR MR	MR MR	MR MR	MR MR	Continuous	Metered/ Measured
5 Day Biochemical Oxygen Demand (BOD_5)	kg/d	Monthly Avg. Weekly Avg.	5992 9452	16692 25038	16692 25038	16692 25038	16692 25038	1/Day	Calculated
5 Day Biochemical Oxygen Demand (BOD_5)	mg/L	Monthly Avg. Weekly Avg.	13.24 18.57	30 45	30 45	30 45	30 45	1/Day	24 Hour Composite
Influent BOD_5	mg/L	Monthly Avg. Weekly Avg.	206 251.4	MR MR	MR MR	MR MR	MR MR	1/Day	24 Hour Composite
BOD_5 Minimum Percent Removal	%	Monthly Avg.	93.2	85	85	85	85	1/Day	Calculated
Total Suspended Solids (TSS)	kg/d	Monthly Avg. Weekly Avg.	7508 14366	16692 25038	16692 25038	16692 25038	16692 25038	1/Day	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Weekly Avg.	16 26	30 45	30 45	30 45	30 45	1/Day	24 Hour Composite
Influent Total Suspended Solids (TSS)	mg/L	Monthly Avg. Weekly Avg.	246 293	MR MR	MR MR	MR MR	MR MR	1/Day	24 Hour Composite
TSS Minimum Percent Removal	%	Monthly Avg.	93.4	85	85	85	85	1/Day	Calculated
Enterococci (geometric mean)	#per 100mL	Monthly Avg Instant Max	-- --	-- --	MR MR	35 MR	35 MR	1/Day	Grab
Fecal Coliform (geometric mean)	# per 100mL	Monthly Avg. Weekly Avg	31.7 493.8	200 400	200 400	-- --	-- --	1/Day	Grab
Dissolved Oxygen (minimum)	mg/L	Weekly Avg.	6.38	5	5	5	5	1/Day	Grab
Oil and Grease	mg/L	Monthly Avg. Instant Max.	2.9 6.6	10 15	10 15	10 15	10 15	2/Month	Grab
Influent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max	11.3 17.7 27.8	MR MR MR	MR MR MR	MR MR MR	MR MR MR	6/Day	Grab
Effluent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max.	11.8 18 27.3	MR MR MR	MR MR MR	MR MR MR	MR MR MR	6/Day	Grab
Influent pH	su	Instant. Min. Instant. Max.	6.2 9.5	MR MR	MR MR	MR MR	MR MR	6/Day	Grab
Effluent pH	su	Instant. Min. Instant. Max.	6 7.3	6.0 9.0	6.0 9.0	6.0 9.0	6.0 9.0	6/Day	Grab
Ammonia (Total as N)	kg/d	Monthly Avg. Weekly Avg. Daily Max.	5880 9439 25170	MR MR MR	MR MR MR	MR MR MR	MR MR MR	1/Quarter	Calculated
Ammonia (Total as N)	mg/L	Monthly Avg. Weekly Avg. Daily Max.	13.96 20.12 29.9	MR MR MR	MR MR MR	MR MR MR	MR MR MR	1/Quarter	24 Hour Composite
Chlorine Produced Oxidants Option 1 (3)	kg/d	Month Avg. Daily Max.	314 1597	MR 36.2 *	MR MR	MR MR	28.3 (1) 68.7 (1)	6/day	Calculated
Chlorine Produced Oxidants Option 1 (3)	mg/L	Month Avg. Daily Max.	0.73 1.7	MR 0.065 *	MR MR	MR MR	0.051 (1) 0.124 (1)	6/day	Grab
Chlorine Produced Oxidants Option 2 (3)	kg/d	Month Avg. Daily Max.	-- --	MR MR	MR MR	MR MR	MR (1) MR (1)	6/day	Calculated
Chlorine Produced Oxidants Option 2 (3)	mg/L	Month Avg. Daily Max..	-- --	MR 0.065*	MR MR	MR MR	0.051 (1) 0.124 (1)	6/day	Grab
Arsenic	g/day	Monthly Avg. Daily Max	616 1312	MR 757 *	MR MR	MR MR	441 623	1/Month	Calculated
Arsenic	µg/L	Monthly Avg. Daily Max	1.43 2.2	MR 1.36 *	MR MR	MR MR	0.79 1.12	1/Month	24 Hour Composite
Bis (2 Ethylhexyl) Phthalate	g/day	Monthly Avg. Daily Max	555.3 1291	MR 17100	MR MR	MR MR	MR 17100	1/Month	Calculated
Bis (2 Ethylhexyl) Phthalate	µg/L	Monthly Avg. Daily Max	1.38 3.2	MR 30.7	MR 30.7	MR 30.7	MR 30.7	1/Month	24 Hour Composite

Chloroform	g/day	Monthly Avg. Daily Max	1447 3209	MR 66500	MR 66500	MR 66500	MR 66500	1/Month	Calculated
Chloroform	µg/L	Monthly Avg. Daily Max	3.5 7.4	MR 120	MR 120	MR 120	MR 120	1/Month	Grab
Cyanide	kg/day	Monthly Avg. Daily Max	4.5 24.3	MR 2.78 *	MR MR	MR MR	1012 1734	1/Month	Calculated
Cyanide	µg/L	Monthly Avg. Daily Max	8.84 40	MR 5 *	MR MR	MR MR	1820 3117	1/Month	Grab
Dichlorobromomethane	g/day	Monthly Avg. Daily Max	175.8 545	MR 907	MR 907	MR 907	MR 907	1/Month	Calculated
Dichlorobromomethane	µg/L	Monthly Avg. Daily Max	0.42 1.2	MR 1.63	MR 1.63	MR 1.63	MR 1.63	1/Month	Grab
1,4 Dichlorobenzene	g/day	Monthly Avg. Daily Max	831 3962	MR 1080	MR 1080	MR 1080	MR 1080	1/Month	Calculated
1,4 Dichlorobenzene	µg/L	Monthly Avg. Daily Max	1.96 8	MR 1.95	MR 1.95	MR 1.95	MR 1.95	1/Month	Grab
Di-N-Butylphthalate	g/day	Monthly Avg. Daily Max	238 658	MR 5430	MR 5430	MR 5430	MR 5430	1/Month	Calculated
Di-N-Butylphthalate	µg/L	Monthly Avg. Daily Max	0.6 1.71	MR 9.76	MR 9.76	MR 9.76	MR 9.76	1/Month	Grab
Mercury, Total Recoverable Option 1 (4)	g/day	Monthly Avg. Daily Max	34 122	520 MR	520 MR	520 MR	520 MR	1/Month	Calculated
Mercury, Total Recoverable Option 1 (4)	µg/L	Monthly Avg. Daily Max	0.08 0.2	MR MR	MR MR	MR MR	MR MR	1/Month	24 Hour Composite
Mercury, Total Recoverable Option 2 (4)	g/day	Monthly Avg. Daily Max	34 122	MR MR	MR MR	MR MR	MR MR	1/Month	Calculated
Mercury, Total Recoverable Option 2 (4)	µg/L	Monthly Avg. Daily Max	0.08 0.2	0.93 MR	0.93 MR	0.93 MR	0.93 MR	1/Month	24 Hour Composite
Methylene Chloride	g/day	Monthly Avg. Daily Max	1896 5492	MR 56300	MR 56300	MR 56300	MR 56300	1/Month	Calculated
Methylene Chloride	µg/L	Monthly Avg. Daily Max	4.41 9.9	MR 101	MR 101	MR 101	MR 101	1/Month	Grab
Phenols	kg/day	Monthly Avg. Daily Max	2.4 8	MR 13600	MR 13600	MR 13600	MR 13600	1/Month	Calculated
Phenols	µg/L	Monthly Avg. Daily Max	5.84 20	MR 24500	MR 24500	MR 24500	MR 24500	1/Month	Grab
Selenium, Total Recoverable	g/day	Monthly Avg. Daily Max	548 993	MR 14000	MR 14000	MR 14000	MR 14000	1/Month	Calculated
Selenium, Totall Recoverable	µg/L	Monthly Avg. Daily Max	1.44 2.6	MR 25.1	MR 25.1	MR 25.1	MR 25.1	1/Month	Grab
Tetrachloroethylene	g/day	Monthly Avg. Daily Max	253 1298	MR 1990	MR 1990	MR 1990	MR 1990	1/Month	Calculated
Tetrachloroethylene	µg/L	Monthly Avg. Daily Max	0.58 2.5	MR 3.58	MR 3.58	MR 3.58	MR 3.58	1/Month	Grab
Toluene	g/day	Monthly Avg. Daily Max	203.2 3005	MR 5390	MR 5390	MR 5390	MR 5390	1/Month	Calculated
Toluene	µg/L	Monthly Avg. Daily Max	0.49 6.8	MR 16.9	MR 16.9	MR 16.9	MR 16.9	1/Month	Grab
1,1,1-Trichloroethane	g/day	Monthly Avg. Daily Max	151.4 294	MR 394	MR 394	MR 394	MR 394	1/Month	Calculated
1,1,1-Trichloroethane	µg/L	Monthly Avg. Daily Max	0.36 0.68	MR 0.709	MR 0.709	MR 0.709	MR 0.709	1/Month	Grab
Zinc, Total Recoverable	g/day	Monthly Avg. Daily Max	16035 47295	MR 156000	MR 156000	MR 156000	MR 156000	1/Month	Calculated
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max	38.5 78	MR 280	MR 280	MR 280	MR 280	1/Month	24 Hour Composite
Acute Toxicity, LC50	% effluent	Minimum	88.4	67	67	67	67	1/Quarter	Composite

Footnotes and Abbreviations:

MR Monitor and report only

* These limits were stayed in a letter dated May 20, 2010.

(1) The permittee shall comply with the enforceable quantification limit of 0.1 mg/L as a monthly average and daily maximum concentration and 55.6 kg/d as a monthly average and daily maximum loading.

(2) 1-Initial phase limitations and monitoring conditions are effective from the effective date of the permit (EDP) until the EDP + 12 months. 2-Interim phase limitations and monitoring conditions are effective from the EDP + 12 months until the EDP + 36 months. The Final phase limitations and monitoring conditions become effective on the EDP + 36 months.

(3) Under normal discharge conditions, when MCUA is not discharging from outfall 007A, CPO loading and concentration shall be limited through the DMR for outfall 001A under Option 1.

Under other discharge conditions, when MCUA is discharging from outfall 007A, CPO concentration shall be limited through the DMR for outfall 001A under Option 2. Additionally, CPO concentration shall be limited through the DMR for outfall 007A, while CPO loading shall be limited through the DMR for outfall 007A as an "Effluent Adjusted Value".

(4) If on the day the 24-hour average composite sample for compliance is collected, the 24 hour daily average flow value is less than or equal to the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the actual calculated loading value on the DMR under Option 1 and "CODE=N"under option 2.

If on the day the 24-hour average composite sample for compliance is collected, the 24 hour daily average flow value is greater than the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the measured concentration value on the DMR under Option 2 and "CODE=N" under option 1.

12 Permit Summary Table for Outfall 007A

Additional monitoring requirements for outfall 007A can be found in Part IV, C. 2. 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	WASTE WATER DATA 1/2010-12/2012	EXISTING LIMITS	1- INITIAL LIMITS (2)	2- INTERIM LIMITS (2)	3- FINAL LIMITS (2)	MONITORING	
								Freq.	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	16.6 69.1	MR MR	MR MR	MR MR	MR MR	Continuous	Continuous
Duration of Discharge	# of Days	Monthly Avg.	5.4	MR	MR	MR	MR	Continuous	Metered
Flow, Total	mgal/mo	Monthly Tot.	159	MR	MR	MR	MR	Continuous	Metered
Enterococci (geometric mean)	#per 100mL	Monthly Avg Instant Max	-- --	-- --	MR MR	35 MR	35 MR	1/Discharge	Grab
Fecal Coliform (geometric mean)	# per 100mL	Monthly Avg. Weekly Avg.	2.66 6.8	200 400	200 400	-- --	-- --	1/Discharge	Grab
Chlorine Produced Oxidants (Effluent Gross)	kg/d	Month Avg. Daily Max.	-- --	MR MR	MR MR	MR MR	40.7 (1) 55(1)	1/Discharge	Grab
Chlorine Produced Oxidants (Effluent Gross)	mg/L	Month Avg. Daily Max.	1.54 1.83	MR 0.104	MR 0.104	MR 0.104	0.07(1) 0.104(1)	1/Discharge	Grab
Chlorine Produced Oxidants (Effluent Adjusted Value)	kg/d	Month Avg. Daily Max.	-- --	MR 57.9	MR 57.9	MR 57.9	MR 57.9	1/Discharge	Grab
Chlorine Produced Oxidants (Effluent Adjusted Value)	mg/L	Month Avg. Daily Max.	-- --	MR MR	MR MR	MR MR	MR MR	1/Discharge	Grab

Footnotes and Abbreviations:

MR Monitor and report only

(1) permittee shall comply with the enforceable quantification limit of 0.1 mg/L as a monthly average and daily maximum concentration and 55.6 kg/d as a monthly average and daily maximum loading.

(2) 1-Initial phase limitations and monitoring conditions are effective from the effective date of the permit (EDP) until the EDP + 12 months. 2-Interim phase limitations and monitoring conditions are effective from the EDP + 12 months until the EDP + 36 months. The Final phase limitations and monitoring conditions become effective on the EDP + 36 months.

Table A: Effluent limitation analysis for the Toxic Metals, Organic Compounds, Cyanide (µg/L); effluent flow of 147 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)
Arsenic, Total Recoverable	1/2010-12/2012	(dt) = 35 (nd) = 2	0.35 (calculated)	2.2 (max) 1.42 (LTAeq)	(a) = 552 (c) = 468 (hc) = 0.793	(a) = N (c) = N (hc) = Y	(a) = 264.2 (c) = 316.5 (hc) = 0.793	MDL = 1.12 AML = 0.79
Bis (2 Ethylhexyl) Phthalate	1/2010-12/2012	(dt) = 32 (nd) = 5	0.69 (calculated)	1.77 (LTAeq)	(hc) = 22	(hc) = N	N/A	MDL = 48.7 AML = 28.6
Chloroform	1/2010-12/2012	(dt) = 37 (nd) = 0	0.38 (calculated)	7.4 (max)	(h) = 21000	(h) = N	N/A	MDL = 39454 AML = 27300
Chromium, Total Recoverable	1/2010-12/2012	(dt) = 11 (nd) = 0	0.49 (calculated)	6.27 (max)	(hc) = 7500	(hc) = N	(hc) = 7500	N/A
Copper (Harbor Estuary), Total Recoverable	1/2010-12/2012	(dt) = 11 (nd) = 0	0.36 (calculated)	17.16 (max)	(a) = 63.2 (c) = 72.8	(a) = N (c) = N	(a) =35.65 (c) = 58.56	N/A
Cyanide	1/2010-12/2012	(dt) = 20 (nd) = 17	0.70 (calculated)	19 (max)	(h) = 1820	(h) = N	N/A	MDL = 3117 AML = 1820
Dichlorobromomethane	1/2010-12/2012	(dt) = 25 (nd) = 12	0.38 (calculated)	1.2 (max) 0.38 (LTAeq)	(hc) = 221	(hc) = N	N/A	MDL = 319 AML = 221
1,4-Dichlorobenzene	1/2010-12/2012	(dt) = 34 (nd) = 3	1.22 (calculated)	8 (max)	(h) = 28600	(h) = N	N/A	MDL = 52899 AML = 28600
Di-N-Butyl Phthalate	1/2010-12/2012	(dt) = 2 (nd) = 35	0.13 (calculated)	1.3 (max)	(h) = 58500	(h) = N	N/A	MDL = 67198 AML = 58500
Lead, Total Recoverable	1/2010-12/2012	(dt) = 4 (nd) = 0	0.60 (default)	1.51 (max)	(a) = 1680 (c) = 312	(a) = N (c) = N	(a) = 567.2 (c) = 173	N/A
Manganese, Total Recoverable	1/2010-12/2012	(dt) = 11 (nd) = 0	0.18 (calculated)	396 (max)	(h) = 1300	(h) = N	(h) = 1300	N/A
Mercury, Total Recoverable	1/2010-12/2012	(dt) = 13 (nd) = 24	0.39 (calculated)	0.12 (max)	(a) = 14.4 (c) = 12.22 (h) = 0.663	(a) = N (c) = N (h) = N	(a) = 7.64 (c) = 9.39 (h) = 0.663	MDL = 0.96 AML = 0.663
Methylene Chloride	1/2010-12/2012	(dt) = 36 (nd) = 1	1.23 (calculated)	9.9 (max) 4.4 (LTAeq)	(hc) = 4030	(hc) = N	N/A	MDL = 7454 AML = 4030
Nickel, Total Recoverable	1/2010-12/2012	(dt) = 11 (nd) = 0	0.23 (calculated)	11.8 (max)	(a) = 512 (c) = 286 (h) = 22100	(a) = N (c) = N (h) = N	(a) = 312.4 (c) = 222.5 (hc) = 22100	N/A
Phenols	1/2010-12/2012	(dt) = 26 (nd) = 11	0.56 (calculated)	20 (max)	(h) = 11180000	(h) = N	N/A	MDL = 18012741 AML = 11180000
Selenium, Total Recoverable	1/2010-12/2012	(dt) =35 (nd) = 2	0.90 (calculated)	2.6 (max)	(a) = 2320 (c) = 923 (h) = 54600	(a) = N (c) = N (h) = N	(a) = 523 (c) = 375 (h) = 54600	MDL = 1664.7 AML = 924.8
Tetrachloroethylene	1/2010-12/2012	(dt) = 20 (nd) = 17	0.49 (calculated)	2.5 (max) 0.49 (LTAeq)	(hc) = 20.8	(hc) = N	(hc) = 20.8	MDL = 32.2 AML = 20.8
1,1,1-Trichloroethane	1/2010-12/2012	(dt) = 4 (nd) = 33	0.24 (calculated)	0.68 (max)	(h) = 33800	(h) = N	(h) = 33800	MDL = 43630 AML = 33800
Toulene	1/2010-12/2012	(dt) = 18 (nd) = 19	0.67 (calculated)	6.8 (max)	(h) = 195000	(h) = N	(h) = 195000	MDL = 330257 AML = 195000
Zinc, Total Recoverable	1/2010-12/2012	(dt) = 37 (nd) = 0	0.47 (calculated)	78 (max)	(a) = 720 (c) = 1053 (h) = 338000	(a) = N (c) = N (h) = N	(a) = 297 (c) = 666.4 (h) = 338000	MDL = 761 AML = 496.4

(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

13 Combined Sewer Overflow (CSO)

Combined Sewer Overflow Discharge Description:

This facility receives flows from combined sewer systems (CSS). Such flows are regulated through this permit. CSSs are sewers that were designed many decades ago to collect rainwater and snowmelt runoff, domestic sewage, and industrial wastewater in the same pipe. CSSs are no longer permitted in New Jersey for new communities, but many older cities in the State continue to operate existing CSSs. Most of the time, the CSSs transport all wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. However, during periods of rainfall or snowmelt, the wastewater volume in a CSS can exceed the hydraulic capacity of the sewer system or treatment plant. For this reason, CSSs were designed to overflow during these periods and discharge excess wastewater directly from CSOs to nearby streams, rivers, or other water bodies prior to reaching the sewage treatment plant.

