



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER QUALITY

BUREAU OF SURFACE WATER AND PRETREATMENT PERMITTING

PHILIP D. MURPHY

Governor

TAHESHA L. WAY

Lt. Governor

401 East State Street

P.O. Box 420, Mail Code 401-02B

Trenton, New Jersey 08625-0420

Tel. (609) 292-4860

www.nj.gov/dep

SHAWN M. LATOURETTE

Commissioner

Via Email Only

November 20, 2023

Re: Draft NJPDES Discharge to Surface Water Master General Permit Renewal - Statewide
Category: B4B - General Groundwater Petroleum Product Clean-up Permit
NJPDES Permit No. NJ0102709

Dear Interested Parties:

Enclosed is a **draft** NJPDES permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. This master general permit serves to renew the existing master general petroleum product clean-up permit and is being renewed with minimal changes. A full copy of the master B4B general permit, including a complete description of all effluent limitations and monitoring conditions is available on the Department's website at: https://www.nj.gov/dep/dwq/gp_B4B.htm.

Notice of this draft permit action appeared in the November 15, 2023 *DEP Bulletin*. The *DEP Bulletin* is available on the Department's website at <https://dep.nj.gov/bulletin/>. In addition, notice of this draft permit will appear in the major Northern, Central and Southern New Jersey newspapers listed below. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will close thirty days after the latest newspaper's publication date.

The Press of Atlantic City

Star Ledger

The Times

As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments or a request that the Department hold a non-adversarial public hearing on the draft document must be submitted in writing to Susan Rosenwinkel, Assistant Director, Mail Code 401-02B, Water Pollution Management Element, Bureau of Surface Water & Pretreatment Permitting, P.O. Box 420, Trenton, NJ 08625-0420 or by email at dwq_bswp@dep.nj.gov 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 Tara Klimowicz or Kevin Johnson either by phone at (609) 292-4860 or via e-mail at Tara.Klimowicz@dep.nj.gov or Kevin.Johnson@dep.nj.gov.

Sincerely,

Dwayne Kobesky, Environmental Specialist 4
Bureau of Surface Water & Pretreatment Permitting

Enclosures

c: Permit Distribution List, Masterfile #: 39609; PI #: 50577

New Jersey is an Equal Opportunity Employer

Table of Contents for the Draft Permit

This permit package contains the items listed below:

- 1. Cover Letter**
- 2. Table of Contents**
- 3. List of Acronyms**
- 4. Public Notice**
- 5. Fact Sheet / Statement of Basis**
- 6. NJPDES Permit Authorization Page**
- 7. Part I – General Requirements: NJPDES**
- 8. Part II – General Requirements: Discharge Categories**
- 9. Part III – Limits and Monitoring Requirements**
- 10. Part III – Attachment: Auxiliary list of Toxic Pollutants that may be Limited**
- 11. Part IV – Specific Requirements: Narrative**
- 12. Appendix A: Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program
(only applicable for those authorizations in which a whole effluent toxicity limit is specified)**

List of Acronyms

ACR	Acute to Chronic Ratio
AL	Action Level
AML	Average Monthly Limitation
BMP	Best Management Practices
BPJ	Best Professional Judgement
CAP	Capacity Assurance Program
CFR	Code of Federal Regulations
CV	Coefficient of Variation
CWEA/CWA	Clean Water Enforcement Act/Clean Water Act
Department	New Jersey Department of Environmental Protection
DGW	Discharge to Groundwater
DMR	Discharge Monitoring Report
DRBC	Delaware River Basin Commission
DSN	Discharge Serial Number
DSW	Discharge to Surface Water
EDP/M	Effective Date of the Permit/Permit Modification
EEQ	Existing Effluent Quality
ELG	Effluent Limitation Guideline
g/d or g/day	Grams per Day
IEC	Interstate Environmental Commission
IPP	Industrial Pretreatment Program
kg/d or kg/day	Kilograms per Day
LTA	Long Term Average
MA1CD10 or 1Q10	Minimum average one day flow with a statistical recurrence interval of ten years
MA7CD10 or 7Q10	Minimum average seven consecutive day flow with a statistical recurrence interval of ten years
MA30CD5 or 30Q5	Minimum average 30 consecutive day flow with a statistical recurrence interval of five years
mg/L	Milligrams per Liter
MDL	Maximum Daily Limitation
MGD	Million Gallons per Day
MRF	Monitoring Report Form
NAICS	North American Industry Classification System
NPDES/NJPDES	National/New Jersey Pollutant Discharge Elimination System
NJR	New Jersey Register
PCB	Polychlorinated Biphenyls
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
RPMF	Reasonable Potential Multiplying Factor
RTR	Residuals Transfer Report
RQL	Recommended Quantification Levels
RWBR	Reclaimed Water for Beneficial Reuse
SIC	Standard Industrial Classification
SIU	Significant Indirect User
SQAR	Sludge Quality Assurance Regulations
SWQS	Surface Water Quality Standards
TMDL	Total Maximum Daily Load
TR	Total Recoverable
TRIR	Toxicity Reduction Implementation Requirements
USEPA TSD	USEPA Technical Support Document for Water Quality Based Toxics Control (EPA/505/2-90-001, March 1991)
µg/L	Micrograms per Liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UV	Ultraviolet
WCR	Wastewater Characterization Report
WER	Water Effects Ratio
WLA	Wasteload Allocation
WWTP	Wastewater Treatment Plant
WQBEL	Water Quality Based Effluent Limitation

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

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection (Department) proposes to renew the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) General Petroleum Product Clean-up Master General Permit (Category B4B), NJ0102709 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.

This NJPDES/DSW Renewal Master B4B General permit is issued to continue to authorize the discharge of treated groundwater from remediations, dewaterings, and pump test activities that are necessary due to contamination of groundwater by petroleum products to eligible surface waters of the State or storm sewers. The Department has determined that these types of point sources require the same effluent limitations or operating conditions, require the same or similar monitoring conditions, and are more appropriately controlled under a general permit authorization than under individual NJPDES permits. However, if the Department determines that the applicant is not eligible for this general permit due to the presence of contaminants not addressed here, the applicant may pursue an individual permit or another appropriate general permit. A full copy of the Master B4B General Permit, including a complete description of all effluent limitations and monitoring conditions is available at: https://www.nj.gov/dep/dwq/gp_B4B.htm.

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

This renewal draft NJPDES Master B4B General Permit has been prepared based on the administrative record which is on file at the offices of the Department, located at 401 East State Street, Trenton, New Jersey. It is available for inspection, by appointment, Monday through Friday, between 8:30 A.M. and 4:00 P.M. Appointment for inspection may be requested through the Records Access Program. Details are available online at www.nj.gov/dep/opra, or by calling (609) 341-3121.

Written comments or a request that the Department hold a non-adversarial public hearing on the draft document must be submitted in writing to Susan Rosenwinkel, Assistant Director, or Attention: Comments on Public Notice NJ0102709, Mail Code 401-02B, Division of Water Quality, Water Pollution Management Element, P.O. Box 420, Trenton, NJ 08625-0420 or by email to dwq_bswp@dep.nj.gov by the close of the public comment period which closes thirty calendar days after publication of this notice in the newspaper. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The 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 permit decision.