CSOs often contain high levels of suspended solids, pathogenic microorganisms, toxic pollutants, floatables, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants. CSOs can cause exceedances of water quality standards (WQS) which may pose risks to human health, threaten aquatic life and its habitat, and impair the use and enjoyment of the State's waterways.

Although Middlesex County Utilities Authority does not own and/or operate any CSO outfalls, they indirectly control the discharge of Perth Amboy City's CSOs. Please refer to Perth Amboy City's individual NJPDES Discharge to Surface Water permit NJ0156132 for more detail regarding Perth Amboy City's CSOs.

Combined Sewer Overflow Control Policy Background:

A. Regulatory Background

Historically, the control of CSOs has proven to be extremely complex. This complexity stems partly from the difficulty in quantifying CSO impacts on receiving water quality and the site-specific variability in the volume, frequency, and characteristics of CSOs. In addition, the financial considerations for communities with CSOs can be significant. The U.S. Environmental Protection Agency (EPA) estimated the CSO abatement costs for the 1,100 national communities served by CSSs to be approximately $41.2 billion in the May 1995 Combined Sewer Overflows - Guidance for Nine Minimum Controls. In 2008, New Jersey's CSO abatement costs were estimated at $9.3 billion. See National Clean Watersheds Needs Survey, http://water.epa.gov/scitech/datait/databases/cwns/upload/cwns2008rtc.pdf.

To address these challenges, EPA's Office of Water issued a National Combined Sewer Overflow Control Strategy ("CSO Strategy") on August 10, 1989 (54 Federal Register 37370). Five years later, EPA issued the National CSO Control Policy (National Policy) on April 19, 1994, which remains the current national framework for control of CSOs. The National Policy provides guidance to permittees and state authorities on coordinating the planning, selection and implementation of CSO controls. It promotes a phased approach to the control of CSOs through a series of permits that include progressively more stringent requirements. The National Policy prohibits dry weather overflows and contains provisions for developing appropriate, site-specific NPDES permit requirements for all CSOs. In the Wet Weather Quality Act of 2000, Congress amended the CWA to incorporate the National Policy. As amended, the CWA requires that all permits, orders and decrees issued to regulate combined system overflows must comply with the National Policy. 33 U.S.C.A. § 1342(q)(1). DEP incorporated the National Policy verbatim into its regulations at N.J.A.C. 7:14A-11.12 – Appendix C.

Key Elements of the National CSO Control Policy

The National Policy contains four key principles to ensure that existing and proposed CSO controls are cost-effective and meet the requirements of the CWA. These four principles are:

- Provide clear levels of control that would be presumed to meet appropriate health and environmental objectives;
- Provide sufficient flexibility to municipalities, especially those that are financially disadvantaged, to consider the site-specific nature of CSOs and determine the most cost-effective means of reducing pollutants and meeting CWA objectives and requirements;

- Allow a phased approach for implementation of CSO controls which considers a community's financial capability; and
- Review and revise, as appropriate, WQS and their implementation procedures when developing long-term CSO control plans to reflect the site-specific wet weather impacts of CSOs.

The National Policy requires permittees to implement Nine Minimum Controls (NMCs), and to develop and implement a Long Term Control Plan (LTCP). The NMCs are as listed below.

1. Proper operation and regular maintenance programs for the sewer system and the CSOs,
2. Maximum use of the collection system for storage,
3. Review and modification of pretreatment requirements to assure CSO impacts are minimized,
4. Maximization of flow to the publicly owned treatment works for treatment,
5. Prohibition of CSOs during dry weather,
6. Control of solid and floatable materials in CSOs,
7. Pollution prevention,
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts, and
9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

There are nine minimum elements of the LTCP. They are:

1. Characterization, monitoring, and modeling activities to serve as the basis for selection and design of effective CSO controls;
2. A public participation process that actively involves the affected public in the decision-making to select long-term CSO controls;
3. Consideration of sensitive areas as the highest priority for controlling overflows;
4. Evaluation of alternatives that will enable the permittee, in consultation with the NPDES permitting authority, WQS authority, and the public, to select CSO controls that will meet CWA requirements;
5. Cost/performance considerations to demonstrate the relationships among a comprehensive set of reasonable control alternatives;
6. Operational plan revisions to include agreed-upon long-term CSO controls;
7. Maximization of treatment at the existing POTW treatment plant for wet weather flows;
8. An implementation schedule for CSO controls; and
9. A post-construction compliance monitoring program adequate to verify compliance with water quality-based CWA requirements and ascertain the effectiveness of CSO controls.

In New Jersey, the CSO Strategy, and later, National Policy have been implemented, in part, through NJPDES Master General Permit (MGP) (NJ0105023) for Combined Sewer Systems. Most of the CSSs in the State were regulated under General Permit Authorizations issued under the MGP, however some CSSs continued to be regulated under individual NJPDES permits. In addition, some CSO controls were required under other enforceable documents, such as Administrative Consent Orders or Judicial Consent Orders.

The first MGP was issued on January 27, 1995, and became effective on March 1, 1995. Under the 1995 MGP, permittees which own and/or operated any portion of a CSS were required to develop and implement technology based control measures including the NMCs. Of significance to note, the Department required the installation of solid and floatable controls, i.e., netting or bar screens, that would not allow the passage of solids greater than one half inch. To date, 89% of such facilities across the State have installed these controls. In addition, the permittees were required to initiate the first element of the LTCP, by requiring the development of Combined Sewer System Characterization Studies (System Characterization Study) to demonstrate the relationship between rainfall, runoff and sewer system responses. As part of the studies, permittees were required to develop a field calibrated and verified CSO model designed to represent the CSS's response to historical events of precipitation. The study was divided into six components: 1. Monitoring Program Proposal and Work Plan; 2. Service Area and Land Use Report; 3. Sewer System Inventory and Assessment Report; 4. Rainfall Monitoring Study; 5. Combined Sewer Overflow Monitoring Study; and 6. Combined Sewer System Modeling Study.

On February 24, 2000, the Department renewed the MGP.

On June 30, 2004, the Department revoked and reissued the MGP. Existing requirements remained in place, and the Department added several new provisions to require permittees to address four additional elements of the CSO LTCP. Specifically, the permit required permittees to develop, with Department oversight, a Public Participation Plan, evaluate a specific set of alternatives, develop appropriate cost and performance curves, and maximize conveyance for treatment at the existing POTW treatment plant for wet weather flows. Permittees with CSO points were required to develop and evaluate a variety of disinfection control alternatives. The permit became effective on August 1, 2004, and expired on July 31, 2009. DEP issued a draft new general permit before the August 1, 2009 expiration date, but did not finalize it.

The 2004 MGP reflected the Department's intention to allow the CSO permittees to integrate the results of ongoing TMDL studies into their LTCPs. The TMDL water quality studies were intended to help develop water quality goals for the receiving waters, identify CSO and non-CSO sources of pollution, and identify load reduction objectives and allocations through establishment of TMDLs for pathogens, nutrients and other pollutants determined to be responsible for the impairments. As indicated in the Fact Sheet that accompanied the 2004 MGP, the Department did not intend to require the permittees to develop and implement all elements of the LTCP until the TMDLs for pathogens were established.

The Department expected that TMDL studies would have been completed during the lifetime of the 2004 MGP. However, the studies were not completed until after the MGP expired. Further, on March 15, 2012, EPA provided DEP with a draft of the water quality study and associated documentation that was intended to provide the basis for the pathogens TMDL in the NY/NJ Harbor. After reviewing the draft water quality study, the Department determined that it was technically deficient, and that the Department could not move forward with the TMDL for pathogens at that time. Rather than continue to wait for an acceptable water quality study and for TMDLs to be adopted, the Department has determined that it is necessary to move forward on individual permits requiring permittees to develop and implement all elements of the LTCP at this time. Thus, the Department has determined that it is no longer appropriate to control CSOs through a MGP and is issuing individual permits in a phased approach in order to address the site-specific conditions of each of the permittees and to promote better coordination of a LTCP among all permittees contributing to the hydraulically connected system.

Since the inception of the Department's CSO program, 64 CSO points in New Jersey have been eliminated. Permittees have put into place Solids/Floatables Control Measure for at least 183 CSO points. The control measures for the remaining CSO points are in various stages of construction. These Solids and Floatables control facilities currently capture, remove, or otherwise prevent the discharge of an estimated 700 tons of solids and floatables material per year. The New Jersey Environmental Infrastructure Financing Program, through a partnership with DEP and the New Jersey Environmental Infrastructure Trust has helped finance much of this work by funding over $1.4 billion for CSO abatement projects.

Specifically, the Middlesex County Utilities Authority has performed the following studies:

- Central Treatment Plant Conveyance and Capacity Analysis, Cost Performance Analysis Report NJPDES Permit No. NJ0020141, prepared by CDM, dated August 2007; and
- Public Participation Report, NJPDES Individual Permit No. NJ0020141, prepared by John N. Rogers, P.E., dated August 2007.

For Perth Amboy:

- Combined Sewer Overflow Discharge Characterization Study – System Inventory and Assessment Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.
- Combined Sewer Overflow Discharge Characterization Study – Service Area Drainage and Land Use Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.

- Combined Sewer Overflow Discharge Characterization Study – Monitoring Program Proposal and Work Plan for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated September 2006.
- Combined Sewer Overflow Discharge Characterization Study for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated September 2007.
- Public Participation Report for the City of Perth Amboy, NJPDES Permit No. NJ0105023, prepared by Hatch Mott MacDonald, dated April 2007.
- Long Term Combined Sewer Overflow Control Plan Cost and Performance Analysis Report for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated April 2007 and revised August 2008.

Multiple municipalities/permittees own separate portions of a hydraulically connected combined sewer system, and any changes to the system, or CSO controls that are implemented by one of these municipalities/permittees will likely affect the CSO discharges in other portions of the hydraulically connected combined sewer system. Additionally, these municipalities/permittees are then connected to a STP which is owned by a separate entity. Therefore, the Department requires that the permittee work cooperatively with the receiving STP and all other appropriate municipalities/permittees in the hydraulically connected combined sewer system to ensure that the data collected is used consistently in the development of the LTCP and can be documented to achieve overall water quality benefits.

Further, the Department strongly encourages the permittees to combine their resources to develop and submit a single LTCP on behalf of the permittees in the hydraulically connected combined sewer system.

The Department recognizes that the development of such a single comprehensive LTCP among multiple entities will require extensive coordination and cooperation and, as such, will consider requests to extend the compliance schedule for the submittal of the single, comprehensive LTCP.

This permit contains conditions necessary to implement the National Policy pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., Sewage Infrastructure Improvement Act, N.J.S.A. 58:25-23 et seq., and the Clean Water Act, 33 U.S.C. 1251 et seq., and the regulations promulgated pursuant thereto, N.J.A.C. 7:14A, specifically, N.J.A.C. 7:14A-11.12, Appendix C.

Summary of Permit Conditions:

A. Nine Minimum Controls:

This permit requires that the permittee continue to comply with all of the Nine Minimum Controls (NMCs), as listed below.

1. Proper operation and regular maintenance programs for the sewer system and the CSOs,
2. Maximum use of the collection system for storage,
3. Review and modification of pretreatment requirements to assure CSO impacts are minimized,
4. Maximization of flow to the publicly owned treatment works for treatment,
5. Prohibition of CSOs during dry weather,
6. Control of solid and floatable materials in CSOs,
7. Pollution prevention,
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts, and
9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

The NMCs are identified in the National Policy as minimum technology-based controls that can be implemented to address CSOs without extensive engineering studies or significant construction costs, prior to the implementation of long-term control measures. As described in the National Policy, permittees were to implement the NMCs as the first steps in controlling discharges from CSOs. EPA has prepared a document to guide permittees on how to implement the NMCs and document implementation. The document, Guidance for Nine Minimum Controls, can be found at http://www.epa.gov/npdes/pubs/owm0030.pdf.

Permittees are encouraged to be creative and explore innovative and cost-effective measures in implementing the NMCs to address their specific CSOs. The NMCs are not necessarily distinct and separate from one another. Many control measures can address and facilitate more than one of the controls at the same time (e.g., street sweeping can address both the "Control of Solids/Floatables" and the "Pollution Prevention" controls). With the assistance of the guidance document referenced above, permittees should continue to plan and pursue control measures that can achieve the ultimate goal of reducing overall CSO impacts in a holistic manner. Based upon the evaluation of the implementation of the NMCs, the Department has included enhancements in order to clarify requirements consistent with the National Policy. A brief description of the NMCs under this permit follows.

1. Proper Operation and Regular Maintenance Program Requirements

Under the existing individual NJPDES Discharge to Surface Water permit (a Combined Sewer Overflow Pollution Prevention Plan (CSOPPP) and a Proper Operation & Maintenance Plan and Manual is required), and consistent with state and federal regulations, (N.J.A.C. 7:14A-6.12 and 40 CFR 122.41(e)), all permittees with CSSs were required to develop and maintain a current Operations and Maintenance (O&M) Plan and Manual for their contributory collection system to the CSO outfalls. The Plan and Manual were to demonstrate that the permittee has made or will make all the necessary financial, administrative and institutional arrangements to meet the requirements of the permit. The Department has determined that it is necessary to provide more detail in the permit, consistent with EPA Guidance, on the necessary components of an O & M Program and Manual. Under this proposed permit action, the permittee is required to continue to implement update annually as necessary, an Operations & Maintenance (O&M) Program (and corresponding Manual), Emergency Plan, detailed Standard Operating Procedures (SOPs) and an Asset Management Plan to ensure that the treatment works, which are owned and/or operated by the permittee, are operated and maintained in a manner that achieves compliance with all terms and conditions of this permit. For example, SOPs are required to be developed to ensure that the permittee:

a. Provides a system for documenting, assessing, tracking and addressing residential complaints regarding blockages and other situations that lead to flooding of basements, streets and other public and private areas,
b. Provides for ongoing infiltration and inflow (I/I) reduction strategies through the identification of sources and implementation of I/I reduction projects,
c. Includes Asset Management planning, addressing such measures as infrastructure inventory with infrastructure repair/replacement needs listed and scheduled according to priority/criticality, and
d. Includes under the Emergency Plan: a plan for addressing a wide range of emergencies, including procurement for energy (fuel oil, electricity) and replacement parts.

The permittee shall review its rules, ordinances and sewer use agreements with its customer and/or upstream municipalities and revise if necessary to require them to identify I/I and reduce where appropriate, and to identify and eliminate interconnections and cross-connections in storm sewers.

2. Maximum Use of the Collection System for Storage

Under the existing individual NJPDES Discharge to Surface Water permit, specifically Appendix C, the permittee was required to conduct a feasibility study to evaluate in-line and off-line storage technologies for incorporation into possible future control strategies to store flow for subsequent treatment at the STP after downstream conveyance and treatment capacities were restored. Under this proposed permit action, the permittee will be required to minimize the introduction of sediment and obstructions and regularly remove any impediments to flows within the system and to identify and implement minor modifications to enable the entire collection system owned/operated by the permittee that conveys flows to the treatment works to store additional wet weather flows to minimize CSO discharges (volume, frequency and duration), while not creating or increasing sewage overflows to basements, streets and other public and private areas, until downstream sewers and treatment facilities can adequately convey and treat the flows.

3. Review and Modification of Pretreatment Requirements to Assure CSO Impacts are Minimized

Under the existing individual NJPDES Discharge to Surface Water permits issued to the STPs that receive combined sewage, the STPs were required to explore various options to minimize discharges of non-domestic users during wet weather periods. Under this proposed permit action, the CSO permittee is required to determine the locations of Significant Indirect/Industrial Users (SIUs) as it relates to the locations of its CSO outfalls, and the discharge nature of the SIUs for the entire collection system which is owned and/or operated by the permittee. Furthermore, the permittee is to determine and prioritize the environmental impact of these SIUs by CSO outfall and include this information in the characterization portion of its Operation & Maintenance Program. For delegated STPs, the permittee shall require that SIUs investigate ways to minimize their discharges during wet weather, and where necessary, establish agreements with SIUs or enact ordinances or rules specifying that the SIUs should restrict discharges to the greatest extent practicable during wet weather periods.

4. Maximization of Flow to the POTW for Treatment

Under the existing individual NJPDES Discharge to Surface Water permits issued to the STPs that receive combined sewage, the permittee was required to operate and maintain the facilities to maximize the conveyance of wastewater to the STP for treatment and to minimize the frequency and duration of CSOs to the receiving waters. Under this proposed permit action, this requirement is continued and the permittee is also required to evaluate and implement low-cost alternatives for increasing the flow to the STP, based upon capacity evaluations of the permittee's collection system.

5. Prohibition of CSOs during Dry Weather

Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not provide the permittee with requirements for the prohibition of CSOs during dry weather at this time.

6. Control of Solids and Floatable Material in CSOs

Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not provide the permittee with solids/floatable requirements at this time.

7. Pollution Prevention

Under the existing individual NJPDES Discharge to Surface Water permit, the permittee was required to develop, implement, and maintain a Combined Sewer Overflow Pollution Prevention Plan (CSOPPP). The CSOPPP required documentation of the procedures used to develop, evaluate and implement interim and long term solids/floatables control measures among other things. Under this proposed permit action, the permittee will be required to prevent and limit contaminants from entering the entire collection system owned and/or operated by the permittee

8. Public Notification to Ensure that the Public Receives Adequate Notification of CSO Occurrences and CSO Impacts

Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not require the permittee to notify the public of CSO occurrences and CSO impacts at this time.

9. Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls

Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not require the permittee to monitor to characterize CSO impacts and controls at this time.

B. Long Term Control Plan (LTCP):

This permit contains requirements for the permittee to develop and submit a final LTCP on or before the Effective Date of the Permit + 3 years. The permittee may utilize information collected under previous permits to the extent that they are accurate and representative of a properly operated and maintained sewer system and meet the current requirements, such as:

For MCUA:
- Central Treatment Plant Conveyance and Capacity Analysis, Cost Performance Analysis Report NJPDES Permit No. NJ0020141, prepared by CDM, dated August 2007; and
- Public Participation Report, NJPDES Individual Permit No. NJ0020141, prepared by John N. Rogers, P.E., dated August 2007.

For Perth Amboy:
- Combined Sewer Overflow Discharge Characterization Study – System Inventory and Assessment Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.
- Combined Sewer Overflow Discharge Characterization Study – Service Area Drainage and Land Use Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.
- Combined Sewer Overflow Discharge Characterization Study – Monitoring Program Proposal and Work Plan for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated September 2006.
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- Public Participation Report for the City of Perth Amboy, NJPDES Permit No. NJ0105023, prepared by Hatch Mott MacDonald, dated April 2007.
- Long Term Combined Sewer Overflow Control Plan Cost and Performance Analysis Report for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated April 2007 and revised August 2008.

As stated above, since multiple municipalities/permittees own portions of hydraulically connected combined sewer systems, the Department requires that the permittee work cooperatively with all other municipalities/permittees in the hydraulically connected combined sewer system to ensure that the same data is used consistently in the development of the LTCP and can be documented to achieve overall water quality benefits. The Department encourages a single LTCP be developed and submitted on behalf of all of the permittees in a hydraulically connected combined sewer system. For example, the Department supports the permittee combining their resources with Perth Amboy City in the development of a single LTCP to address this permit requirement.

The National Policy lists nine elements that must be addressed in the LTCP. The National Policy also encourages permittees to develop, and permit writers to evaluate LTCPs on a watershed management basis. Permittees should evaluate all sources of pollution (e.g., point sources, CSOs, storm water) during system characterization and, wherever possible, develop control strategies on a watershed basis in coordination with the NPDES permitting authority.

This permit allows for the submittal of the LTCP in three steps. EPA has prepared a document to provide guidance to permittees on the development of the Long Term Control Plans and how to document the implementation. This document can be found at http://www.epa.gov/npdes/pubs/owm0272.pdf

As listed in the National Policy, the nine elements of the LTCP are:

1. Characterization, monitoring, and modeling activities as the basis for selection and design of effective CSO controls;

2. A public participation process that actively involves the affected public in the decision-making to select long-term CSO controls;
3. Consideration of sensitive areas as the highest priority for controlling overflows;
4. Evaluation of alternatives that will enable the permittee, in consultation with the NPDES permitting authority, WQS authority, and the public, to select CSO controls that will meet CWA requirements;
5. Cost/performance considerations to demonstrate the relationships among a comprehensive set of reasonable control alternatives;
6. Operational plan revisions to include agreed-upon long-term CSO controls;
7. Maximization of treatment at the existing POTW treatment plant for wet weather flows;
8. An implementation schedule for CSO controls; and
9. A post-construction compliance monitoring program adequate to verify compliance with water quality-based CWA requirements and ascertain the effectiveness of CSO controls.

The Department has grouped the LTCP submittal requirements into 3 steps, in accordance with EPA's LTCP planning approach outlined in the Guidance for Long Term Control Plans. The LTCP shall consist of the following steps and be submitted according to the schedule in the permit.

Step 1 entails the development and submittal of the Sewer System Characterization Workplan and final report as well as the creation of the Public Participation Process and identification, evaluation and prioritization of the Sensitive Areas. This step also entails understanding the water quality standards as they apply to the receiving water for each CSO and how achievement of those standards will affect the choice of the CSO control measures. The workplan is being required to ensure that all permittee of the hydraulically connected system conduct and update the characterization using a coordinated approach that will result in a comprehensive and integrated sewer system characterization. While the permittee has conducted characterization work under the MGP, it will be necessary to update the information from previous studies to incorporate modifications in the collection system and requirements under this permit. This Workplan is required to be submitted 3 months after the effective date of the permit and the final Sewer System Characterization Report, along with the Public Participation Process and the Consideration of Sensitive Areas information is then due 1 year after the effective date of the permit.

Based upon the information gathered under Step 1, Step 2 will entail the development and evaluation of the CSO control alternatives described below, that at a minimum will enable the permittee, in consultation with the Department's NJPDES program, the water quality standards program, and the public to select CSO control measures that will meet the Clean Water Act requirements. The Development and Evaluation of Alternatives Report required for Step 2 is to be submitted 2 years after the effective date of the permit.

Step 3 entails the final selection and implementation schedule of the agreed upon LTCP CSO control measures as well as the Compliance Monitoring Program (CMP). The CMP will require monitoring of the discharges and the receiving waters prior to, and at various intervals during, the implementation of the LTCP to evaluate the effectiveness of the ongoing CSO control measures. This step will also entail concurrent revisions to the O&M Program and Manual as control measures are implemented. The permittee is required to submit an approvable Selection and Implementation of Alternatives Report 3 years after the effective date of the permit.

A brief description of the LTCP requirements in the permit follows.

1. Characterization Monitoring and Modeling of the Combined Sewer System

Under this proposed permit action, the permittee will be required to submit an updated characterization study of the combined sewer system to: establish the existing baseline conditions, evaluate the efficiency of the technology based controls, determine the baseline condition upon which the LTCP will be based and uniformly characterize the hydraulically connected system with respect to the requirements of this permit, specifically the number of events as defined in this permit.

2. Public Participation Process

Under the existing individual NJPDES Discharge to Surface Water permit, the permittee was required to create a Public Participation Program that would ensure the opportunity for participation by the public in the LTCP development process. Under this proposed permit action, the permittee will be required to submit an updated Public Participation Plan and to involve the public in the decision making process in determining the alternatives chosen under the LTCP.

3. Consideration of Sensitive Areas

Under this proposed permit action, the permittee will be required to give the highest priority to controlling overflows in sensitive areas. The LTCP shall prohibit increased CSO overflows and eliminate/relocate CSO overflows in sensitive areas. If elimination/relocation is not possible, the permittee shall provide treatment necessary to meet the WQS.

4. Evaluation of Alternatives

Under the existing individual NJPDES Discharge to Surface Water permit, the permittee was required to evaluate specific alternative interim and long term control measures for the control of pathogens and to formulate cost and performance relationships for treatment of CSO discharges. Under this proposed permit action, the permittee will be required to evaluate a broader range of control alternatives that meet the CWA requirements and provide attainment of the WQS using either the Presumption Approach or the Demonstration Approach. The control alternatives shall include: green infrastructure, increased storage in the collection system, STP expansion/storage, I/I reduction, sewer separation, discharge treatment and bypass of secondary treatment at the STP.

When evaluating the alternatives for the LTCPs, the permittee may use one of two approaches:

1) 'The Presumption Approach' in which the permittee chooses to implement a minimum level of treatment (e.g., 4 or less overflow events per year, at least 85 percent removal of volume/mass of the collected combined sewage flows) that is presumed to meet the water quality-based requirements of the CWA, unless data indicate otherwise. The "Presumption" Approach, in accordance with N.J.A.C 7:14A-11 Appendix C provides the below:

   A program that meets any of the criteria listed below will be presumed to provide an adequate level of control to meet the water quality-based requirements of the CWA, provided the Department determines that such presumption is reasonable in light of the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas described above.

   i. No more than an average of four overflow events (see below) per year from a hydraulically connected system as the result of a precipitation event that does not receive the minimum treatment specified below. These four overflow events shall be calculated over a 60 month rolling average, provided that the Department may allow up to two additional overflow events per year. For the purpose of this criterion, an 'event' is:

      - In a hydraulically connected system that contains only one CSO outfall, multiple periods of overflow are considered one overflow event if the time between periods of overflow is no more than 24 hours.

      - In a hydraulically connected system that contains more than one CSO outfall, multiple periods of overflow from one or more outfalls are considered one overflow event if the time between periods of overflow is no more than 24 hours without a discharge from any outfall.

ii. The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis.

iii. The elimination or removal of no less than the mass of the pollutants, identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling effort, for the volumes that would be eliminated or captured for treatment under Section G.4.f.ii.

Combined sewer overflow remaining after implementation of the NMCs and within the criteria specified in this section in sections ii. and iii. Above shall receive minimum treatment in accordance with the items below.

- Primary clarification (Removal of floatables and settleable solids may be achieved by any combination of treatment technologies or methods that are shown to be equivalent to primary clarification.).

- Solids and floatables disposal.

- Disinfection of effluent, if necessary, to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals, where necessary.

<u>OR</u>

2) The 'Demonstration Approach' in which the permittee demonstrates that its plan is adequate to meet the water quality-based requirements of the CWA. The "Demonstration" Approach, in accordance with N.J.A.C. 7:14A-11 Appendix C provides the below.

A permittee may demonstrate that a selected control program, though not meeting the criteria specified under the Presumption Approach, is adequate to meet the water quality-based requirements of the CWA. The permittee must demonstrate each of the following below.

i. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs.

ii. The CSO discharges remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment.

iii. The planned control program will provide the maximum pollution reduction benefits reasonably attainable.

iv. The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses.

The permittee will be required to evaluate a range of CSO control alternatives, based on their practical and technical feasibility, and the water quality benefits of constructing and implementing various remedial controls and combinations of such controls. The permittee should be prepared to address any future changes in the WQS. For example, on November, 26, 2012, EPA recommended new recreational water quality criteria for pathogens. NJDEP will be evaluating these new criteria and considering a proposal to incorporate them within the next 3 years.

The permit requires the permittee to consider at least the following:

- Green infrastructure which allows for stormwater management close to its source, providing both water quality treatment and some volume control. The volume that is retained onsite and kept out of the sewer system can help delay expensive gray infrastructure maintenance and upgrades. Some examples of green infrastructure measures include, but are not limited to, pervious pavements, street bump-outs, rain gardens, and tree trenches.

- Increased storage capacity in the collection system to store the wastewater until the sewage flows subside sufficiently for the downstream sewers to be able to transport the flow to the STP for treatment;

- STP expansion and/or storage at the plant. Based on information provided by the STP, an evaluation of the capacity of the unit processes must be conducted at the STP and a determination made of whether there is any additional treatment capacity available at the STP. The permittee shall use this information and determine (modeling may be used) the amount of CSO discharge reduction that would be achieved by utilizing the additional treatment capacity while maintaining compliance with all permit limits;

- I/I reduction in the entire collection system that conveys flows to the treatment works. I/I reduction can free up storage capacity or conveyance in the sewer system and/or treatment capacity at the STP. The permittee shall determine the amount of CSO discharge reduction that could be achieved and the feasibility of implementing in the entire system or portions thereof;

- Sewer separation through construction of new sewer lines to separate and remove the stormwater from the sanitary sewer system;

- CSO discharge treatment at individual CSO outfalls; and

- Providing CSO related bypasses of the secondary treatment portion of the STP in accordance with the National Policy.

  The National Policy encourages permittees to consider the use of a bypass of secondary treatment in the evaluation of alternatives. The intentional diversion of waste streams from any portion of a treatment facility, including secondary treatment, is considered a bypass. EPA bypass regulations at 40 CFR 122.41(m) allow for a facility to bypass some or all the flow from its treatment process under specified limited circumstances. Under the regulation, the permittee must show that the bypass was unavoidable to prevent loss of life, personal injury or severe property damage, there was no feasible alternative to the bypass and the permittee submitted the required notices. In addition, the regulation provides that a bypass may be approved only after consideration of adverse effects.

  Under the National Policy, a CSO-related bypass of the secondary treatment portion of the POTW treatment plant for combined sewer flows may be an appropriate alternative for CSO controls that can be considered in certain limited circumstances. For example, EPA suggests that a bypass can be justified if:
  - the permittee can demonstrate that the secondary treatment system is properly operated and maintained;
  - the system has been designed to meet secondary limits for flows greater than the peak dry weather flow, plus an appropriate quantity of wet weather flow;
  - it is either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow; and
  - the permittee can ensure that the discharge will not cause exceedances of WQS.

  Further, in order for the Department to consider a by-pass as a feasible alternative under the LTCP the permittee must address compliance with the requirements of all other applicable regulations,

such as N.J.A.C. 7:14A, N.J.A.C. 7:9B, and N.J.A.C. 7:15. N.J.A.C. 7:14A-23.13(m) prohibits plant designs that propose the use of bypass lines which would circumvent treatment units and allow untreated or partially treated wastewater to be discharged. The Department recognizes that the rule would need to be modified in order to allow bypasses as part of an approved LTCP.

The permittee may refer to Combined Sewer Overflows - Guidance for Long-Term Control Plan (EPA 832-B-95-002) for further information on these alternatives.

5. Cost Performance Considerations

Under the existing individual NJPDES Discharge to Surface Water permit, the permittee was required to develop cost and performance analysis report for specific control alternatives for each CSO. Under this proposed permit action, the permittee will be required to update and submit cost/performance considerations to determine where the increment of pollution reduction diminishes compare to the increased cost, often known as "knee of the curve". If the permittee chooses the Presumption Approach of no more than an average of 4 discharge events per year, the permittee is not required to conduct analysis for the other events (i.e. 0, 7, 10, 20). The permittee can use previous studies in developing cost/performance considerations to the extent that the studies meet the requirements of this permit.

6. Operational Plan

Under this proposed permit action, the permittee will be required to modify the O&M Program and Manual to address the final LTCP CSO control facilities and operating strategies.

7. Maximizing Treatment at the Existing STP

Under this proposed permit action, the permittee will be required to investigate the control alternative of maximizing flow through the STP, including the alternative of bypassing of secondary treatment at the STP.

8. Implementation Schedule

Under this proposed permit action, the permittee will be required to submit a construction and financing schedule for implementation of the LTCP CSO controls. The schedule may be phased and shall consider: addressing areas of overflows, discharges to sensitive areas as highest priority, use impairment of receiving waters, permittee's financial capability, grant/loan availability, user fees and rate structures, funding mechanisms and resources necessary to implement an asset management plan.

As noted in the National Policy, permittees are required to develop and submit their LTCPs "as soon as practicable, but generally within two years after the date of the NPDES permit provision, Section 308 information request, or enforcement action requiring the permittee to develop the plan." However, "NPDES authorities may establish a longer timetable for completion of the long-term CSO control plan on a case-by-case basis to account for site-specific factors which may influence the complexity of the planning process." NJ has determined that due to the fragmented nature of the CSS ownership in this hydraulically connected sewer system, and the extreme complexities of integrated sewer systems involving multiple municipalities and dozens of interdependent outfalls, that a compliance schedule of 36 months is appropriate. However, as noted above, if the permittees work cooperatively to develop one LTCP, the Department will consider extending the compliance schedule for submittal of the final LTCP.

9. Compliance Monitoring Program (CMP)

Under this proposed permit action, the permittee will be required to implement a CMP to verify: baseline and existing conditions, effectiveness of controls, compliance with the WQS and protection of designated uses. The permittee can use previously submitted studies in developing the CMP that shall detail the monitoring protocols. If using the Demonstration Approach, the monitoring must be ongoing ever year,

however, if using the Presumption Approach the monitoring may be reduced during implementation of the CSO controls.

C. Reporting Requirements:

Since the permittee does not own/operate any CSO outfalls, there are no monitoring report requirements at this time.