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

FACT SHEET

Masterfile #: Varies

PI #: Varies

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 (NJPDES).

PERMIT ACTION: Surface Water Renewal - Master General Petroleum Products Clean-up (GPPC) Permit Category B4B – NJ0102709

The Department is proposing to renew the December 26, 2018 Master B4B General Permit which expires on December 31, 2023.

1 Description of Master General Petroleum Product Clean-up Permit:

Pursuant to N.J.A.C. 7:14A-6.13(b)4 of the NJPDES Regulations, the Department has determined that the petroleum product clean-up category of point sources require the same effluent limitations or operating conditions, require the same or similar monitoring conditions, and are more appropriately controlled under a general permit than under an individual permit. Given that many facilities with petroleum product contamination contain similar contaminants, the Department has issued one master general permit to regulate these wastestreams. Issuance of a master general permit serves to simplify and streamline the NJPDES permitting process for these similar types of discharges.

Authorized permittees will discharge groundwater resulting from the remediation of contaminated groundwater associated with petroleum products. Dewatering and pump test discharges that have petroleum product contamination are also eligible under this master permit.

This permit authorizes the discharge of these point sources into surface waters of the State or separate storm sewers, except those waters classified as FW-1 and PL (Pinelands). This permit authorizes discharges that are in compliance with the limitations and conditions described below and in a manner that will not cause violation of the NJSWQS of N.J.A.C. 7:9B-1.1 et seq. and the Federal Surface Water Quality Standards, 40 CFR 131. Please refer to Section 5 of this Fact Sheet for additional information on waterbody classifications.

All facilities considered eligible under this master general permit are considered minor facilities by the Department in accordance with the United States Environmental Protection Agency (EPA) rating criteria.

The master B4B permit was last renewed on December 26, 2018 and this subject permit serves to renew that action. There are limited differences from the existing permit in comparison to this subject permit renewal. In addition, this master B4B permit serves to renew the existing individual general permit authorizations.

2 Description of Facilities Covered by the Master B4B Permit:

Effluent limitations are dependent on the quality of the contaminated groundwater, contaminants present, the duration of the effluent discharge, the ultimate receiving waterbody, and the nature of the remedial activity. Therefore, this

permit renewal retains the three sets of effluent limitations specified in Tables 1, 2, and 3 of the existing permit which are:

Table 1: Remediation discharges into waters classified as FW2-NT, FW2-TM, FW2-TP, SE, or SC where petroleum related constituents are present. Other metals, volatile organics, acid extractables, base-neutrals and pesticides may also be present.

Table 2: Short term dewatering or pump test discharges into waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC where petroleum related constituents are present. Other metals, volatile organics, acid extractables, base-neutrals and pesticides may also be present.

Table 3: Remediation discharges into waters classified as C1 (Category One) where petroleum related constituents are present and more stringent effluent limitations shall apply.

Existing and new applicants must request authorization to be covered under the general permit by submitting appropriate NJPDES application forms. The B4B Checklist and B4B permit application forms can be found at the Department's website at: https://www.nj.gov/dep/dwq/forms_surfacewater.htm. If the Department determines that the individual facility meets the eligibility requirements of the master B4B permit, then an individual general permit authorization is issued to that facility.

Petroleum products are defined as leaded gasoline, unleaded gasoline, aviation fuel, jet fuel, kerosene, diesel fuel, number 1 fuel oil, number 2 fuel oil, number 4 fuel oil, number 5 fuel oil and number 6 fuel oil. If additional site-specific constituents are contained in the petroleum product discharge, the Department will make a case specific determination of the applicant's eligibility for this general permit. If the Department determines that an applicant is not eligible for this general permit due to site specific constituents, the applicant may pursue an individual permit. The Department will review applications for remediation discharges on a case-by-case basis and, if the Department determines that the effluent limits cannot be attained, it reserves the right to deny authorization to discharge under the master B4B permit. This permit is not intended for groundwater contamination at residential homes.

In order to minimize confusion for renewal authorizations, all outfall designations have been retained from the previous individual general permit authorization. For new authorizations under this master general permit, outfalls will be designated as DSN 001A regardless of which table is utilized. Individual general permit authorizations issued under the master B4B general permit are given two NJPDES numbers. The NJPDES number on the individual authorization page will be specific to the individual facility whereas the NJPDES number NJ0102709 is specific to the master B4B general permit.

3 Description of Limitations and Conditions for all Tables:

The proposed effluent limitations and other pertinent information regarding the draft renewal 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:

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 2018/2020 Integrated Water Quality Monitoring and Assessment Report (Integrated Report),
4. Requirements of the Delaware River Basin Commission (N.J.A.C. 7:9B-1.5(b)1),
5. Requirements of the Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2),
6. Requirements of the Pinelands Commission (N.J.A.C. 7:50-6.81 to 6.87),
7. Requirements of the Highlands Commission (N.J.S.A. 13:20-1 et seq),

8. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements),
9. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements),
10. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15).

Technology based limitations 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(a)1.ii., 13.3(b), and 13.4. Best Professional Judgement (BPJ) determinations are authorized by Section 402 (a)(1) of the Clean Water Act.

In accordance with N.J.A.C. 7:14A-13.5, WQBELs are imposed when it has been determined that the discharge of a pollutant causes an excursion of criteria specified in the New Jersey NJSWQS, 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 policies 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 (TSD) for Water Quality Based Toxics Control (EPA/505/2-90-001, March 1991) 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 limitations are expressed as a minimum as a percent.

This permit action does not authorize any increase in the concentration of pollutants above those levels authorized under the existing permit. All permit limitations and conditions in this permit action are equal to or more stringent than those contained in the existing permit action. 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.

B. Background to the Section of Regulated Parameters for all Tables

A summary of effluent data is included in the Permit Summary Table (PST) at the end of this Fact Sheet. In addition, influent data (untreated wastewater) continues to be required in the applications for individual authorizations under the master B4B permit and was considered as part of the decision making in this renewal permit. Effluent data and site-specific data included in the renewal application were considered in the Department's determination regarding which parameters to regulate. In addition, the Department considered the parameters included in the existing B4B permit, in accordance with N.J.A.C. 7:14A-13.19.

1. Flow, pH, Total Organic Carbon (TOC), Total Suspended Solids (TSS), and Petroleum Hydrocarbons: As discussed further in the section for Table 1, the Department has retained effluent limitations and/or monitoring requirements for flow, pH, TOC, TSS, and petroleum hydrocarbons in the master B4B permit renewal. The majority of these parameters are generally regulated in all NJPDES/Discharge to Surface Water permits throughout the State of New Jersey for wastewater discharges. Total organic carbon, total suspended solids and petroleum hydrocarbons are consistently present at detectable levels in untreated groundwater as evidenced by recent renewal application data for requests for authorization under the master B4B permit renewal.
2. Benzene: Effluent limitations and monitoring requirements have been retained for benzene from the existing master B4B permit because benzene, ethylbenzene, toluene and xylene (BTEX) constituents are consistently present in petroleum products as evidenced by B4B permit renewal application data.

As discussed in the existing master B4B permit, benzene is singled out as an appropriate indicator parameter for BTEX constituents and other volatile organic compounds because of its treatability characteristics. Two of the most widely used technologies for the treatment of groundwater contaminated with petroleum products are air stripping and granular activated carbon. Benzene is more difficult to remove by air stripping than ethylbenzene, toluene and xylene so benzene is generally the limiting compound when these other volatile

organic compounds are present. Benzene also has a low mean adsorptive capacity and is therefore expected to be one of the first constituents to “break-through” granular activated carbon or appear in the effluent when the adsorptive capacity is exhausted.

The NJSWQS for benzene, ethylbenzene and toluene for freshwater are 0.15 µg/L, 530 µg/L and 1300 µg/L, respectively. A NJSWQS does not exist at this time for xylene. Because the NJSWQS for benzene is significantly lower than that for ethylbenzene and toluene, this further supports the inclusion of an effluent limit for benzene.

3. Naphthalene: Effluent limitations and monitoring requirements have been retained for naphthalene from the existing master B4B permit because this constituent is consistently present in petroleum products as evidenced by B4B permit renewal application data. Naphthalene can be present in gasoline as well as fuel oils, although it is typically present in higher concentrations in fuel oil. Naphthalene has a very low Henry’s Law Constant and is therefore more difficult to remove by air stripping than most compounds including benzene. Considering adsorptive capacities, benzene is expected to “break-through” the granular activated carbon before naphthalene; however, because benzene may not be present in fuel oils in large quantities, it is still necessary to limit naphthalene to ensure that the removal efficiency of treatment is adequate.
4. Total Recoverable Lead: Effluent limitations and monitoring requirements have been retained for total recoverable lead on a case-by-case basis. The applicability of the lead limitation and monitoring requirement is dependent on whether or not detectable levels of lead are indicated in the NJPDES B4B permit application at levels that are comparable to or in excess of the lead limitation found in the Part III – Attachment.
5. Methyl tert Butyl Ether (MTBE) and tertiary Butyl Alcohol (TBA): Effluent limitations and monitoring requirements have been retained for methyl tert butyl ether (MTBE) and tertiary butyl alcohol (TBA) in the master B4B permit renewal as these fuel oxygenate additives may be present in contamination resulting from gasoline products.

C. Basis and Derivation for Effluent Limitations and Monitoring Requirements - Specific

A full summary of monitoring report form data from the existing permit is included at the end of this Fact Sheet. This data was evaluated in determining whether or not facilities can meet the proposed limitations.

The Department has not considered dilution effects in the application of any effluent limits in this master B4B permit renewal as an assumed dilution factor of one serves to streamline. Consideration of site-specific dilution effects is not feasible for a master general permit where the development of requirements. In addition, the majority of discharges covered under this general permit are routed to the receiving waterbody via storm sewers where the Department does not typically allow for dilution credit.

Table 1: Remediation discharges into waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC where petroleum product related constituents are present. Effluent limitations and monitoring requirements can also be included for metals, volatile organics, acid extractables, base/neutral compounds and pesticides.

1. Flow: Monitoring for flow is required pursuant to N.J.A.C. 7:14A-13.13 and is consistent with the existing master B4B permit. Flow monitoring shall be performed with a flow meter with a frequency of once per month.
2. TSS: The TSS limitation of 40 mg/L as a daily maximum for discharges to FW2-NT waters, SE, SC waters, and fresh and saline portions of the Delaware River is retained from the existing master B4B permit and is consistent with the NJSWQS at N.J.A.C. 7:9B-1.1 et seq. for FW2-NT waters. This limitation is economically and technologically achievable based on monitoring report form effluent data which shows average TSS levels

well below the limitation of 40 mg/L. The monitoring requirement for monthly average is also retained from the existing master B4B permit.

The TSS limitation for discharges to FW2-TM and FW2-TP is 25 mg/L as a daily maximum and is retained from the existing master B4B permit and is consistent with the NJSWQS at N.J.A.C. 7:9B-1.1 et seq. for FW2-TM and FW2-TP waters. This limitation is economically and technologically achievable based on monitoring report form effluent data. The monitoring requirement for monthly average is also retained from the existing master B4B permit.

3. Petroleum Hydrocarbons: The effluent limitations of 10 mg/L as a monthly average and 15 mg/L as a daily maximum for petroleum hydrocarbons are based on N.J.A.C. 7:14A-12.8 and are retained from the existing master B4B permit. Monitoring report form effluent data shows that treatment systems are consistently capable of reducing total petroleum hydrocarbon levels well below the proposed effluent limitations.
4. TOC: The effluent limitation of 20 mg/L as a daily maximum for TOC is retained from the existing master B4B permit. This limitation is economically and technologically achievable based on monitoring report form effluent data. The monitoring requirement for monthly average is also retained from the existing master B4B permit.
5. pH: The pH range of 6.0 standard units (s.u.) as a minimum and 9.0 s.u. as a maximum is imposed for both fresh and saline waters and are retained from the existing master B4B permit. These minimum and maximum pH levels are economically and technologically achievable based on existing monitoring report form effluent data.
6. Benzene and Naphthalene: The effluent limitation of 7.0 µg/L as a daily maximum for benzene is retained from the existing master B4B permit and is consistent with N.J.A.C. 7:14A-12, Appendix B. Based on existing monitoring report form data this limitation is both economically and technologically achievable. The monitoring requirement for monthly average is also retained from the existing master B4B permit.

The effluent limitations for naphthalene of 22 µg/L as a monthly average and 59 µg/L as a daily maximum are retained from the existing master B4B permit and are also consistent with N.J.A.C. 7:14A-12, Appendix B for FW2, SC, and SE waters. These limitations are economically and technologically achievable as evidenced by existing monitoring report form effluent data.

7. Total Recoverable Lead: The daily maximum effluent limitation of 10 µg/L continues to be applicable to those new discharges where lead is shown to be detectable in the permittee's B4B permit application or in other available data. This limit for new authorizations is consistent with the existing master B4B permit and is appropriate pursuant to N.J.A.C. 7:14A-13.19. A limited number of renewal authorizations have lead requirements of 37 µg/L as a monthly average and 79 µg/L as a daily maximum which has been retained.
8. MTBE and TBA: The daily maximum limit of 70 µg/L has retained in this master B4B permit renewal pursuant to the NJSWQS at N.J.A.C. 7:9B-1.1 et seq. In addition, the monitoring requirement for monthly average is also retained from the existing master B4B permit.

In the 2013 master GPPC permit an effluent limitation of 500 ug/L as a quarterly average was imposed based on Best Professional Judgement (BPJ) and is retained from the existing master B4B permit. BPJ is authorized by Section 402(a)(1) of the CWA. The monitoring requirement for monthly average and as a daily maximum is also retained from the existing master B4B permit.

9. Other Metals, Volatile Organics, Acid Extractables, Base/Neutral Compounds or Pesticides Present: The Department will continue to incorporate effluent limits for toxic parameters in the master B4B permit renewal since there are times that additional parameters are present in addition to petroleum related constituents. If any of these pollutants are present in quantities comparable to the remediation standards at N.J.A.C. 7:14A-

12, Appendix B, the Department may include effluent limitations and monitoring requirements for those pollutants included in Part III-Attachment. This is consistent with the existing master B4B permit.