D. 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.

E. Operator Classification Number:

The specific licensed operator classification requirement for the collection system is not included in the permit, however, as part of the O&M requirements in Part IV.F., the permittee is required to have an appropriately licensed operator as per N.J.A.C. 7:10-13. To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Finance and Construction at (609) 633-1180.

F. Compliance Schedule:

This permit includes a compliance schedule for the submittal of the LTCP which is established at three (3) years from the effective date of the permit (EDP) to allow the permittee sufficient time to coordinate the development of the LTCP with all of the municipalities in the hydraulically connected sewer system. This permit also requires other submittal deadlines to document the permittee's progress toward compliance with the NMC and LTCP of the National Policy and N.J.A.C. 7:14A-11 – Appendix C, in accordance with N.J.A.C. 7:14A-6.4.

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 *Star Ledger* and in the DEP Bulletin.

Contact Information

If you have any questions regarding the CSO conditions contained in this permit action, please contact Tara Klimowicz, Bureau of Surface Water Permitting at (609) 292-4860.

14 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. National CSO Control Policy (Published April 19, 1994, at 59 Federal Register 18688)
5. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A] [B]
6. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A] [B]
7. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A] [B]
8. N.J.A.C. 7:9-5.1 et seq., Wastewater Discharge Requirement [A][B]
9. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A] [B]
10. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [B]

11. Delaware River Basin Commission: Administrative Manual – Part III Water Quality Regulations.
13. Interstate Environmental Commission Regulations, N.J.S.A. 32:18-1 et seq.
14. N.J.S.A. 58:25-23 et/ seq., Sewage Infrastructure Improvement Act

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. New Jersey's 2010 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). [A] [B]
4. "EPA Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991. [A]
5. Draft "Technical Manual for Reclaimed Water for Beneficial Reuse", published by NJDEP, October 2002. [A] [B]

To help permittees and NPDES permitting and WQS authorities implement the provisions of the CSO Control Policy, EPA has developed the following guidance documents:

- Combined Sewer Overflows - Guidance for Long-Term Control Plan (EPA 832-B-95-002)
- Combined Sewer Overflows - Guidance for Nine Minimum Controls (EPA 832-B-95-003)
- Combined Sewer Overflows - Guidance for Screening and Ranking Combined Sewer System Discharges (EPA 832-B-95-004)
- Combined Sewer Overflows - Guidance for Monitoring and Modeling (EPA 832-B-95-005)
- Combined Sewer Overflows - Guidance for Financial Capability Assessment (EPA 832-B-95-006)
- Combined Sewer Overflows - Guidance for Funding Options (EPA 832-B-95-007)
- Combined Sewer Overflows - Guidance for Permit Writers (EPA 832-B-95-008)
- Combined Sewer Overflows - Questions and Answers on Water Quality Standards and the CSO Program (EPA 832-B-95-009)

The 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. National CSO Control Policy
- 3. New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B),
- 4. New Jersey's 2010 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List),
- 5. Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2)
- 6. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15),
- 7. Sludge Quality Assurance Regulations (N.J.A.C. 7:14C),
- 8. Pretreatment Requirements (N.J.A.C. 7:14A-19)

Permits/Applications:

1. NJPDES/DSW Permit Application dated 5/13/2010 [A]
2. Existing NJPDES/DSW Permit NJ0020141, issued 4/1/2005 and effective 6/1/2005 [A]
3. Major Modification NJPDES Permit NJ0020141, issued 6/30/2006 and effective 8/1/2006 [A]
4. Minor Modification NJPDES Permit NJ0020141, issued 6/23/2006 and effective 6/1/2005 [A]
5. Major Modification NJPDES Permit NJ0020141, issued 5/1/2008 and effective 5/1/2008 [A]
6. Minor Modification NJPDES Permit NJ0020141, issued 4/16/2009 and effective 6/1/2009 [A]
7. Renewal of Reuse General Permit NJG0165832, issued 4/26/2012 and effective 5/1/2012 [A]

Correspondences/Submittals:

1. Central Treatment Plant Conveyance and Capacity Analysis, Cost Performance Analysis Report NJPDES Permit No. NJ0020141, prepared by CDM, dated August 2007.

2. Public Participation Report, NJPDES Individual Permit No. NJ0020141, prepared by John N. Rogers, P.E., dated August 2007.
3. Request for Stay letter dated May 20, 2010
4. Combined Sewer Overflow Discharge Characterization Study – System Inventory and Assessment Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.
5. Combined Sewer Overflow Discharge Characterization Study – Service Area Drainage and Land Use Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004.
6. Combined Sewer Overflow Discharge Characterization Study – Monitoring Program Proposal and Work Plan for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated September 2006.
7. Combined Sewer Overflow Discharge Characterization Study for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated September 2007.
8. Public Participation Report for the City of Perth Amboy, NJPDES Permit No. NJ0105023, prepared by Hatch Mott MacDonald, dated April 2007.
9. Long Term Combined Sewer Overflow Control Plan Cost and Performance Analysis Report for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated April 2007 and revised August 2008.

Stipulation of Settlement

1. Stipulation dated January 30, 2008

Meetings/Site Visits:

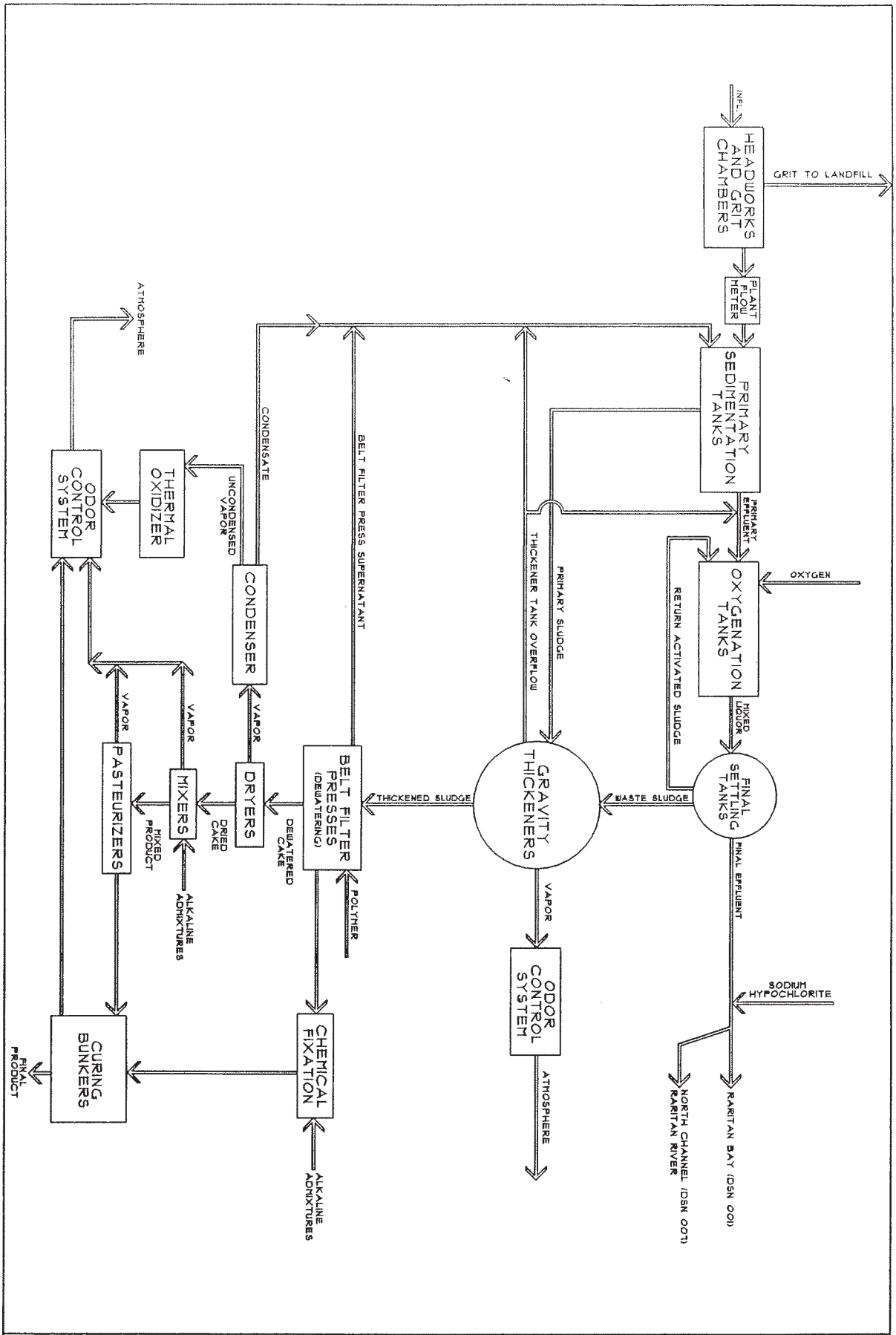
1. CSO Rollout meeting with MCUA on August 19, 2013.

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.

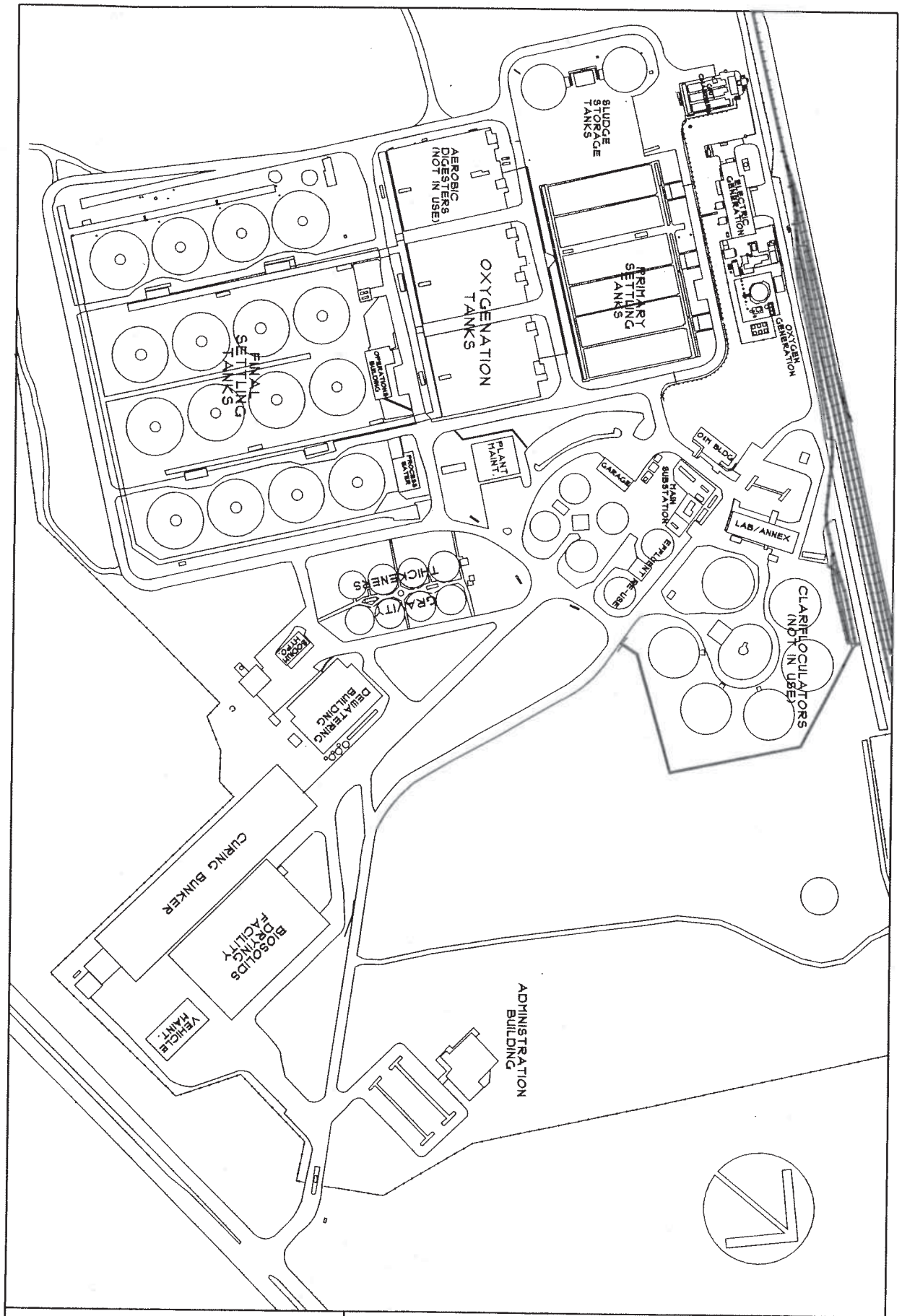
[B] Denotes items that may be found on the New Jersey Department of Environmental Protection (NJDEP) website located at "http://www.state.nj.us/dep/".

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



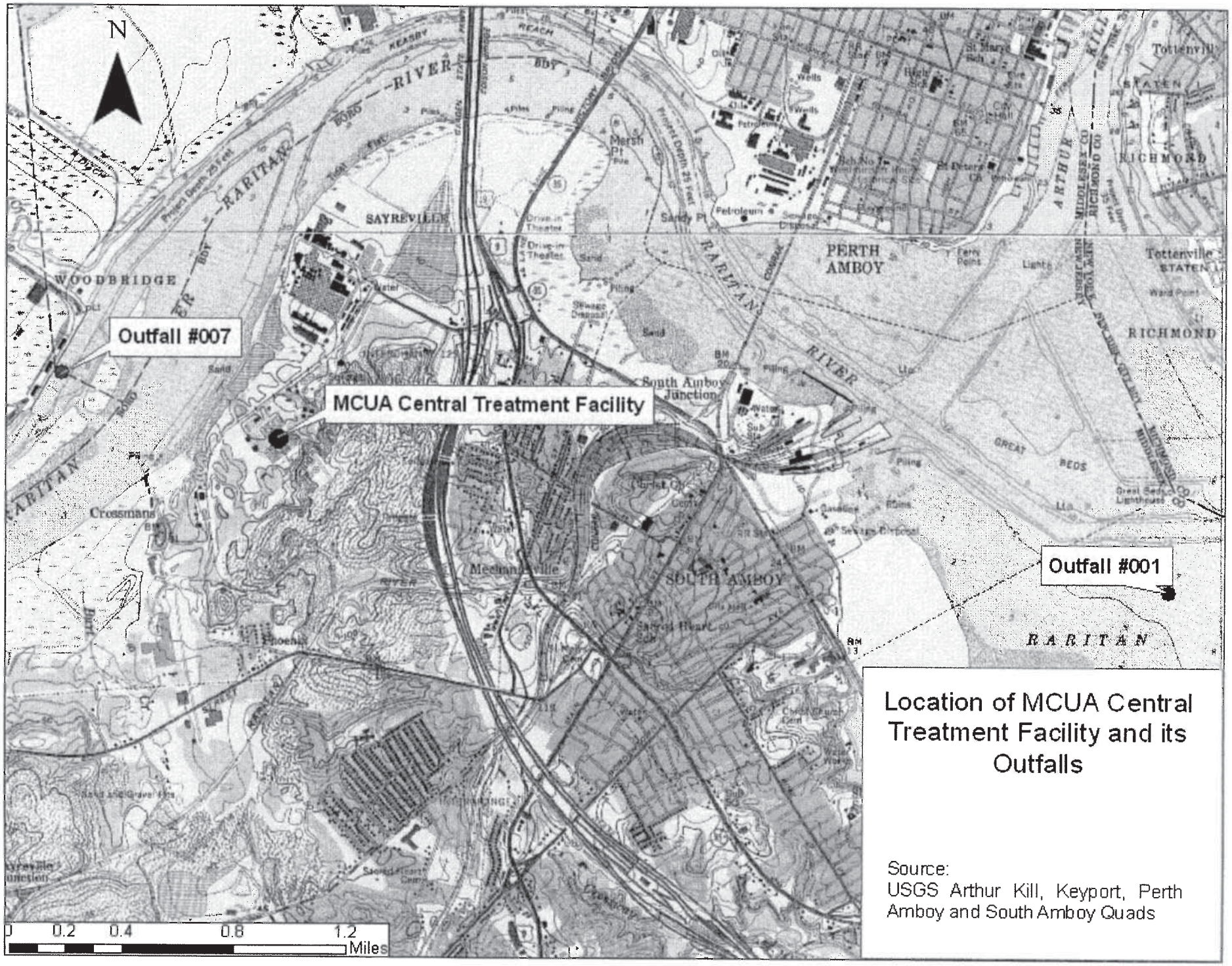
MIDDLESEX COUNTY UTILITIES AUTHORITY
2571 MAIN STREET EXTENSION
SAYREVILLE NJ 08872
PHONE 732-721-3800

MCUA PLANT FLOW DIAGRAM



MIDDLESEX COUNTY UTILITIES AUTHORITY
2571 MAIN STREET EXTENSION
SAYREVILLE NJ 08872
PHONE 732-721-3800

MCUA PLANT LAYOUT



Location of MCUA Central Treatment Facility and its Outfalls

Source:
USGS Arthur Kill, Keyport, Perth Amboy and South Amboy Quads

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. Notifcations 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 condtion for water or waste, except as specifically authorized by a valid NJPDES permit.