10. Whole Effluent Toxicity (WET): (Requirements applicable only to those dischargers where one or more metals are present):

Section 101(a) of the 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 NJSWQS at N.J.A.C. 7:9B-1.5(a)3 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 NJSWQS and the NJPDES Regulations, the need for a WQBEL for WET was evaluated for these discharges.

As stated in the existing master B4B permit, a WQBEL for Chronic WET was calculated in accordance with N.J.A.C. 7:14A-13.6 and USEPA's TSD.

Since the master B4B permit renewal does not consider dilution effects, these limits are developed using an acute dilution factor (Df_a) of 1 and a chronic dilution factor (Df_c) of 1. Because the vast majority of discharges covered under the master B4B permit are routed to small waterbodies or storm sewers, the use of a dilution factor of one serves to simplify and streamline the master general permit and is likely reflective of site-specific conditions.

The Df_a and Df_c were then used to determine acute and chronic WLAs consistent with N.J.A.C. 7:14A-13.5, using a steady state model, as specified in section 5.4.1 of the TSD. Consistent with recommendations in 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)). The acute WLA (WLA_a) was translated to equivalent chronic toxic units (WLA_{ac}), to enable comparison of acute and chronic WET limits, by multiplying the WLA_a by a default acute to chronic ratio (ACR) of 10.

The existing master B4B permit included WET requirements for those discharges that contained metals in the discharge at levels comparable to N.J.A.C. 7:14A-12, Appendix B. As a result, the Department did evaluate existing WET data for these discharges for consideration in this B4B master permit renewal. Existing WET data showed a wide variability in WET effects as summarized later in this Fact Sheet.

Under the existing master B4B permit chronic WET limits were applied to those sites where metals were present. Given that the B4B permit covers similar discharges and chronic WET limits were only applied if metals were present, the Department has determined that this data is representative for consideration in retaining these requirements in this renewal permit. While approximately half of the data indicated no toxicity (i.e., results of >100%), some data showed some toxicity. As a result, the Department has retained the chronic WET limitation of 61% in this master B4B permit renewal. A chronic WET limitation of 61% will be applied to those sites where metals are present at levels comparable to N.J.A.C. 7:14A-12, Appendix B.

In accordance with N.J.A.C. 7:14A-6.4(a) and 13.21(b), a schedule to achieve compliance with any new chronic WET WQBEL has been included in this permit and is applicable for new dischargers (i.e., not renewal authorizations) for the three years of the discharge authorization beginning with the effective date of the permit which is intended to become effective with the commencement of pumping. After that time the referenced limit of 61% is imposed. Interim monitoring and reporting requirements have been included based on N.J.A.C. 7:14A-6.2(a)14.

- **For discharges to fresh waters:** The test species method to be used for chronic testing shall be the *Ceriodaphnia dubia*, Survival and Reproduction Test, 40 CFR 136.3, method 1002.0 and will be indicated

in Part III of the individual authorization. Such selection is based on the freshwater characteristics of the receiving stream, the existing permit (if applicable), N.J.A.C. 7:9B-1.5 and the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program" document. This document is included as Appendix A of this permit, in accordance with N.J.A.C. 7:14A-6.5, 11.2(a)2.iv. and 40 CFR Part 136.

- **For discharges to saline waters:** The test species method to be used for chronic testing shall be the *Mysidopsis bahia*, Survival, Growth, and Fecundity Test, 40 CFR 136.3, method 1007.0 and will be indicated in Part III of the individual authorization. Such selection is based on the saline characteristics of the receiving stream, the existing permit (if applicable), N.J.A.C. 7:9B-1.5 and the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program" document. This document is included as Appendix A of this permit, in accordance with N.J.A.C. 7:14A-6.5, 11.2(a)2.iv. and 40 CFR Part 136.

The Toxicity Reduction Implementation Requirements (TRIR) are included in accordance with N.J.A.C. 7:14A-13.17(a), 7:14A-6.2(a)5 and recommendations in Section 5.8 of the TSD. The requirements are necessary to ensure compliance with the applicable WET limitation on its effective date and to expedite compliance with the WET limitation should exceedances of the WET limitation occur. As included in section D.5 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. The monitoring frequency is set at **quarterly** consistent with the existing master B4B permit. The sample type shall be a composite sample. In the event there are four data points showing results of greater than 100%, the Department can reduce the frequency to annual, semi-annual or another alternate frequency, if deemed appropriate. Any such reduction may be incorporated as a minor modification as indicated in Part IV.

11. Monitoring Frequencies for Table 1:

- **For new authorizations and renewal authorizations:** A **monthly** monitoring frequency is specified for all above noted parameters with the exception of petroleum hydrocarbons. A monthly monitoring frequency is consistent with the existing master B4B permit for flow, TSS, TOC, pH, benzene, naphthalene, MTBE and TBA whereas a **quarterly** monitoring requirement for petroleum hydrocarbons is consistent with the existing B4B permit for petroleum hydrocarbons.
- **For renewal authorizations:** The Department may choose to impose a quarterly monitoring frequency for all parameters provided that all effluent data points for all parameters are consistently in compliance and in consideration of flow volumes.

Table 2: Short term dewatering or pump test discharges into waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC where petroleum product related constituents are present. Effluent limitations and monitoring requirements can also be included for metals, volatile organics, acid extractables, base/neutral compounds and pesticides.

1. Flow, TSS, Petroleum Hydrocarbons, TOC, pH, Benzene, Naphthalene, Total Recoverable Lead (where applicable), MTBE as well as Metals, Volatile Organics, Acid Extractable, Base/Neutral Compounds or Pesticides (where applicable): The rationale for the effluent limitations and monitoring requirements for these parameters for Table 2 is identical to the discussion for Table 1. If deemed appropriate and requirements are applied, the basis for the effluent limitations and monitoring requirements for metals, volatile organics, acid extractables, base/neutral compounds and pesticides is identical to the discussion for Table 1. Limitations for total recoverable lead are consistent with the limits for new authorizations since these are short term discharges.

2. TBA: The TBA monthly average limit of 500 µg/L has been retained from the existing master B4B permit. This limit is based on BPJ as discussed for Table 1. While a quarterly average has been imposed for Table 1, it is not certain that short term dewatering or pump test discharges will last a full quarter; therefore, this limit has been imposed as a monthly average. The monitoring requirement for daily maximum is also retained from the existing master B4B permit.
3. Monitoring Frequencies for Table 2: Due to the short term and intermittent nature of dewatering and pump test activities, the monitoring frequency is set as follows:

Expected Duration of Project	<u>Less than 6 Months</u>	<u>Between 6 and 12 Months</u>	<u>Greater than 12 Months</u>
Monitoring Frequency	Once / 4 Days	Once / Week	Once / Month

The Department reserves the right to adjust this monitoring frequency on an as needed basis based on site-specific factors.

4. Revocation of Authorization After Completion of Short-Term Project: Upon finalization of this master B4B permit, the Department will issue all individual authorizations with an expiration date consistent with the expiration date of the master B4B permit regardless of how long a given project is expected to take to complete. In accordance with N.J.A.C. 7:14A-2.7, all NJPDES permits shall be issued for a fixed term not to exceed five (5) years. The Department will no longer set the permit expiration date consistent with the expected duration of the project unless the project completion date is coincidentally the same as the master B4B permit expiration date. The Discharge Monitoring Report (DMR) forms must continue to be submitted even after the discharge is ceased until such time as the DMRs are inactivated or the permit is revoked.

Therefore, when the permittee has permanently ceased its discharge to surface water, the permittee shall request revocation of its individual authorization under the master B4B permit. The permittee can obtain the necessary revocation forms by accessing https://www.nj.gov/dep/dwq/pdf/njpdess4_revocation_form.pdf or by contacting the Department's Bureau of Ground Water, Residuals and Permit Administration at (609) 984-4428. The permittee can also contact the appropriate Regional Enforcement Office for further guidance on closure proceedings.

Upon receipt of an administratively complete revocation request, the Department will verify with the appropriate Regional Enforcement Office that the discharge has ceased and that the treatment works has undergone closure, in conformance with N.J.A.C. 7:14A-23.34. The Department will then revoke such individual authorization by preparing a copy of the individual authorization page showing the revocation date of the individual authorization and sending such to the permittee.

Table 3: Remediation discharges into waterbodies classified as C1 (Category One) where strictly petroleum product related constituents are present where more stringent effluent limitations shall apply.

1. No Measurable Change Criteria: Pursuant to N.J.A.C. 7:9B-1.5(d), Category One waters shall be protected from any measurable changes to the existing water quality. Often times when a pump and treat remediation project is deemed necessary, it is because the facility cannot ensure hydraulic control of the contaminated groundwater plume and contaminated groundwater is migrating off-site which could impact sensitive receptors. Therefore, in order to ensure approval of these remediation projects in an expeditious manner, the Department has included requirements for remediation discharges to Category One waters in the master B4B permit renewal. Water quality concerns have been considered for each limited parameter as discussed below where more stringent effluent limitations have been imposed in certain instances.

The Department has issued a minimal number of authorizations for Category One waters during the term of the existing master B4B permit. The Department will continue to review applications for remediation

discharges to C1 waters on a case-by-case basis. If the Department determines that the effluent limits cannot be attained or that the criteria at N.J.A.C. 7:9B-1.5(d) cannot be demonstrated, it reserves the right to deny authorization to discharge under the master B4B permit.

2. Flow: Monitoring for flow is required pursuant to N.J.A.C. 7:14A-13.13 and shall be metered with a frequency of once per two weeks.
3. TSS: The effluent limitation for TSS is retained from the master existing master B4B permit. Considering current monitoring report form data collected under the 2018 master B4B permit, permittees can consistently comply with the proposed daily maximum effluent limitation of 25 mg/L; therefore, this limit is economically and technologically achievable. In fact, the vast majority of TSS effluent data collected shows low levels. The monitoring requirement for monthly average is also retained from the existing master B4B permit.
4. Petroleum Hydrocarbons: The effluent limitations of 10 mg/L as a monthly average and 15 mg/L as a daily maximum for petroleum hydrocarbons are retained from the existing master B4B permit and are consistent with N.J.A.C. 7:14A-12.8. Based on current monitoring report form data, current treatment technology can consistently treat total petroleum hydrocarbons to non-detectable or trace levels.
5. TOC: The effluent limitation for TOC of 20 mg/L as a daily maximum is retained from the existing master B4B permit. Based on current monitoring report form data, current treatment technology can consistently treat to the proposed limit where current data generally shows low levels. The monitoring requirement for monthly average is also retained from the existing master B4B permit.
6. pH: The effluent limits for minimum and maximum pH for Category One waters are based on N.J.A.C. 7:9B-1.1 et seq. for FW2 waters. The in-stream pH range of 6.5 s.u. as a minimum and 8.5 s.u. as a maximum have been retained from the existing B4B master permit as effluent limits due to the high quality characteristics of Category One waters.
7. Benzene, Total Recoverable Lead (where applicable): Due to the low in-stream NJSWQS for benzene and total recoverable lead as well as the “no measurable change” criteria for Category One waters pursuant to N.J.A.C. 7:9B-1.5(d)6.iii., stringent effluent limitations are appropriate pursuant to N.J.A.C. 7:9B-1.5(e)7. Therefore, the compliance points of 7 µg/L for benzene and 10 µg/L for lead have been retained from the existing master B4B as daily maximum effluent limitations. The monitoring requirement for monthly average is also retained from the existing master B4B permit. A requirement for lead is only imposed if lead is present in the influent application data.
8. Naphthalene: Although there is no NJSWQS for naphthalene at this time, naphthalene is listed as a toxic pollutant at N.J.A.C. 7:14A-4 Appendix A Table II. Based on the fact that naphthalene is toxic as well as the “no measurable change” criteria for Category One waters, pursuant to N.J.A.C. 7:9B-1.5(d)6iii, the Department has determined that a stringent effluent limitation is appropriate. Therefore, the compliance point of 8 µg/L has been retained from the existing master B4B permit. The monitoring requirement for monthly average is also retained from the existing master B4B permit.
9. MTBE and TBA: The compliance point of 70 µg/L as a daily maximum effluent limit has been retained from the existing master B4B. The monitoring requirement for monthly average is also retained from the existing master B4B permit.

The compliance point of 100 µg/L as a monthly average limit has been retained from the existing master B4B permit. The monitoring requirement for daily maximum is also retained from the existing master B4B permit.

10. Metals, Volatile Organics, Acid Extractable, Base/Neutral Compounds or Pesticides (where applicable): The rationale for the effluent limitations and monitoring requirements for metals, volatile organics, acid extractables, base/neutral compounds and pesticides is identical to the discussion for Table 1.

While the Department has issued a very limited number of authorizations under the master B4B for C1 waterbodies, the Department is retaining the option to impose effluent limitations and monitoring requirements for any metals, volatile organics, acid extractables, base/neutral compounds and pesticides that may be present where the compliance point is consistent with the existing master B4B.

The Department will review applications for remediation discharges on a case-by-case basis and, if the Department determines that the effluent limits cannot be attained, it reserves the right to deny authorization to discharge under the master B4B permit.

11. Whole Effluent Toxicity (WET): The Department has imposed WET requirements for Table 3 in the event that any metals are detected. The rationale for WET requirements is identical to that as specified in Table 1.
12. Monitoring Frequencies for Table 3: Due to the high-quality classification of C1 waters, the monitoring frequency for Table 3 is set at once per two weeks for all parameters with the exception of WET which is set at quarterly. The Department reserves the right to adjust this monitoring frequency on an as needed basis based on site-specific factors.

C. Effluent Monitoring Frequencies and Sample Types:

Monitoring frequencies and sample types are in accordance with N.J.A.C. 7:14A-14, unless specified otherwise in the permit.

D. Use of Sufficiently Sensitive Test Methods for Reporting:

When more than one test procedure is approved under this part for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 136, 122.21(e)(3), and 122.44(i)(1)(iv).

An EPA-approved method is sufficiently sensitive where:

- A. The method minimum level is at or below the level of the applicable water quality criterion or permit limitation for the measured pollutant or pollutant parameter; or
- B. The method minimum level is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
- C. The method has the lowest minimum level of the EPA-approved analytical methods.