PART III
LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
001A Sanitary	Raritan Bay	SE1(C2)	A - Sanitary Wastewater

Location Description

Influent monitoring shall be before any treatment, other than degritting, and before the addition of any internal wastestreams. Effluent monitoring shall be after the last treatment step. (For WET, see Part IV.) Outfall 001A shall discharge treated wastewater to the Raritan Bay, classified as SE1, at Latitude: 40 deg. 28' 52.9" and Longitude: 74deg 15' 11.4".

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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 1 Initial **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/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 1 Initial **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 Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Quarter	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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Enterococci	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	67 Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants Option 1	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	0.065 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 1 Initial **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	*****	*****	*****	*****	5.0 Weekly Av Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	22300	22300		***	40	40			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	4450	4450		***	8	8			
Selenium, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	14000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	25.1 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	5560	5560		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	156000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	280 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	16700	16700		***	30	30			
Mercury Total Recoverable Option 1	Effluent Gross Value	520 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			
Mercury Total Recoverable Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	0.93 Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
1,4-Dichlorobenzene	Effluent Gross Value	REPORT Monthly Average	1080 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.95 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	11100	11100		***	20	20			
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT Monthly Average	17100 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	30.7 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	17100	17100		***	30	30			
Di-n-butyl phthalate	Effluent Gross Value	REPORT Monthly Average	5430 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	9.76 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	11100	11100		***	20	20			
Dichlorobromomethane	Effluent Gross Value	REPORT Monthly Average	907 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.63 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			
Chloroform	Effluent Gross Value	REPORT Monthly Average	66500 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	120 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			
Toluene	Effluent Gross Value	REPORT Monthly Average	5390 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	16.9 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			
Methylene Chloride	Effluent Gross Value	REPORT Monthly Average	56300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	101 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5560	5560		***	10	10			

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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Tetrachloroethylene	Effluent Gross Value	REPORT Monthly Average	1990 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	3.58 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5000	5000		***	9	9			
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT Monthly Average	394 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	0.709 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			
Phenols	Effluent Gross Value	REPORT Monthly Average	13600 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	24500 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			

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

PHASE: 2 Interim **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/Day	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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
BOD, 5-Day (20 oC)	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Quarter	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	35 Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	67 Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants Option 1	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	0.065 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	5.0 Weekly Av Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	22300	22300		***	40	40			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	4450	4450		***	8	8			
Selenium, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	14000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	25.1 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	5560	5560		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	156000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	280 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	16700	16700		***	30	30			
Mercury Total Recoverable Option 1	Effluent Gross Value	520 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Mercury Total Recoverable Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	0.93 Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			
1,4-Dichlorobenzene	Effluent Gross Value	REPORT Monthly Average	1080 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.95 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	11100	11100		***	20	20			
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT Monthly Average	17100 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	30.7 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	17100	17100		***	30	30			
Di-n-butyl phthalate	Effluent Gross Value	REPORT Monthly Average	5430 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	9.76 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	11100	11100		***	20	20			
Dichlorobromomethane	Effluent Gross Value	REPORT Monthly Average	907 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.63 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			
Chloroform	Effluent Gross Value	REPORT Monthly Average	66500 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	120 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			
Toluene	Effluent Gross Value	REPORT Monthly Average	5390 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	16.9 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Methylene Chloride	Effluent Gross Value	REPORT Monthly Average	56300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	101 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5560	5560		***	10	10			
Tetrachloroethylene	Effluent Gross Value	REPORT Monthly Average	1990 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	3.58 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5000	5000		***	9	9			
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT Monthly Average	394 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	0.709 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			
Phenols	Effluent Gross Value	REPORT Monthly Average	13600 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	24500 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 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	***	***		***	***	***			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
BOD, 5-Day (20 oC)	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Report Per Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	16692 Monthly Average	25038 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Quarter	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	35 Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	67 Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants Option 1	Effluent Gross Value	28.3 Monthly Average	68.7 Daily Maximum	KG/DAY	*****	0.051 Monthly Average	0.124 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	0.051 Monthly Average	0.124 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	5 Weekly Av Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	779 Monthly Average	1334 Daily Maximum	KG/DAY	*****	1400 Monthly Average	2398 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	22300	22300		***	40	40			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	441 Monthly Average	623 Daily Maximum	GR/DAY	*****	0.79 Monthly Average	1.12 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	4450	4450		***	8	8			
Selenium, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	14000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	25.1 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	5560	5560		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	156000 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	280 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	16700	16700		***	30	30			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Mercury Total Recoverable Option 1	Effluent Gross Value	520 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			
Mercury Total Recoverable Option 2	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GR/DAY	*****	0.93 Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	556	556		***	1	1			
1,4-Dichlorobenzene	Effluent Gross Value	REPORT Monthly Average	1080 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.63 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	11100	11100		***	20	20			
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT Monthly Average	17100 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	30.7 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	PQL	17100	17100		***	30	30			
Di-n-butyl phthalate	Effluent Gross Value	REPORT Monthly Average	5430 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	9.76 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	11100	11100		***	20	20			
Dichlorobromomethane	Effluent Gross Value	REPORT Monthly Average	907 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	1.63 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			
Chloroform	Effluent Gross Value	REPORT Monthly Average	66500 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	120 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	2780	2780		***	5	5			

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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Toluene	Effluent Gross Value	REPORT Monthly Average	5390 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	16.9 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			
Methylene Chloride	Effluent Gross Value	REPORT Monthly Average	56300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	101 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5560	5560		***	10	10			
Tetrachloroethylene	Effluent Gross Value	REPORT Monthly Average	1990 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	3.58 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	5000	5000		***	9	9			
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT Monthly Average	394 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	0.709 Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	3340	3340		***	6	6			
Phenols	Effluent Gross Value	REPORT Monthly Average	13600 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	24500 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water WCR - Quarterly Reporting Requirements:

Submit a Quarterly WCR: within twenty-five days after the end of every quarterly monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 4: Surface Water WCR - Quarterly 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
Nickel, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	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
Copper, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	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
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	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
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

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
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
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

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
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
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
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
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
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
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
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

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
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
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
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	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
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

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi 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-butylamine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
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
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
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
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

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

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
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
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

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - A - 5: Surface Water WCR - Semi 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-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
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	24 Hour Composite	January thru December
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):
007A Sanitary	North Channel Raritan River	SE1(C2)	A - Sanitary Wastewater

Location Description

Outfall 007A shall only be used when outfall 001A has reached hydraulic capacity. Effluent monitoring shall be after the last treatment step. Outfall 007A shall discharge treated wastewater to the Raritan Bay, classified as SE1, at Latitude: 40 deg. 29' 34.2" and Longitude: 74deg 19' 42.0".

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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Duration Of Discharge	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Flow, Total	Effluent Gross Value	REPORT Monthly Total	*****	MGAL/MON	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Discharge	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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Discharge	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	0.104 Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants	Effl. Adjusted Value	REPORT Monthly Average	57.9 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Duration Of Discharge	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
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:
Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

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

PHASE: 2 Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, Total	Effluent Gross Value	REPORT Monthly Total	*****	MGAL/MON	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	35 Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Discharge	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	0.104 Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants	Effl. Adjusted Value	REPORT Monthly Average	57.9 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			

Table III - B - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Duration Of Discharge	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	Continuous	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:

Please note, during the "1-Initial" phase, all enterococci samples shall be split samples with fecal coliform.

Table III - B - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3 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	***	***		***	***	***			
Flow, Total	Effluent Gross Value	REPORT Monthly Total	*****	MGAL/MON	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	35 Monthly Geo Avg	REPORT Instant Maximum	#/100ML	1/Discharge	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	15 Monthly Average	36.2 Daily Maximum	KG/DAY	*****	0.027 Monthly Average	0.065 Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			
Chlorine Produced Oxidants	Effl. Adjusted Value	REPORT Monthly Average	57.9 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Discharge	Grab
January thru December	MDL	55.6	55.6		***	0.1	0.1			

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
IPPI Influent Pretreatment Req			A - Sanitary Wastewater

Location Description

Influent monitoring shall be before any treatment, other than degritting, and before the addition of any internal wastestreams.

Contributing Waste Types

Sanitary

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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Cyanide, Total (as CN)	Raw Sew/influent	REPORT RQL = 40	UG/L	24 Hour Composite	January thru December
Arsenic, Total (as As)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Beryllium, Total (as Be)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Cadmium, Total (as Cd)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Chromium, Total (as Cr)	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Copper, Total (as Cu)	Raw Sew/influent	REPORT RQL = 0.01	UG/L	24 Hour Composite	January thru December
Lead, Total (as Pb)	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Thallium, Total (as Tl)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Nickel, Total (as Ni)	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Silver, Total (as Ag)	Raw Sew/influent	REPORT RQL = 2	UG/L	24 Hour Composite	January thru December
Zinc, Total (as Zn)	Raw Sew/influent	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Antimony, Total (as Sb)	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Selenium, Total (as Se)	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Mercury, Total (as Hg)	Raw Sew/influent	REPORT RQL = 1	UG/L	24 Hour Composite	January thru December
Acenaphthylene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Acenaphthene	Raw Sew/influent	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
Anthracene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(k)fluoranthene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzo(a)pyrene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Raw Sew/influent	REPORT RQL = 26.5	UG/L	24 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Butyl benzyl phthalate	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Chrysene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Diethyl phthalate	Raw Sew/influent	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Dimethyl phthalate	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Fluoranthene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Fluorene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachlorocyclo-pentadiene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachloroethane	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Isophorone	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
N-nitrosodi-n-propylamine	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
N-nitrosodimethyl-amine	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Nitrobenzene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Phenanthrene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Pyrene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzo(ghi)perylene	Raw Sew/influent	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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)anthracene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,2-Dichlorobenzene	Raw Sew/influent	REPORT RQL = 9	UG/L	24 Hour Composite	January thru December
1,2,4-Trichloro-benzene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Dibenzo(a,h) anthracene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
1,3-Dichlorobenzene	Raw Sew/influent	REPORT RQL = 9	UG/L	24 Hour Composite	January thru December
1,4-Dichlorobenzene	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
2-Chloronaphthalene	Raw Sew/influent	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
2,4-Dinitrotoluene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
2,6-Dinitrotoluene	Raw Sew/influent	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Raw Sew/influent	REPORT RQL = 60	UG/L	24 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Raw Sew/influent	REPORT RQL = 9.5	UG/L	24 Hour Composite	January thru December
Naphthalene	Raw Sew/influent	REPORT RQL = 8	UG/L	24 Hour Composite	January thru December
Bis(2-ethylhexyl) phthalate	Raw Sew/influent	REPORT RQL = 30	UG/L	24 Hour Composite	January thru December
Di-n-butyl phthalate	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
Benzidine	Raw Sew/influent	REPORT RQL = 50	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Hexachlorobenzene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Hexachlorobutadiene	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,3-Dichloropropene	Raw Sew/influent	REPORT RQL = 7	UG/L	24 Hour Composite	January thru December
Dichlorobromomethane	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Carbon Tetrachloride	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
1,2-Dichloroethane	Raw Sew/influent	REPORT RQL = 3	UG/L	24 Hour Composite	January thru December
Bromoform	Raw Sew/influent	REPORT RQL = 8	UG/L	24 Hour Composite	January thru December
Chloroform	Raw Sew/influent	REPORT RQL = 5	UG/L	24 Hour Composite	January thru December
Toluene	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
Benzene	Raw Sew/influent	REPORT RQL = 7	UG/L	24 Hour Composite	January thru December
Acrolein	Raw Sew/influent	REPORT RQL = 50	UG/L	24 Hour Composite	January thru December
Acrylonitrile	Raw Sew/influent	REPORT RQL = 50	UG/L	24 Hour Composite	January thru December
Chlorobenzene	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
Chlorodibromomethane	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
Ethylbenzene	Raw Sew/influent	REPORT RQL = 6	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Methyl Bromide	Raw Sew/influent	REPORT RQL = 9	UG/L	24 Hour Composite	January thru December
Methyl Chloride	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Methylene Chloride	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
Tetrachloroethylene	Raw Sew/influent	REPORT RQL = 9	UG/L	24 Hour Composite	January thru December
1,1-Dichloroethane	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
1,1-Dichloroethylene	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
1,1,1-Trichloro- ethane	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
1,1,2-Trichloro- ethane	Raw Sew/influent	REPORT RQL = 6	UG/L	24 Hour Composite	January thru December
1,1,2,2-Tetrachloro- ethane	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
1,2-Dichloropropane	Raw Sew/influent	REPORT RQL = 5	UG/L	24 Hour Composite	January thru December
1,2-trans-Dichloro- ethylene	Raw Sew/influent	REPORT RQL = 4	UG/L	24 Hour Composite	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Vinyl Chloride	Raw Sew/influent	REPORT RQL = 10	UG/L	24 Hour Composite	January thru December
Trichloroethylene	Raw Sew/influent	REPORT RQL = 5	UG/L	24 Hour Composite	January thru December
Chloroethane	Raw Sew/influent	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Parachloro-m-cresol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Phenols	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Delta BHC, Total (ug/l)	Raw Sew/influent	REPORT RQL = 0.02	*****	24 Hour Composite	January thru December
Endosulfan Sulfate	Raw Sew/influent	REPORT RQL = 0.08	UG/L	24 Hour Composite	January thru December
Beta Endosulfan	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Alpha Endosulfan	Raw Sew/influent	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Endrin Aldehyde	Raw Sew/influent	REPORT RQL = 0.1	UG/L	24 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
4,4'-DDD(p,p'-DDD)	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Aldrin	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Alpha BHC	Raw Sew/influent	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Beta BHC	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Gamma BHC (lindane),	Raw Sew/influent	REPORT RQL = 0.03	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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
Chlordane	Raw Sew/influent	REPORT RQL = 0.2	UG/L	24 Hour Composite	January thru December
Dieldrin	Raw Sew/influent	REPORT RQL = 0.03	UG/L	24 Hour Composite	January thru December
Endrin	Raw Sew/influent	REPORT RQL = 0.04	UG/L	24 Hour Composite	January thru December
Toxaphene	Raw Sew/influent	REPORT RQL = 1	UG/L	24 Hour Composite	January thru December
Heptachlor	Raw Sew/influent	REPORT RQL = 0.02	UG/L	24 Hour Composite	January thru December
Heptachlor Epoxide	Raw Sew/influent	REPORT RQL = 0.4	UG/L	24 Hour Composite	January thru December
PCB-1221 (Arochlor 1221)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1242 (Arochlor 1242)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1254 (Arochlor 1254)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2-Chlorophenol	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
2-Nitrophenol	Raw Sew/influent	REPORT RQL = 18	UG/L	24 Hour Composite	January thru December
2,4-Dichlorophenol	Raw Sew/influent	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). Pursuant to N.J.A.C. 7:14A-19.3(c) 7i, the influent sample for priority pollutant scans shall be collected to coincide with the effluent and sludge monitoring for priority pollutants.

Table III - C - 1: 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-Dimethylphenol	Raw Sew/influent	REPORT RQL = 13.5	UG/L	24 Hour Composite	January thru December
2,4-Dinitrophenol	Raw Sew/influent	REPORT RQL = 40	UG/L	24 Hour Composite	January thru December
2,4,6-Trichloro- phenol	Raw Sew/influent	REPORT RQL = 20	UG/L	24 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Raw Sew/influent	REPORT RQL = 21	UG/L	24 Hour Composite	January thru December
4-Nitrophenol	Raw Sew/influent	REPORT RQL = 12	UG/L	24 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Raw Sew/influent	REPORT RQL = 60	UG/L	24 Hour Composite	January thru December
Phenol Single Compound	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Pentachlorophenol	Raw Sew/influent	REPORT RQL = 30	UG/L	24 Hour 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. QLs include, but are not limited to, Recommended Quantification Levels (RQLs) and Method Detection Levels (MDLs). 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. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

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

2. Rainfall Monitoring Requirements

a. The permittee shall monitor and report rainfall data and data regarding the dates and times outfall 007A was utilized. The rainfall data shall include the dates it rained and the amount of rain (within the vicinity of the treatment facility). The outfall data shall include the date and times outfall 007A was opened and closed. This data shall be included as an attachment to the DMRs for outfall 007A.

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
Mail Code - 401-02B
Division of Water Quality
Office of Permit Management
P.O. Box 420
Trenton, New Jersey 08625-0420

ii. (if requested by the Water Compliance and Enforcement Bureau)
Mail Code - 44-03
NJDEP: Central Bureau of Water Compliance and Enforcement
4 Station Plaza - P.O. Box 420
Trenton, New Jersey 08625-0420

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 no discharge occurs from outfall 007A, the permittee is required to report "NODI" on the surface water DMR for outfall 007A.

2. Special Reporting Requirements for Mercury

a. If on the day the 24-hour average composite sample for compliance is collected, the 24-hour daily average flow value is less than or equal to the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the actual calculated loading value on the DMR under Option 1 and "CODE=N" under Option 2.

b. If on the day the 24-hour average composite sample for compliance is collected, the 24-hour daily average flow is greater than the flow value used to calculate the loading limitation (147 MGD), then the permittee is required to report the measured concentration value on the DMR under Option 2 and "CODE=N" under Option 1.