When there is no analytical method that has been approved under 40 CFR part 136, required under 40 CFR chapter I, subchapter N or O, and is not otherwise required by the Department, the permittee may use any suitable method upon approval by the Department.

For questions regarding the applicability of the rule and whether or not the facility is complying with the target level of sensitivity, contact Steve Seeberger of the Bureau of Surface Water and Pretreatment Permitting at (609) 292-4860 or via email at Stephen.Seeberger@dep.nj.gov.

For questions regarding laboratory methodologies, certifications, or specifics relating to quantitation limits associated with individual test methods, contact the Office of Quality Assurance at (609) 292-3950 or via email at OQA@dep.nj.gov.

E. Compliance Schedule:

In accordance with N.J.A.C. 7:14A-6.4(a) and N.J.A.C. 7:14A-13.21(b), a schedule of achieve compliance with a new chronic WET WQBEL has been included in this master B4B permit renewal and is applicable for new discharges/authorizations (i.e., not renewal authorizations). The compliance schedule time frame is established at three years and is modeled after the schedule applied to new source, new dischargers or expanded direct discharges at N.J.A.C. 7:14A-12.31(c).

For new dischargers under Table 1 and, if deemed appropriate, Table 3, the Department will set an initial and final phase for WET limits.

1. During the "initial" phase, which begins from the commencement of pumping (as specified in the application), chronic WET monitoring conditions are effective from the effective date of the permit (EDP) until EDP + 36 months.
2. During the "final" phase, a chronic WET effluent limitation of IC25=61% will become effective on EDP + 36 months.

For Table 2 a WET limitation does not apply given the short-term nature of the discharge.

F. Treatment Additives:

If a permittee proposes addition of any chemical or biofouling agents in its treatment system in order to enhance treatment effectiveness and system performance, the permittee must obtain permission from the Department prior to use of such compounds.

The permittee shall submit an email or letter to the Department describing the use of such chemical addition agents, including information pertaining to dosage rates and frequency of dosage, and the Safety Data Sheet for the product(s) that contains toxicological data. The letter shall be submitted electronically to the Department's Bureau of Surface Water and Pretreatment Permitting at dwq_bswp@dep.nj.gov 30 days before the anticipated use. The Department will evaluate the submittal and notify the permittee in writing or via email as to whether the compound can be utilized under the conditions of the individual authorization under the permit.

G. Delaware River Basin Commission (DRBC):

As requested by DRBC in an e-mail correspondence dated November 17, 2023, monitoring requirements for effluent Total Dissolved Solids (TDS) will be included as a monthly average and daily maximum for concentration and loading for those facilities that discharge to the Delaware River Basin in any new or existing individual authorization. These monitoring conditions are required by DRBC to evaluate the TDS concentration level in the effluent and ensure that it will not exceed the basin wide limitation of 1,000 mg/L in accordance with the Effluent Quality Requirements of the DRBC Water Quality Regulations at Section 3.10.4.D.2. Refer to Part IV, Section D.2. for more information.

H. Perfluoroalkyl and Polyfluoroalkyl Compounds (PFAS):

The Department has been made aware that there may be facilities that are in the process of installing treatment units to address PFAS. This may include facilities that are not covered under this existing master B4B general permit. As a result, the Department will incorporate PFAS requirements to assess any levels that may be present. These requirements will be included on a case-by-case basis in any new or existing individual authorization. These requirements would be in addition to any effluent limitations and monitoring conditions specified in Sections B. and C. above.

PFAS are a family of manmade chemicals that have been used in industrial and commercial applications for over 70 years. PFAS, also known as "forever chemicals," repel water and oil and are resistant to heat and chemical

reactions. PFAS are extremely persistent in the environment and soluble and mobile in water. PFAS are developmental toxicants, liver toxicants, and immune system toxicants that are probable carcinogens and bioaccumulate in animal and human tissue. Since these chemicals are persistent and heavy, they may settle at the bottoms of tanks and pits and be present long after PFAS-containing chemicals were used. Therefore, in accordance with N.J.A.C. 7:14A-6.2(a)14, the Department is hereby imposing monitoring and reporting requirements for the following PFAS substances listed below on an as needed basis, which will be specified in any individual authorizations. These parameters are as follows:

- C4 – Perfluorobutanoic Acid (PFBA)
- C5 – Perfluoropentanoic Acid (PFPeA)
- C6 – Perfluorohexanoic acid (PFHxA)
- C7 – Perfluoroheptanoic acid (PFHpA)
- C8 – Perfluorooctanoic acid (PFOA)
- C9 – Perfluorononanoic acid (PFNA)
- C10 – Perfluorodecanoic acid (PFDA)
- C11 – Perfluoroundecanoic acid (PFUnA)
- C12 – Perfluorododecanoic acid (PFDoA)
- C13 – Perfluorotridecanoic acid (PFTriA)
- C14 – Perfluorotetradecanoic acid (PFTeA)
- C4-S – Perfluorobutanesulfonic acid (PFBS)
- C6-S – Perfluorohexanesulfonic acid (PFHxS)
- C8-S – Perfluorooctanesulfonic acid (PFOS)
- GenX chemicals including Hexafluoropropylene Oxide (HFPO) Dimer Acid and its Ammonium Salt

I. Reporting Requirements:

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

Electronic Reporting Requirements

On October 22, 2015, the USEPA promulgated the final NPDES Electronic Reporting Rule (see Federal Register 80:204 p. 64064). This rule requires entities regulated under the CWA NPDES program to report certain information electronically instead of filing paper reports.

In accordance with this rule, all required monitoring results reported on MRFs shall be electronically submitted to the Department via the Department's Electronic MRF Submission Service. The following documents shall be electronically submitted to the Department via the Department's designated Electronic Submission Service:

- Requests for authorization (i.e. RFAs) under this general permit
- Requests for termination/revocation under this general permit

Consistent with the provisions of the final rule, the permittee may seek a waiver from the mandatory electronic reporting of the above identified documents and reports for just cause. Such a request shall be made in accordance with the provisions of 40 CFR 127.15 and submitted to the Department at the address identified below:

NJDEP: Division of Water Quality
Permit Administration Section
Mail Code 401-02B, P.O. Box 420
401 E. State Street
Trenton, NJ 08625-0420

Please refer to Part II of this permit action for further details regarding the reporting requirements as a result of the Electronic Reporting Rule.

J. 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.

K. Outfall Tag:

Pursuant to N.J.A.C. 7:14A-6.2(a)9, the permittee shall ensure that a tag is present to mark the location of the outfall pipe on or before the start of discharge.

L. Treatment Work Approval (TWA):

Prior to discharge and upon issuance of a new individual authorization or where treatment has been modified, a General Industrial Treatment Works Approval (GI TWA) may be required for the construction of a treatment works (N.J.A.C. 7:14A-22) to enable attainment of the limits and conditions of the NJPDES permit. If you have any questions regarding the TWA, please contact the General Industrial TWA Permits Section of the Bureau of Environmental, Engineering and Permitting at (609) 984- 4429.

In accordance with N.J.A.C. 7:14A-22.4(a)7, a treatment works approval (TWA) modification for chemical addition where it is used for purposes of improving treatment system performance is not required.

M. Operator Classification Number:

To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Environmental, Engineering and Permitting at (609) 984-4429.