3. Special Reporting Requirements for Chlorine Produced Oxidants

a. Given the MCUA's unique treatment system and layout with respect to disinfection, the Department has established this section to regulate Chlorine Produced Oxidants (CPO).

b. During the Final period, CPO limitations are required as detailed below and in Part III.

i. Under normal discharge conditions, when MCUA is not discharging from outfall 007A, CPO loading and concentration shall be limited through the DMR for outfall 001A under Option1.

ii. Under other discharge conditions, when MCUA is discharging from Outfall 007A, CPO concentration shall be limited through the DMR for outfall 001A under Option 2. Additionally, CPO concentration shall be limited through the DMR for Outfall 007A, while CPO loading shall be limited through the DMR for outfall 007A as an "Effluent Adjusted Value".

iii. The CPO Effluent Adjusted Value concentration shall be calculated as follows:.

iv. CPO Effluent Adjusted Value concentration = CPO 001A concentration * (001A Flow/(001A Flow + 007A Flow)) + CPO 007A concentration * (007A Flow/(007A Flow + 001A Flow)).

v. The CPO Effluent Adjusted Value loading shall be calculated as follows:.

vi. CPO Effluent Adjusted Value loading = CPO Effluent Adjusted Value concentration * 3.785 L/gal * (001A Flow + 007A Flow).

D. SUBMITTALS

1. Standard Submittal Requirements

a. The permittee shall prepare/update the Operation and Maintenance (O&M) Manual including an emergency plan in accordance with requirements of N.J.A.C. 7:14A-6.12(c).

b. Submit a certification that an Operations and Maintenance (O&M) Manual has been prepared: within 90 days from the effective date of the permit (EDP).

c. 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. Compliance Schedule Progress Reports

a. In accordance with N.J.A.C. 7:14A-6.4(a), a schedule of compliance has been included for enterococci, CPO and arsenic, including interim deadlines for annual progress reports that outline the progress towards compliance with the conditions of the permit.

   i. Submit a Compliance Schedule Progress Report: within 12 months from the effective date of the permit (EDP).

   ii. Submit a Compliance Schedule Progress Report: within 24 months from the effective date of the permit (EDP).

b. The compliance schedule progress report(s) shall be submitted to the following Departmental entities:

   i. NJDEP: Division of Water Quality
   Mail Code - 401-02B
   Bureau of Surface Water Permitting
   P.O. Box 420
   Trenton, New Jersey 08625-0420

   ii. Mail Code - 44-03
   NJDEP: Central Bureau of Water Compliance and Enforcement
   4 Station Plaza - P.O. Box 420
   Trenton, New Jersey 08625-0420

3. Polychlorinated Biphenyls (PCB) Monitoring

a. The permittee shall perform sampling for the 209 PCB congeners within 24 months after the effective date of the permit.

   i. The permittee shall perform three dry weather and three wet weather samples on the facility's main outfall.

   ii. Dry weather sampling shall be conducted when less than 0.1 inches of rainfall has occurred within the previous 72 hours. (For industrials, add)During dry weather, for industrial facilities, the permittee shall sample the process wastewater outfall.

   iii. Wet weather sampling shall be performed within 72 hours after the onset of a precipitation event in which at least 0.1 inches of rainfall has occurred. Wet weather conditions are defined as following the onset of a precipitation event of 0.1 inches or greater and an increase in wastewater flow, provided that no rainfall (defined as less than 0.1 inches) has occured within the previous 72 hours. Sampling should start no sooner than two hours prior to the start of the rising hydrograph or no later than 30 minutes after the start of the rising hydrograph for the discharge.

   iv. All samples shall be collected at least 30 days after the previous sampling event. No more than two samples (one wet and one dry) shall be collected in each quarter of the year or the same quarter of the following year.

   v. All samples shall be performed during periods which are representative of normal facility operations.

   vi. All sampling shall be performed using the most recent version of USEPA Method 1668, Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS, as found at EPA 40 CFR Part 136.

vii. Dry weather samples shall be 24-hour time-weighted composite samples at a frequency of not greater than one aliquot every hour for a nominal sample volume of 2 liters for both the sample and the field replicate.

viii. Wet weather samples shall consist of a two liter grab sample collected into a laboratory supplied bottle within 30 minutes of the start of the discharge, sealed and stored at between 0-4 degrees C for shipment. A replicate sample will be collected and treated in the same manner as the sample.

ix. Submit the Final PCB Sampling Report: within 24 months from the effective date of this document.

x. The Final Report shall be submitted in electronic format on a compact disc in EXCEL format and shall include a summary report.

xi. Final Reports shall be submitted to: Attn:
Melisse Carasia Auriti
Bureau of Surface Water Permitting
New Jersey Department of Environmental Protection
Mailcode: 401-02B
401 East State Street,
PO Box 420,Trenton, NJ 08625-0420

b. Frequency Reduction, Suspension, Elimination of Monitoring

i. If sampling demonstrates non-detectable levels in the effluent, the permittee may request a frequency reduction of the monitoring.

ii. If the Department determines that a PMP will be necessary for its facility, the permittee may contact the Department about the possibility of eliminating the sampling described above.

c. PCB Pollutant Minimization Plan (PMP) Requirement

i. If, based on the review of the Final Report, the Department determines that a PMP is required, the permittee shall prepare and submit a PMP to the Department by the date specified in the Department's determination letter.

ii. The permittee shall implement the PMP within 30 days after written notification by the Department that the PMP is complete.

iii. The PMP shall be developed to achieve maximum practical reduction in accordance with the PMP Technical Manual.

d. PCB PMP Annual Report Requirement

i. The permittee shall submit an annual report in accordance with the Annual Report Guidance Document every 12 months from the implementation of the PMP.

ii. Any revisions to the PMP as a result of the ongoing work shall be reported in the annual report.

iii. The annual report shall contain, at a minimum, a detailed discussion of the specific progress and actions taken by the permittee during the previous twelve month period that addresses PCB loadings and implementation of the PMP.

E. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location(s) 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 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 147 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 Construction and Connection Permits at (609) 633-1169.

   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. This permit includes multiple phases for DSN 001A and 007A.
   The "1-Initial" phase limitation and monitoring conditions are effective from the effective date of the permit (EDP) until EDP + 12 months. "2-Interim" phase limitation and monitoring conditions become effective from EDP + 12 months to EDP + 36 months. "3-Final" phase limitations and monitoring become effective on EDP + 36 months.

b. Wastewater Characterization Report (WCR) Form Requirements

   i. The final effluent monitoring conditions contained in PART III for DSN 001A 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 - Acute Whole Effluent Toxicity

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

c. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, 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.

d. 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.

e. The permittee shall resubmit an Acute Methodology Questionnaire within 60 days of any change in laboratory.

f. Submit an acute 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.

g. Test reports shall be submitted to:

   i. New Jersey Department of Environmental Protection
   401-02B
   Division of Water Quality
   Bureau of Surface Water Permitting
   401 East State Street
   P.O. Box 420
   Trenton, New Jersey 08625-0420

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 or action level specified in Part III of this permit.

   i. If the exceedence of the toxicity limit or action level 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 or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. 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 or action level.

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

c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedence of the toxicity limit or action level 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 shall 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 or action level 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 or action level 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 or action level 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 or action level in Part III in four consecutive toxicity tests.

ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit or action level 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 A 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.

8. RWBR Requirements for Public Access

a. The Public Access reuse types authorized by this permit are those approved in Appendix A. 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 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.

d. Monitoring of the diverted public access RWBR 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. 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.

v. 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.

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 A. 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. 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 A. 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 A. 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.

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.

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, Mail Code-401-02B, Division of Water Quality, Bureau of Surface Water Permitting, P.O. Box 420, 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. General Requirements

a. The Permittee has developed an industrial pretreatment program pursuant to the General Pretreatment Regulations 40 CFR Part 403 and N.J.A.C. 7:14A-1 et seq. The Permittee shall implement and enforce its approved pretreatment program to prevent the introduction of pollutants into its system which would:

i. interfere with attainment of the effluent limitations contained in the permittee's NJPDES permit;

ii. pass through the treatment works and impair the water quality of the receiving stream; or

iii. affect sludge quality so as to interfere with the use or management of the municipal sludge.

b. The Permittee shall comply with the public participation and notification requirements, including but not limited to, those specified in N.J.A.C. 7:14A-19.10, and 40 CFR Part 25.

c. The Permittee shall secure and maintain sufficient resources and qualified personnel to carry out the program implementation procedures described in this permit.

2. Identify and Locate Industrial Users

a. The Permittee shall update its inventory of indirect users at a frequency and diligence adequate to ensure proper identification of indirect users subject to pretreatment standards, appropriate characterization of the nature of their discharges, and correct designation of indirect users as categorical, significant/major, or other regulated. At a minimum, this inventory shall be updated annually and shall be included in the Pretreatment Program 40 CFR Part 403 Annual Report.

b. The Permittee shall notify an indirect user of pretreatment standards and requirements within thirty (30) days of the determination of the indirect user being subject to regulation under the pretreatment program.

3. Program Modifications

a. The Permittee shall notify the Bureau of Pretreatment and Residuals (BPR) of all substantial industrial pretreatment program (IPP) modifications, as defined under 40 CFR 403.18(b), and comply with the program modification requirements under N.J.A.C. 7:14A-19.9. The Permittee must await formal approval from the BPR before implementing substantial program modifications.

b. For non-substantial program modifications, the Permittee shall provide to the BPR the information required under N.J.A.C. 7:14A-19.9(b). The Permittee, as required by 40 CFR 403.18(d)(1), must submit this information to the BPR at least 45 days prior to implementation. Modifications that are not considered substantial are deemed approved unless the Department notifies the Permittee within 45 days that the modifications are not approved.

4. Develop Local Limits

a. The Permittee has developed and shall enforce local limits as required by N.J.A.C. 7:14A-19.7.

b. The Permittee shall submit a written technical evaluation of the need to revise local limits as required under N.J.A.C. 7:14A-19.7(f).

c. The written technical evalulation required in b. above shall be submitted: within 6 months from the effective date of the permit (EDP).

5. Issue IPP Permits

a. The Permittee must issue an individual IPP Permit to those facilities which are classified as significant industrial users (SIUs) as defined in the MCUA rules and regulations.

b. These individual IPP Permits must contain the minimum requirements as specified under N.J.A.C. 7:14A-19.8(b).

c. The Permittee shall issue a draft IPP Permit to a newly identified (i.e. currently discharging) SIUs within 180 days of identifying that IU.

   i. New SIUs shall receive an IPP Permit prior to commencement of discharge.

   ii. The Permittee shall issue or reissue the IPP Permits, in absence of litigation and/or enforcement action(s) initiated by the Permittee, within one hundred and eighty (180) days of the expiration date of the IPP Permit previously issued to an existing industrial user.

6. Perform Compliance Monitoring and Inspections

a. The Permittee shall randomly inspect indirect users and randomly sample and analyze indirect user effluents at a frequency commensurate with the character, consistency, and volume of the contribution. However, the frequency of sampling shall be adequate to determine the compliance status of the indirect user exclusive of self-monitoring data submitted by the user. Specifically, the frequency of inspection and sampling of all SIUs as defined by the MCUA Rules and Regulations, shall be no less than once per year for inspection and no less than once per year for sampling. Also, in accordance with N.J.A.C. 7:14A-19.6(a)1, facilities which have an IPP permit from the POTW but do not meet the POTW's definition of SIU, and are not CIUs, must be inspected by the POTW once per year and must be sampled by the POTW at least once every three (3) years.

b. Sample collection and analysis and the gathering of other compliance data shall be performed with sufficient care to produce evidence admissible in judicial enforcement proceedings.

7. Take Enforcement Actions

a. The permittee shall take enforcement actions based upon indirect users' noncompliance in accordance with its approved enforcement response plan.

8. Perform Data Management and Record Keeping

a. The Permittee shall develop and maintain a data management system which includes industrial user inventory, characterization of discharge, compliance status, IPP permit status, and enforcement actions.

b. The Permittee shall retain for a minimum of five (5) years all records of monitoring activities and results (whether or not such activities are required by this permit) and shall make such records available to EPA and the State upon request.

9. Notification Requirements

a. The Permittee shall notify its significant industrial users in writing of their obligation to comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA).

10. Pretreatment Annual Report

a. The Permittee shall submit a report annually to the Bureau of Pretreatment and Residuals describing the Permittee's pretreatment activities for the twelve (12) month period from June 1 through May 31. In the event that the Permittee is not in compliance with any conditions or requirements of this permit, the Permittee shall also include the reason for noncompliance and state how and when the Permittee shall comply with such conditions and requirements.

b. Submit the Annual Pretreatment Program Report: by July 1 of each year beginning from the effective date of the permit (EDP).

i. a summary of analytical results of the priority pollutant scans performed on the Delegated Local Agency's (DLA) influent, effluent, and sludge;

ii. a discussion of upset, interference, or pass through incidents, if any, at the DLA treatment plant(s) which the Permittee knows or suspects were caused by indirect users of the DLA system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken, and, if known, the name and address of the indirect user(s) responsible;

iii. an updated list of the Permittee's industrial users including their names and addresses, and a list of deletions and additions. The Permittee shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal categorical standards and which set(s) of standards are applicable; significant/major non-categorical IUs (as defined by the DLA); and other regulated non-categorical industries. The Permittee shall characterize the compliance status of each industrial user with respect to the discharge limitations and reporting requirements;

iv. a summary of the inspection and sampling activities conducted by the Permittee during the period covered by the annual report to gather information and data regarding industrial users;

v. a summary of the compliance and enforcement activities during the period covered by the annual report. The summary shall include administrative and legal/judicial actions initiated by the permittee during the period noted;

vi. a description of any significant changes in operating the pretreatment program which differ from the information in the Permittee's approved DLA pretreatment program including, but not limited to, changes concerning:
    (1) the program's administrative structure
    (2) local industrial discharge limitations
    (3) monitoring program or monitoring frequencies
    (4) Legal authority or enforcement policy
    (5) funding mechanisms
    (6) resource requirements
    (7) staffing levels;

vii. a summary of the annual pretreatment funding, including salaries (as a lump sum), analytical costs for both in-house and contract analyses, equipment costs, and other expenditures associates with implementation of the pretreatment program. The Permittee must also provide a manpower estimate in full-time equivalents (FTEs);

viii. a summary of public participation activities to involve and inform the public. This shall include a copy of the annual publication of significant non-compliance, if such publication was needed to comply with N.J.A.C. 7:14A-19.10(b); and

ix. other information as required and described in the NJDEP 403 Annual Report Guidance.

x. Two copies of the Pretreatment Program Annual Report shall be submitted to the BPR in the form prescribed in that guidance. The reports shall be submitted to:
NJDEP, Mail Code - 401-02B
Bureau of Pretreatment and Residuals
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

11. CWEA Annual Report

a. The Permittee must submit information required by N.J.A.C. 7:14A-19.6(c), (d) and (e) pertaining to the implementation of the DLA's approved pretreatment program.

b. Submit the CWEA Annual Report: by February 1 of each year beginning from the effective date of the permit (EDP).

c. Two copies of this report shall be submitted to:
NJDEP, Mail Code 401-02B, Bureau of Pretreatment and Residuals
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

12. Grace Period Annual Report

a. The permittee must submit the information required by N.J.A.C. 7:14A-19.6(h) and (i) pertaining to implementation of the DLA's approved pretreatment program.

b. Submit the Grace Period Annual Report: by March 1 of each year beginning from the effective date of the permit (EDP).

c. Two copies of this report shall be submitted to:
NJDEP, Mail Code 401-02B, Bureau of Pretreatment and Residuals
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

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.

3. Removal or Modification of Final WQBELs or Criteria End-of-Pipe Effluent Limitations for Chemical Specific Toxic Pollutants

a. The Department will consider proposing to remove or modify a toxic pollutant's newly imposed final effluent limitation from the permit if any or all of the information in item "b" below is submitted for Departmental review and consideration.

b. Items that will be considered include, but are not limited to:

i. Submission of additional effluent data (minimum of 2.5 consecutive years of monthly data) using an approved quantification level equal to or better than the Department?s Recommended Quantification Level (RQL).

ii. Acceptable site-specific ambient data (e.g. hardness, pollutant specific data) collected in accordance with a NJDEP approved work plan.

iii. Acceptable site-specific translator values developed in accordance with a NJDEP approved work plan.

iv. Acceptable site-specific criteria developed in accordance with a NJDEP approved work plan.

c. All studies require a NJDEP approved workplan that shall be submitted to the Department for approval on or before the effective date of the permit (EDP) + 6 months.

i. It is recommended that all ambient monitoring associated with the establishment of hardness values, pollutant concentrations, and site specific translator values be conducted under the confines of a single work plan.

d. All final study reports and/or additional information shall be submitted to the Department on or before EDP + 36 months.

e. The Department will review all submitted information and will either propose a permit action to remove/modify the final effluent limitation(s) or deny the modification request.

NOTES AND DEFINITIONS

Combined Sewer Management

A. NOTES

1. These notes are specific to this permit.

a. The permit conditions in the CSO section apply only to the combined sewer system and related discharges.

2. CSO related resources are listed below with a link to the current webpage.

a. NJDEP's CSO main website and related links can be found at http://www.nj.gov/dep/dwq/cso.htm.
b. EPA's Combined Sewer Overflows Principal Guidance Documents can be found at http://cfpub.epa.gov/npdes/cso/guidedocs.cfm.
c. The Nine Minimum Control requirements from the National CSO Policy along with EPA's guidance document can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://cfpub.epa.gov/npdes/cso/ninecontrols.cfm?program_id=5.
d. The Nine elements of a Long Term Control Plan from the National CSO Policy along with EPA's guidance document can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://cfpub.epa.gov/npdes/cso/ltplan.cfm.
e. EPA's Post Construction Compliance Monitoring Guidance document can be found at http://www.epa.gov/npdes/pubs/final_cso_pccm_guidance.pdf.
f. EPA's Guidance: Coordinating Combined Sewer Overflow (CSO) Long-Term Planning with Water Quality Standards Reviews (PDF).
g. EPA's Capacity, management, operation and maintenance (CMOM) guidance document can be found at http://www.epa.gov/npdes/pubs/cmom_5.pdf.
h. Dry-Weather Deposition and Flushing for Combined Sewer Overflow Pollution Control: http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi?Dockey=30000821.PDF.
i. Combined sewer overflow control (manual): http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi?Dockey=30004MAO.PDF.
j. EPA's Storm Water and Combined Sewer Overflows Publications can be found at http://water.epa.gov/polwaste/wastewater/StormwaterPubs.cfm.