N. Flow Related Conditions:

Groundwater remediations such as those regulated under this permit are not included in the applicable Water Quality Management Plan and/or Wastewater Management Plan for each individual request for authorization.

O. Water Allocation:

Any project that exceeds 100,000 gallons per day for a period of 30 days or more may require a Water Allocation Permit for the diversion of ground and/or surface water. In addition, for temporary ground and surface water control diversions (dewatering) in excess of 100,000 gallons of water per day, may require a Dewatering Allocation Permit, or Dewatering Permit-by-Rule or Short Term Permit-by-Rule depending on the duration of the diversion and the method employed. Further information can be found on the Department's website at: <https://www.nj.gov/dep/watersupply/> or by contacting the Division of Water Supply and Geoscience at (609) 984-6831 or via email at waterallocation@dep.nj.gov.

4 Type and Quantity of the Wastes or Pollutants:

This master B4B general permit continues to regulate surface water discharges resulting from the treatment of petroleum contaminated water. The Department reviewed effluent data from the Monitoring Report Forms (MRFs) for the time period of January 1, 2019 to August 31, 2023 for all facilities covered under the master B4B general permit. In addition, the Permit Summary Table (PST) near the end of this fact sheet contains a summary of the quantity and quality of pollutants treated and discharged from the facilities covered under this B4B permit.

Residuals/Sludge Conditions:

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

Typically, spent granular activated carbon generated by the treatment systems at these types of facilities is regenerated for further use and is not considered to be a sludge for purposes of reporting under the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C). Bag filters and cartridge filters removed from these treatment systems are also not considered to be sludges. However, these materials are considered to be residuals as defined in the New Jersey Pollutant Discharge Elimination System regulations (NJPDES, N.J.A.C. 7:14A). Consequently, general residuals conditions have been included in Part II of the permit. Residuals removed that are manifested as hazardous waste are exempt from SQAR as provided for under N.J.A.C. 7:14C-1.13(b)1.iii. Should there be any significant change in residual use or disposal practices, the permittee shall give written notification to the Department in accordance with Part II, General Conditions, Section B.4.a.

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

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

5 Discharge Location Information and Receiving Waterbody Classification:

A. Waterbody Classifications and Designated Uses as per the SWQS

Waterbodies are classified in the SWQS at N.J.A.C. 7:9B-1.1 et seq. with various waterbody designations. In accordance with the SWQS, saline waters are considered to be those waters classified as Saline Estuary (SE)1, SE2, SE3, or Saline Coastal (SC) and fresh waters are considered to be those waters classified as Fresh Water (FW)1 or FW2 waters. For waters with two classifications (e.g., FW2-NT/SE1), the waterbody is defined as saline if the result of a salinity measurement exceeds 3.5 parts per thousand at mean high tide or as fresh if the salinity is less than or equal to 3.5 parts per thousand, in accordance with N.J.A.C. 7:9B-1.4.

The designated uses for the following waterbody designations (FW2, SE1, SE2, SE3, and SC) are as follows:

Freshwater 2 or FW2:

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

Saline Estuary 1 or SE1:

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.

Saline Estuary 2 or SE2:

1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

Saline Estuary 3 or SE3:

1. Secondary contact recreation;
2. Maintenance and migration of fish populations;
3. Migration of diadromous fish;
4. Maintenance of wildlife; and
5. Any other reasonable uses.

Saline Coastal or SC:

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

Also, consistent with N.J.A.C. 7:9B-1.4, the definitions for C1 Waters, C2 Waters, as associated with the waterbody classifications are as follows:

Category One Waters or C1:

Refers to those waters designated in the tables in N.J.A.C. 7:9B-1.15(c) through (i), for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d). This includes protection from measurable changes in water quality based on exceptional ecological significance, exceptional recreational significance, exceptional water supply significance or exceptional fisheries resource(s) to protect their aesthetic value (color, clarity, scenic setting) and ecological integrity (habitat, water quality and biological functions).

Category Two or C2 Waters:

Refers to those waters at N.J.A.C. 7:9B-1.15 that are not designated as ONRW or Category One for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d).

The SWQS also form the basis for the Department's Integrated Water Quality Monitoring and Assessment Report, which is developed pursuant to Sections 303(d) and 305(b) of the CWA. Sublist 5 of this Report lists the pollutant specific water quality impairments for the State's waters (303(d) list).

B. Waterbody Classifications and Designated Uses as per the DRBC Water Quality Regulations

The designated uses for the mainstem Delaware River and Delaware Bay are those contained in the "Delaware River Basin Commission, Water Quality Regulations, Administrative Manual - Part III," Article 3, dated December 4, 2013, including all amendments and future supplements thereto and are described below:

Zones 1C, 1D and 1E:

Zone 1C is that part of the Delaware River extending from the U.S. Routes 6 and 209 bridge at Port Jervis, New York, R.M. 254.75, to Tocks Island Dam, 217.0 (proposed axis of dam).

Zone 1D is that part of the Delaware River extending from Tocks Island Dam, R.M. 217.0 (proposed axis of dam), to the mouth of the Lehigh River at Easton, Pennsylvania, R.M. 183.66.

Zone 1E is that part of the Delaware River extending from the mouth of the Lehigh River at Easton, Pennsylvania, R.M. 183.66, to the head of tidewater at Trenton, New Jersey, R.M. 133.4 (Trenton-Morrisville Toll Bridge).

The quality of Zone 1C, 1D and 1E waters shall be maintained in a safe and satisfactory condition for the following uses:

1. a. public water supplies after reasonable treatment,
b. industrial water supplies after reasonable treatment,
c. agricultural water supplies;
2. a. maintenance and propagation of resident game fish and other aquatic life,
b. spawning and nursery habitat for anadromous fish,
c. passage of anadromous fish,
d. wildlife;
3. recreation.

Zone N2:

Zone N2 is: Clove Brook extending from its source in Steeny Kill Lake in New Jersey to its mouth in New York at R.M. 0.5 on the Neversink River; an unnamed tributary of Clove Brook extending from its source in New York to its mouth in New Jersey at R.M. 1.0 on Clove Brook; an unnamed tributary to the above unnamed tributary of Clove Brook extending from its source in New York to its mouth in New Jersey at R.M. 0.7 on the unnamed tributary of Clove Brook.

The quality of Zone N2 waters shall be maintained in a safe and satisfactory condition for the following uses:

1. a. public water supplies after reasonable treatment,
b. industrial water supplies after reasonable treatment,
c. agricultural water supplies;
2. a. maintenance and propagation of resident game fish and other aquatic life,
b. maintenance and propagation of trout,
c. wildlife;
3. recreation.

Zone 2 and 3:

Zone 2 is that part of the Delaware River extending from the head of tidewater at Trenton, New Jersey, R.M. (River Mile) 133.4 (Trenton-Morrisville Toll Bridge) to R.M. 108.4 below the mouth of Pennypack Creek, including the tidal portions of the tributaries thereof.

Zone 3 is that part of the Delaware River extending from R.M. 108.4 to R.M. 95.0 below the mouth of Big Timber Creek, including the tidal portions of the tributaries thereof.