B. DEFINITIONS

1. These definitions are specific only to this permit.

a. "Dry weather overflow (DWO)" means a combined sewer overflow that cannot be attributed to a precipitation event, including snow melt, within the hydraulically connected system. DWOs can include flows from one or more of the following: domestic sewage, ground water infiltration, commercial and industrial wastewaters, and any other non-precipitation event related flows (e.g., discharge of tidal infiltration and/or any connections downstream of the regulator to the outfall pipe).

b. "Green Infrastructure" means methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils; or to be stored for reuse. Green infrastructure includes, but is not limited to, pervious paving, bioretention basins, vegetated swales, and cisterns.

c. "Hydraulically connected system" means the entire collection system that conveys flows to one Sewage Treatment Plant (STP). On a case-by-case basis, the permittee, in consultation with the Department, may segment a larger hydraulically connected system into a series of smaller inter-connected systems, based upon the specific nature of the sewer system layout, pump stations, gradients, locations of CSOs and other physical features which support such a sub area. A hydraulically connected system could include multiple municipalities, comprised of both combined and separate sewers.

C. NINE MINIMUM CONTROL REQUIREMENTS

1. **Proper operation and regular maintenance programs for the sewer system and the CSOs.**
2. **Maximum use of the collection system for storage.**
3. **Review and modification of pretreatment requirements to assure CSO impacts are minimized.**
4. **Maximization of flow to the POTW for treatment.**
5. **Prohibition of CSOs during dry weather.**
6. **Control of solid and floatable materials in CSOs.**
7. **Pollution prevention.**
8. **Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.**
9. **Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.**

D. NINE ELEMENTS OF THE LONG TERM CONTROL PLAN

1. **Characterization, Monitoring, and Modeling of the Combined Sewer Systems.**
2. **Public Participation.**
3. **Consideration of Sensitive Areas.**
4. **Evaluation of Alternatives.**
5. **Cost/Performance Considerations.**
6. **Operational Plan.**
7. **Maximizing Treatment at the Existing POTW Treatment Plant.**

8. Implementation Schedule.

9. Post-Construction Compliance Monitoring Program.

SPECIFIC REQUIREMENTS: NARRATIVE

Combined Sewer Management

A. MONITORING REQUIREMENTS

1. CSO Monitoring Requirements

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

b. All monitoring 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.

c. Discharges shall be directly monitored or predicted using a DEP approved up-to-date model.

B. RECORDKEEPING

1. CSO Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and any other methods of monitoring which may be employed, 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. The permittee shall retain records to document implementation of the Nine Minimum Controls (NMC) and Long Term Control Plan (LTCP) requirements in Sections F. and G., and shall utilize this information when preparing and submitting progress reports required in Section D, including residential complaints, inspection records, maintenance records. This information shall be made available to the Department upon request.

C. REPORTING

1. CSO Reporting Requirements

a. Since the permittee does not own/operate any CSO outfalls, there are no CSO monitoring report requirements at this time.

D. SUBMITTALS

1. CSO Submittal Requirements

a. The permittee shall correct all deficiencies cited by the Department and submit a revised approvable document within 30 days of notification of the deficiencies by the Department.

b. All reports submitted to the Department pursuant to the requirements of this permit shall comply with the signatory requirements of N.J.A.C. 7:14A-4.9., and contain the following certification.

i. "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information."

c. Since multiple municipalities/permittees own separate portions of the hydraulically connected sewer system, the permittee shall work cooperatively with all other appropriate municipalities/permittees in the hydraulically connected sewer system to ensure that the NMC & LTCP activities are being developed and implemented consistently. The permittee shall identify their joint and separate responsibilities with all other appropriate municipalities/permittees in the hydraulically connected sewer system regarding implementation of the NMCs and LTCPs.

The permittee shall summarize its construction related activities, as well as those reported to them by the other permittees in their service communities, and notify all parties of any construction related activities in the hydraulically connected collection system on a quarterly basis. The permittee shall make these construction related activities available publically on their website.

d. The permittee shall submit all information required by or related to this permit via email or other electronic format acceptable to the Department to NJCSOProgram@dep.state.nj.us and to the permittee's enforcement inspector. The Department cannot accept any file larger than 20 megabytes (MB). Any submission larger than that must be broken into files less than 20MB and sent separately.

2. Updated Nine Minimum Controls Submittal Requirements

a. The permittee shall submit a PDF of a sewer map depicting the actual locations of the separate and combined sanitary sewers, storm sewers owned/operated by the permittee: on or before EDP + 4 months. This map shall identify flow direction and manhole invert elevations.

3. Long Term Control Plan (LTCP) Submittal Requirements

a. The Department encourages a single LTCP to be developed and submitted on behalf of all of the permittees in a hydraulically connected sewer system. If the STP and the hydraulically connected municipalities work cooperatively to develop and implement a single LTCP, the permittee may request an extension of time to the LTCP compliance schedule due dates.

b. The permittee shall develop an approvable LTCP that will include the elements contained in Section G. The LTCP shall consist of the following steps and be submitted according to the schedule below.

i. Step 1a – System Characterization Workplan for the LTCP - In accordance with Section G.1., the permittee shall submit an approvable system characterization workplan: on or before EDP + 3 months.

ii. Step 1b - In accordance with G.1., G.2. and G.3., the permittee shall submit the System Characterization Report, the Public Participation Process, and Consideration of Sensitive Areas of the LTCP: on or before EDP + 12 months.

iii. Step 2 - Development and Evaluation of Alternatives for the LTCP - In accordance with Sections G.2. through G.5. and G.9., the permittee shall submit an approvable Development and Evaluation of Alternatives Report on or before EDP + 24 months.

iv. Step 3 - Selection and Implementation of the LTCP: In accordance with Sections G.2. and G.6. through G.9., the permittee shall submit an approvable Selection and Implementation of Alternatives Report: on or before EDP + 36 months.

v. Upon Department approval of the LTCP, the permittee shall begin implementation of the LTCP in accordance with the schedule contained therein.

c. In accordance with Section G.9., the permittee shall submit an approvable baseline Compliance Monitoring Program (CMP) work plan: on or before EDP + 3 months.

d. In accordance with Section G.9. and the approved work plan, the permittee shall submit an approvable baseline CMP Report and data: on or before EDP + 12 months.

4. CSO Progress Report Submittal Requirements

a. The permittee shall submit Progress Reports: within twenty-five (25) days after the end of every quarter beginning on the effective date of the permit (EDP).

b. The Progress Reports shall be prepared in accordance with the following requirements.

i. The Progress Reports shall follow the outline structure of the permit requirements in Sections F. and G.

ii. The Progress Reports shall include a summary of all required information, CSO control measures implemented by the permittee to comply with the NMCs, a prioritized schedule for additional CSO control measures to be implemented, and the effectiveness of the implemented CSO control measures, pursuant to this permit for the previous calendar quarter. The first Progress Report shall include a summary of all CSO control measures implemented to date and the effectiveness of those control measures.

iii. Each Progress Report must include a verification that the Operation and Maintenance Manual, including the SOPs, Asset Management Plan and Emergency Plan, have been updated in accordance with this permit and amended annually, as necessary.

iv. Each Progress Report shall contain a detailed discussion of, and document compliance with, the continued implementation of the NMCs and the manner in which all owners/operators of the hydraulically connected collection system participated in the development of the LTCP, including

information regarding the development and status of the telephone hotline/website pursuant to Section F.8.

v. Upon Departmental approval of the LTCP, the permittee shall begin implementation of the CSO control measures in accordance with the schedule in the approved LTCP.

E. FACILITY MANAGEMENT

1. CSO Discharge Requirements

a. Since the permittee does not own/operate any CSO outfalls, there are no CSO discharge requirements at this time.

F. NINE MINIMUM CONTROL REQUIREMENTS

1. Proper Operation and Regular Maintenance Program Requirements

a. The permittee shall continue to implement and update annually, an Operations & Maintenance (O&M) Program and corresponding Manual, including an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12, to ensure that the treatment works, including but not limited to collection system, pumping stations, and related appurtenances which are owned/operated by the permittee are operated and maintained in a manner that achieves compliance with all terms and conditions of this permit.

b. The permittee shall operate the treatment works using a licensed operator in accordance with N.J.S.A. 58:11-66(a), N.J.A.C. 7:14A-6.12(b) and N.J.A.C. 7:10A.

c. The permittee shall provide adequate operator staffing for the treatment works,

d. The permittee shall provide documentation that ensures that employees are properly trained to perform the operation and maintenance duties required and to follow the Standard Operating Procedures (SOPs) in the O&M Program and corresponding Manual. This shall include a current training program for the purpose of informing new employees and maintaining training levels for current employees in regards to the O&M Program and corresponding Manual, including safety related concerns.

e. The permittee shall implement an O&M Program & corresponding Manual that includes, at a minimum, the following.

i. A directory of appropriate O&M staff, including a description of their individual responsibilities and emergency contact information.

ii. A description of the permittee's Fats, Oils and Grease (FOG) Program.

iii. An update of the characterization of the entire collection system owned/operated by the permittee that conveys flows to the treatment works. The permittee may use previous studies to the extent that they are accurate and representative of a properly operated and maintained sewer system and of the currently required information. This characterization shall include a spreadsheet (the spreadsheet shall be completed no later than at the time of the first quarterly Progress Report), as appropriate, of the capacity, dimensions, age, type of material, and specific location of:

- gravity lines and force mains, including size, length and direction of flow;
- Manholes, including invert elevations of all gravity sewers inlets and outlets;
- Pump stations;
- Significant Industrial Users (SIUs); and
- Specific locations that have historically experienced the following: blockages, bottlenecks, flow constrictions, sewer overflows including to basements, streets and other public and private areas, overflows or related incidences.

f. The permittee shall delineate the characterization information required in Section F.1.e.iii., on a GIS map, as applicable, pursuant to N.J.A.C. 7:1D-Appendix A and shall follow the NJ GIS protocol at http://www.state.nj.us/dep/gis/standard.htm. This map shall be completed on or before the first annual update of the O&M Program and Manual.

g. The permittee shall review its rules, ordinances, and its sewer use agreements with its customer municipalities and revise them within 4 months of the EDP if necessary to require the customer municipalities to:

   i. operate and maintain their treatment works,

   ii. identify Infiltration and Inflow (I/I) and reduce where appropriate, and

   iii. identify and eliminate interconnections and cross-connections in storm sewers.

h. The permittee shall also include Standard Operating Procedures (SOPs) in the O&M Program and corresponding Manual for the operation, inspections, and scheduled preventative maintenance in accordance with the appropriate manufacturer's recommendations and equipment manuals at a minimum, to ensure that the entire collection system that is owned/operated by the permittee that conveys flows to the treatment works will function properly. At a minimum the SOPs shall contain detailed instructions for system operations, such as frequency of inspections, regular maintenance, and the timely repair, and documentation of such information, of the entire collection system that conveys flows to the treatment works. These SOPs shall include procedures to.

   i. Ensure that the entire collection system owned/operated by the permittee that conveys flows to the treatment works functions at all times in such a way as to not result in sewage overflows including to basements, streets and other public and private areas, or bottlenecks/constrictions that limit flow in specific areas and prevent the downstream STP treatment capacity from being fully utilized, in accordance with Section F.4.

   ii. Ensure that the storage and conveyance of combined sewage to the STP is maximized in accordance with Sections F.2 and F.4.

   iii. Ensure that the discharges from SIUs contributing to the CSOs are minimized to the greatest extent practicable in accordance Section F.3.

   iv. Provide a gravity sewer cleaning schedule.

   v. Provide a system for documenting, assessing, tracking, and addressing residential complaints regarding blockages, bottlenecks, flow constrictions, sewer overflows including to basements, streets and other public and private areas, or related incidents.

vi. Remove within one (1) week of the permittee becoming aware, any obstructions due to debris, Fats, Oils and Greases, and sediment buildup, or other foreign materials in the collection system owned/operated by the permittee.

vii. Require immediate corrective action(s) to repair damage and/or structural deterioration, address unpermitted discharges, and eliminate DWOs of the entire collection system owned/operated by the permittee that conveys flows to the treatment works.

viii. Provide for ongoing infiltration and inflow (I/I) reduction strategies through the identification of I/I sources and the prioritization and implementation of I/I reduction projects.

ix. Identify the equipment currently owned, operated and maintained for investigating and maintaining the entire collection system and, at a minimum, reference the appropriate equipment manuals.

x. Provide procedures whereby wet weather flows are maximized for conveyance to the STP.

i. The permittee shall incorporate an Asset Management Plan as part of the overall O&M strategy. This plan shall include an infrastructure inventory with infrastructure repair/replacement needs listed and scheduled according to priority/criticality, that ensures the entire collection system owned/operated by the permittee that conveys flows to the treatment works is perpetually and proactively managed with the appropriate resources (capital, staffing, training, supplies, equipment) allocated in the permittee's budget as prepared and submitted to Department of Community Affairs. The Asset Management Plan shall be completed no later than at the time of the first quarterly Progress Report.

j. The permittee shall also include in the O&M Program and corresponding Manual, an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12(d). The Emergency Plan shall provide for, to the maximum extent possible, uninterrupted treatment works operation during emergency conditions using in-house and/or contract based services. The Emergency Plan shall include Standard Operating Procedures (SOPs), which ensure the effective operation of the treatment works under emergency conditions, such as extreme weather events (including 100 and 500 year storm events) and extended periods of no power, (e.g., 7 days and 14 days).

k. The permittee shall amend the O&M Program & Manual no less frequent than annually to reflect updated information and changes in the characterization, design, construction, operations, maintenance, Emergency Plan, and SOPs as listed in Section F.1. and include verification that the O&M Program and corresponding Manual has been prepared and updated in accordance with the submittal requirements in Section D.4.

2. Maximum use of the collection system for storage

a. The permittee shall use the entire collection system owned/operated by the permittee for in-line storage of sewage for future conveyance to the STP when sewer system flows subside by ensuring that the sewage is retained in the sewer system to the extent possible to minimize CSO discharges (volume, frequency and duration), while not creating or increasing sewage overflows, including to basements, streets and other public and private areas.

b. The permittee shall minimize the introduction of sediment and obstructions in the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Sections F.1. and F.7.

c. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Section F.1.

d. The permittee shall identify and implement minor modifications, based on the ongoing evaluations from the characterization required under Section F.1. to enable the entire collection system owned/operated by the permittee that conveys flows to the treatment works to store additional wet weather flows to reduce any sewage overflows until downstream sewers and treatment facilities can adequately convey and treat the flows.

3. Review and modification of pretreatment requirements to assure CSO impacts are minimized

a. The permittee shall determine the locations, associated CSO outfalls and discharge nature of the Significant Industrial Users (SIUs) for the entire collection system which is owned/operated by the permittee; determine and prioritize the potential environmental impact of these SIUs by CSO outfall; include this information in the characterization portion of the O&M Program and corresponding Manual as required in Section F.1. This information shall be updated annually in the Progress Report in accordance with Section D.4.

b. The permittee shall require that SIUs investigate ways to minimize their dischargers during wet weather and report their findings to the permittee.

c. When and where necessary, the permittee shall establish agreements with SIUs or ordinances specifying that the SIUs (especially for batch discharges, non-continuous dischargers) should restrict discharges to the greatest extent practicable during wet weather periods.

4. Maximization of flow to the POTW for treatment

a. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works and treatment plant to maximize the conveyance of wastewater to the STP for treatment.

b. The permittee shall evaluate and implement low cost alternatives for increasing flow to the STP in accordance with i. and ii. below.

i. Capacity evaluations of the entire collection system owned/operated by the permittee that conveys flows to the treatment works in accordance with Section F.1.e.iii. to determine the maximum amount of flow that can be stored and transported.

ii. Identification of other activities conducted and/or planned to further maximize flow to the POTW.

5. Prohibition of CSOs during dry weather

a. Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not include the prohibition of discharges from CSOs during dry weather at this time.

6. Control of solids/floatables in CSOs

a. Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not include the requirement to control solids/floatables from CSOs at this time.

7. Implementation of Pollution Prevention Measures

a. Unless demonstrated to the Department to be impracticable measures shall include, but not be limited to, the following:

i. Enforcement of illegal dumping regulations.

ii. Revision as necessary of applicable rules, ordinances and sewer use agreements to address the reduction of inflow and infiltration (I/I) into the collection system where feasible.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts

a. Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not include the requirement to ensure that the public receives notification of CSO occurances and impacts at this time.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls

a. Since the permittee does not own and/or operate any CSO outfalls, this proposed permit action does not include the requirement to characterize CSO impacts and controls at this time.

G. LONG TERM CONTROL PLAN REQUIREMENTS:

1. Characterization, Monitoring and Modeling of the Combined Sewer System

a. The permittee and other hydraulically connected communities, as per D.3.a, shall submit an updated characterization study that will result in a comprehensive characterization of the CSS developed through records review, monitoring, modeling and other means as appropriate to establish the existing baseline conditions, evaluate the efficacy of the CSO technology based controls, and determine the baseline conditions upon which the LTCP will be based. The characterization shall include a thorough review of the entire collection system that conveys flows to the treatment works, including areas of sewage overflows, including to basements, streets and other public and private areas, to adequately address the response of the CSS to various precipitation events; identify the number, location, frequency and characteristics of CSOs; and identify water quality impacts that result from CSOs. Ambient in-stream monitoring shall be performed in accordance with the guidance document entitled: *To Be Determined.*

The permittee may use previous studies to the extent that they are accurate and representative of a properly operated and maintained sewer system and of the currently required information, such as:

For Perth Amboy –

- Combined Sewer Overflow Discharge Characterization Study – System Inventory and Assessment Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004;

- Combined Sewer Overflow Discharge Characterization Study – Service Area Drainage and Land Use Report for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated May 2004; and

- Combined Sewer Overflow Discharge Characterization Study for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated September 2007.

b. The major elements of the sewer system characterization are noted below.

i. Rainfall Records--The permittee shall examine the rainfall record as per Section F.9. for the geographic area of its existing CSS using sound statistical procedures and best available data. The permittee shall evaluate flow variations in the receiving water body to correlate between CSOs and receiving water conditions.

ii. Combined Sewer System Characterization—the permittee shall evaluate sewer system records, field inspections gathered from the O&M Characterization required under Section F.1. (and other previous relevant studies), and other activities necessary to understand the number, location and frequency of overflows and their location relative to sensitive areas and to pollution sources in the collection system, such as SIUs.

iii. CSO Monitoring - Using all available information, including the information gathered from Section F.9., the permittee shall develop and/or update a previously existing, comprehensive, representative monitoring program that measures the frequency, duration, flow rate, volume and pollutant concentration of CSO discharges and assesses the impact of the CSOs on the receiving waters. The monitoring data summary may utilize existing data from previous studies, and must include necessary CSO effluent and ambient in-stream monitoring for pathogens (including current and recreational standards for bacteriological indicators (e.g., fecal coliform, Enterococcus and E. Coli)). This ambient baseline monitoring requirement may also satisfy the baseline monitoring requirement in Section G.9. A representative sample of overflow points can be selected that is sufficient to allow characterization of CSO discharges, their water quality impacts and to facilitate evaluation of control plan alternatives.

iv. Modeling – the permittee may employ NJDEP or EPA approved models, which include appropriate calibration and verification with field measurements, to aid in the characterization. If models are used they shall be identified by the permittee along with an explanation of why the model was selected and used in the characterization. The permittee should base its choice of a model on the characteristics of the entire collection system that conveys flows to the treatment works (including flows from other hydraulically connected municipal sewer systems), the number and location of overflow points, and the sensitivity of the receiving water body to the CSO discharges. The sophistication of the model should relate to the complexity of the system to be modeled and to the information needs associated with evaluation of CSO control options and water quality impacts. Because of the iterative nature of modeling sewer systems, CSOs, and their impacts, monitoring and modeling efforts are complementary and should be coordinated with other affected entities.

v. The permittee shall identify sensitive areas where CSOs occur. These areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, bathing beaches, public drinking water intakes or their designated protection areas, and shellfish beds.

2. Public Participation Process

a. The permittee shall submit a Public Participation Plan in accordance with D.3.a. The permittee may use information from the following previous submittals:

Middlesex County Utilities Authority -
- Public Participation Report, NJPDES Individual Permit No. NJ0020141, August 2007.

City of Perth Amboy –

- Public Participation Report for the City of Perth Amboy, NJPDES Permit No. NJ0105023, prepared by Hatch Mott MacDonald.

Implementation shall actively involve the affected public throughout each of the 3 Steps of the LTCP process. The affected public includes rate payers (including rate payers in the separate sewer sections), industrial users of the sewer system, persons who reside downstream from the CSOs, persons who use and enjoy the downstream waters, and any other interested persons.

b. The permittee shall invite members of the affected/interested public to establish a supplemental CSO Team to work with the permittee's assigned staff from Section F.1.

3. Consideration of Sensitive Areas

a. The permittee's LTCP shall give the highest priority to controlling overflows to sensitive areas, in accordance with D.3.a. Sensitive areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, bathing beaches, public drinking water intakes or their designated protection areas, and shellfish beds.

b. The LTCP shall comply with the following requirements.

i. Prohibit new or significantly increased CSO overflows.

ii. Eliminate or relocate CSO overflows that discharge to sensitive areas wherever physically possible and economically achievable, except where elimination or relocation would provide less environmental protection than additional treatment.

iii. Where elimination or relocation is not physically possible and economically achievable, or would provide less environmental protection than additional treatment, provide the level of treatment for remaining CSO overflows deemed necessary to meet WQS for full protection of existing and designated uses.

4. Evaluation of Alternatives

a. The permittee shall evaluate a range of CSO control alternatives, in accordance with D.3.a., that will provide for attainment of water quality standards using either the Presumption Approach or the Demonstration Approach (as defined in Section F. and G.).

b. The permittee shall submit, as per Section D.3.b.iii., the Evaluation of Alternatives Report that will enable the permittee, in consultation with the Department, the public, owners and/or operators of the entire collection system that conveys flows to the treatment works, to select the alternatives to ensure the CSO controls will meet CWA requirements, ensure CSO discharges do not cause exceedances of any water quality criteria, will be protective of the existing and designated uses in accordance with N.J.A.C. 7:9B, give the highest priority to controlling CSOs to sensitive areas and address minimizing impacts from SIU discharges.

c. The permittee shall select either Demonstrative or Presumptive Approach for each group of hydraulically connected CSOs, and identify each CSO group and its individual discharge locations.

d. The Evaluation of Alternatives Report shall include a list of control alternative(s) evaluated for each CSO.

e. The permittee shall evaluate a range of CSO control alternatives predicted to accomplish the requirements of the CWA. In its evaluation of each potential CSO control alternative, the permittee shall use an NJDEP approved hydrologic, hydraulic and water quality models. The permittee shall utilize the models to simulate the existing conditions and conditions as they are expected to exist after construction and operation of the chosen alternative(s). The permittee shall evaluate the practical and technical feasibility of the proposed CSO control alternative, and water quality benefits of constructing and implementing various remedial controls and combination of such controls and activities which shall include, but not be limited to the controls below.

   i. Green infrastructure (which allows for greater removal of load/flow per gallon captured).

   ii. Increased storage capacity in the collection system.

   iii. STP expansion and/or storage at the plant (an evaluation of the capacity of the unit processes must be conducted at the STP resulting in a determination of whether there is any additional treatment capacity available at the STP). Based upon this information, the permittee shall determine (modeling may be used) the amount of CSO discharge reduction that would be achieved by utilizing this additional treatment capacity while maintaining compliance with all permit limits.

   iv. I/I reduction in the entire collection system that conveys flows to the treatment works to free up storage capacity or conveyance in the sewer system and/or treatment capacity at the STP, and feasibility of implementing in the entire system or portions thereof.

   v. Sewer separation.

   vi. CSO discharge treatment.

   vii. CSO related bypass of the secondary treatment portion of the STP in accordance with N.J.A.C. 7:14A-11.12 Appendix C, II C.7.

f. The "Presumption" Approach, in accordance with N.J.A.C 7:14A-11 Appendix C provides:

   A program that meets any of the criteria listed below will be presumed to provide an adequate level of control to meet the water quality-based requirements of the CWA, provided the Department determines that such presumption is reasonable in light of the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas described above.

   i. No more than an average of four overflow events (see below) per year from a hydraulically connected system as the result of a precipitation event that does not receive the minimum treatment specified below. These four overflow events shall be calculated over a 60 month rolling average, provided that the Department may allow up to two additional overflow events per year. For the purpose of this criterion, an 'event' is:

      - In a hydraulically connected system that contains only one CSO outfall, multiple periods of overflow are considered one overflow event if the time between periods of overflow is no more than 24 hours.

- In a hydraulically connected system that contains more than one CSO outfall, multiple periods of overflow from one or more outfalls are considered one overflow event if the time between periods of overflow is no more than 24 hours without a discharge from any outfall.

ii. The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis.

iii. The elimination or removal of no less than the mass of the pollutants, identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling effort, for the volumes that would be eliminated or captured for treatment under Section G.4.f.ii.

Combined sewer overflow remaining after implementation of the NMCs and within the criteria specified in this section at Section G.4.f.ii. and iii. shall receive minimum treatment in accordance with the items below.

- Primary clarification (Removal of floatables and settleable solids may be achieved by any combination of treatment technologies or methods that are shown to be equivalent to primary clarification.).

- Solids and floatables disposal.

- Disinfection of effluent, if necessary, to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals, where necessary.

g. The “Demonstration” Approach, in accordance with N.J.A.C. 7:14A-11 Appendix C provides.

A permittee may demonstrate that a selected control program, though not meeting the criteria specified under the Presumption Approach above, is adequate to meet the water quality-based requirements of the CWA.

The permittee must demonstrate each of the following below.

i. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs.

i. The CSO discharges remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment.

iii. The planned control program will provide the maximum pollution reduction benefits reasonably attainable.

iv. The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses.

5. Cost/Performance Considerations

a. The permittee shall submit in accordance with the submittal requirements at Section D.3. a and b.iii., the cost/performance considerations that demonstrate the relationships among proposed control alternatives that correspond to those required in accordance with Section G.4. This shall include an

analysis to determine where the increment of pollution reduction achieved in the receiving water diminishes compared to the increased costs. If the permittee chooses to pursue the "Presumption Approach" of 'no more than an average of four discharge events per year', the permittee is not required to conduct this analysis for the other number of events (i.e. 0, 7, 10, 20). This analysis, often known as "knee of the curve", shall be among the considerations used to help guide selection of controls.

In accordance with Section G.1.a., the permittee may use previous studies to the extent that they are accurate and representative of a properly operated and maintained sewer system and of the currently required information, such as:

For MCUA:
- Central Treatment Plant Conveyance and Capacity Analysis, Cost Performance Analysis Report NJPDES Permit No. NJ0020141, prepared by CDM, dated August 2007.

For Perth Amboy City:
- Long Term Combined Sewer Overflow Control Plan Cost and Performance Analysis Report for the City of Perth Amboy Utilities Service Affiliates USAPA, prepared by CDM, dated April 2007 and revised August 2008.

6. Operational Plan

a. Upon Department approval of the final LTCP and throughout implementation of the approved LTCP as appropriate, the permittee shall modify the O&M Program and Manual, in accordance with D.3.a., to address the final LTCP CSO control facilities and operating strategies, including but not limited to, maintaining Green Infrastructure, staffing and budgeting, inflow/infiltration, and emergency plans.

7. Maximizing Treatment at the Existing STP

a. The LTCP shall include the maximization of the removal of pollutants during and after each precipitation event at the STP, in accordance with D.3.a., ensuring that such flows receive treatment to the greatest extent practicable utilizing existing tankage for storage, while still meeting all permit limits.

8. Implementation Schedule

a. The permittee shall submit a construction and financing schedule, in accordance with D.3.a., for implementation of NJDEP approved LTCP CSO controls. Such schedules may be phased based on the relative importance of the adverse impacts upon water quality standards, the permittee's financial capability, and other water quality related infrastructure improvements, including those related to stormwater improvements that would be connected to CSO control measures.

b. Upon Department approval of the LTCP, the permittee shall begin implementation of the LTCP in accordance with the schedule contained therein.

c. In accordance with Section D.3.b.iv., the permittee shall submit an implementation schedule, including yearly milestones, which considers the below.

   i. Adequately addressing areas of sewage overflows, including to basements, streets and other public and private areas.

ii. CSO overflows that discharge to sensitive areas as the highest priority.

iii. Use impairment of the receiving water.

iv. The permittee's financial capability including consideration of such factors as below.
- Median household income.
- Total annual wastewater and CSO control costs per household as a percent of median household income.
- Overall net debt as a percent of full market property value.
- Property tax revenues as a percent of full market property value.
- Property tax collection rate.
- Unemployment.
- Bond rating.

v. Grant and loan availability.

vi. Previous and current residential, commercial and industrial sewer user fees and rate structures.

vii. Other viable funding mechanisms and sources of financing.

viii. Resources necessary to design, construct and/or implement other water related infrastructure improvements as part of an overall asset management plan.

9. Compliance Monitoring Program (CMP)

The monitoring information collected from the baseline monitoring phase of the CMP, in accordance with D.3.a., will be compared to subsequent CMP events during and after LTCP implementation to evaluate the effectiveness of implemented CSO controls.

a. The permittee shall implement a CMP, adequate to verify baseline and ambient existing conditions, the effectiveness of CSO controls, compliance with water quality standards, and protection of designated uses. This CMP shall be conducted before, during and after implementation of the LTCP and shall include a work plan to be approved by the Department that details the monitoring protocols to be followed, including the following necessary monitoring below.

i. Ambient in-stream monitoring performed in accordance with the guidance document entitled: *To Be Determined*.

ii. Discharge frequency for each CSO (days/hours per month).

iii. Duration of each discharge (event) for each CSO (start and stop times for each calendar day).

iv. Quality of the flow discharged from each CSO, which shall include pathogen monitoring at a minimum.

v. Rainfall monitoring in the vicinity of each CSO/municipality.

vi. Characterization monitoring and modeling of the CSS in accordance with Section G.1.

The permittee may use previous studies to the extent that they are accurate and representative of a properly operated and maintained sewer system and of the currently required information, such as.

For Perth Amboy City:

- Combined Sewer Overflow Discharge Characterization Study – Monitoring Program Proposal and Work Plan for the City of Perth Amboy Department of Municipal Utilities, prepared by CDM, dated September 2006.

b. For the Demonstration Approach, the above monitoring must be ongoing every year upon LTCP approval to document trends in water quality due to CSO discharges. The results must be submitted in the Progress Reports required in Section D.4.

c. For the Presumption Approach, the above monitoring may be reduced, with prior Departmental approval, during construction/implementation of the CSO controls.

Masterfile #: 5280 **PI #:** 46606

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)	None	Not 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)	Middlesex County UA	Approved
RA-LA	Spray Irrigation (not fenced or restricted area)	None	Not Approved
RA-CM	Street Sweeping	Middlesex County UA	Approved
RA-CM	Dust Control	None	Not Approved
RA-CM	Fire Protection	Middlesex County UA	Approved
RA-CM	Vehicle Washing (at STP or DPW)	None	Not Approved
RA-CM	Composting	None	Not Approved
RA-IS	Sanitary Sewer Jetting	Middlesex County UA - Sewer Service Area	Approved
RA-IS	Non-Contact Cooling Water	None	Pending
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	STP Washdown	Middlesex County UA	Approved

Categories:

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

Abbreviations:

	UA – Utilities Authority
NH3 -	Ammonia
NO3 -	Nitrate
STP -	Sewage Treatment Plant
DPW -	Dept. of Public Wor

Annual Reuse Report

Any facility that has received an RWBR authorization is required to submit an Annual Reuse Report. The following information, at a minimum, shall be included in the report, due on February 1st of each year.

(1) The total wastewater reused (R) by the facility in the previous calendar year. If no wastewater was reused in the previous calendar year, report R as zero and skip to (6) below;

R = _____ gallons

(2) The total wastewater discharged (D) by the facility in the previous calendar year;

D = _____ gallons

(3) The percent of wastewater reused (%R) by the facility in the previous calendar year, calculated as follows:

%R = R/(R+D), expressed as a percent;

%R = _____ percent

(4) The total wastewater that was reused for **each reuse type** in the previous calendar year. This information should be provided in the chart format utilized in the RWBR Usage Table below;

RWBR Usage Table

RWBR Category	Specific RWBR Type	Location	Flow (gallons)

Attach additional pages as necessary.

(5) An update to the correlation between Total Suspended Solids and Turbidity, if necessary;

Correlation = _____

(6) Submit a completed copy of this form to:

For paper copies:
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, NJ 08625-0420

For electronic copies:
ben.manhas@dep.state.nj.us

Annual Reuse Report - SAMPLE

Any facility that has received an RWBR authorization is required to submit an Annual Reuse Report. The following information, at a minimum, shall be included in the report, due on February 1st of each year.

(1) The total wastewater reused (R) by the facility in the previous calendar year. If no wastewater was reused in the previous calendar year, report R as zero and skip to (6) below;

R = _____ gallons

(2) The total wastewater discharged (D) by the facility in the previous calendar year;

D = _____ gallons

(3) The percent of wastewater reused (%R) by the facility in the previous calendar year, calculated as follows:

%R = R/(R+D), expressed as a percent;

%R = _____ percent

(4) The total wastewater that was reused for **each reuse type** in the previous calendar year. This information should be provided in the chart format utilized in the RWBR Usage Table below;

RWBR Usage Table

RWBR Category	Specific RWBR Type	Location	Flow (gallons)
	For Example:		
RA-CM	*Street Sweeping*	*Local Township*	*42,000*
RA-IS	*Sanitary Sewer Jetting*	*Facility Sewer Service Area*	*15,000*
RA-IS	*STP Washdown*	*Sewage Treatment Plant*	*43,000*
		Grand Total (R)	*100,000*

Attach additional pages as necessary.

(5) An update to the correlation between Total Suspended Solids and Turbidity, if necessary;

Correlation = _____

(6) Submit a completed copy of this form to:

For paper copies:
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, NJ 08625-0420

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SAMPLE