The quality of Zones 2 and 3 waters shall be maintained in a safe and satisfactory condition for the following uses:

1. a. public water supplies after reasonable treatment,
b. industrial water supplies after reasonable treatment,
c. agricultural water supplies;
2. a. maintenance and propagation of resident fish and other aquatic life,
b. passage of anadromous fish,
c. wildlife;
3. recreation (Zone 2); recreation – secondary contact (Zone 3);
4. navigation.

Zone 4:

Zone 4 is that part of the Delaware River extending from R.M. 95.0 to R.M. 78.8, the Pennsylvania-Delaware boundary line, including the tidal portions of the tributaries thereof.

The quality of Zone 4 waters shall be maintained in a safe and satisfactory condition for the following uses:

1. industrial water supplies after reasonable treatment;
2. a. maintenance of resident fish and other aquatic life,
b. passage of anadromous fish,
c. wildlife;
3. a. recreation - secondary contact above R.M. 81.8,
b. recreation below R.M. 81.8;
4. navigation.

Zone 5:

Zone 5 is that part of the Delaware River extending from R.M. 78.8 to R.M. 48.2, Liston Point, including the tidal portions of the tributaries thereof.

The quality of waters in Zone 5 shall be maintained in a safe and satisfactory condition for the following uses:

1. industrial water supplies after reasonable treatment;
2. a. maintenance of resident fish and other aquatic life,
b. propagation of resident fish from R.M. 70.0 to R.M. 48.2,
c. passage of anadromous fish,
d. wildlife;
3. recreation;
4. navigation.

Zone 6:

Zone 6 is Delaware Bay extending from R.M. 48.2 to R.M. 0.0, the Atlantic Ocean, including the tidal portions of the tributaries thereof.

The quality of Zone 6 waters shall be maintained in a safe and satisfactory condition for the following uses:

1. industrial water supplies after reasonable treatment,
2. a. maintenance and propagation of resident fish and other aquatic life,
b. maintenance and propagation of shellfish,
c. passage of anadromous fish,
d. wildlife;
3. recreation;
4. navigation.

6 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 newspapers below and in the *DEP Bulletin* available at <https://dep.nj.gov/bulletin/>.

The Press of Atlantic City

Star Ledger

The Times

7 Contact Information

If you have any questions regarding this permit action, please contact Tara Klimowicz or Kevin Johnson of the Bureau of Surface Water and Pretreatment Permitting. Both can be reached at either (609) 292-4860 or via e-mail at Tara.Klimowicz@dep.nj.gov or Kevin.Johnson@dep.nj.gov.

8 Data Summary

Effluent data from the individual permittee's DMRs were summarized for the time period of January 2019 to August 2023. There were approximately 30 active outfalls within this period. The following data summary tables do not consider non-detectable quantities when determining the average and maximum values for each parameter, nor do they include DMR results reported with No Observable Discharge Identified (NODI) in the total number of non-detectable quantities.

General Petroleum Product Clean-up Parameters

Parameter	Wastewater Data	Parameter	Wastewater Data
Total Suspended Solids, mg/L	Average - 21.49 Maximum - 570 # Detects - 283 #Non-detects - 693 % Detected - 29	Benzene, µg/L	Average - 2.40 Maximum - 23.9 # Detects - 78 #Non-detects - 882 % Detected - 8.13
Petroleum Hydrocarbons, mg/L	Average - 3.01 Maximum - 13.2 # Detects - 102 #Non-detects - 606 % Detected - 14.41	Naphthalene, µg/L	Average - 1.66 Maximum - 14 # Detects - 58 #Non-detects - 860 % Detected - 6.32
Total Organic Carbon, mg/L	Average - 4.27 Maximum - 97.1 # Detects - 640 #Non-detects - 335 % Detected - 65.64	Total Recoverable Lead, µg/L	Average - 8.04 Maximum - 91.2 # Detects - 93 #Non-detects - 163 % Detected - 36.33
pH, s.u.	Average - 7.26 Maximum - 10.25 Minimum - 5.4 # Detects - 697 #Non-detects - 0	MTBE-Effluent, µg/L	Average - 2.6 Maximum - 33 # Detects - 80 #Non-detects - 840 % Detected - 8.7
Chronic WET, %	Average - 58.91 Minimum - 2.3 # detects - 37 #non-detects - 35 % Detected - 51.39	TBA-Effluent, µg/L	Quarterly Average - 28.19 Monthly Average - 48.02 Daily Max - 577 # detects - 125 #non-detects - 786 % Detected - 13.72

The following conclusions can be drawn from the existing data:

- In comparing effluent data to effluent limits, very few data points are out of compliance.
- A majority of the effluent data points were non-detectable for each respective parameter, except for pH, TOC and WET.
- The Chronic WET Toxicity data reported on the DMRs for thirteen sites ranged from 2.3% to >100. This data supports the retention of Chronic Toxicity requirements for Table 1.

**Summary of Detected Toxic Pollutants in all Effluent Sampling Results Reported from
January 2019 through August 2023**

Toxic Pollutants	Number of Non-Detect Values	Number of Detected Values	Daily Maximum (µg/L)	Monthly Average (µg/L)
Volatile Organic Compounds				
1,2-Dichloroethane	34	0	--	--
Chlorobenzene	8	19	190	5.90
Ethylbenzene	378	15	5.7	0.863
Tetrachloroethylene	34	27	19.8	2.091
Toluene	213	16	7.9	0.720
Trichloroethylene	49	2	0.47	0.43
Acid Compounds				
2,4-Dimethylphenol	121	0	--	--
Phenol (Single Compound)	23	0	--	--
Base/Neutral Compounds				
Acenaphthene	43	0	--	--
Benzo(a)anthracene	2	1	0.05	0.05
Benzo(a)pyrene	1	0	--	--
Benzo(b)fluoranthene	1	0	--	--
Benzo(k)fluoranthene	1	0	--	--
Bis (2-ethylhexyl) Phthalate	40	0	--	--
Chrysene	1	0	--	--
Dibenzo(a,h)anthracene	1	0	--	--
Fluoranthene	2	0	--	--
Fluorene	80	2	0.294	0.294
Hexachloroethane	20	0	--	--
Indeno(1,2,3 c,d)pyrene	1	0	--	--
N-nitrosodiphenylamine	0	1	0.45	0.45
Phenanthrene	90	3	0.246	0.227
Pyrene	49	2	0.328	0.328
Pesticides				
4,4'-DDD	1	1	0.009	0.009
4,4'-DDE	2	1	0.009	0.009
4,4'-DDT	0	1	0.009	0.009
Chlordane	1	0	--	--
Metals And Cyanide				
Arsenic (Total & TR)	62	145	23.8	6.35
Cadmium (Total & TR)	2	0	--	--
Chromium (Total and TR)	85	46	62.9	5.82
Copper (Total & TR)	125	58	86.4	7.27
Cyanide	107	22	89	22.39
Iron (Total & TR)	1	25	92800	11195
Manganese (TR)	0	9	1500	336.33
Mercury (TR)	5	17	0.5	0.20
Nickel (Total & TR)	82	40	41.57	8.26
Zinc (Total & TR)	235	216	540	37.77

Dashes (--) correspond with the no detected quantifiable effluent sampling data for these parameters; As a result, the maximum and average values could not be determined.

9 Permit Summary Table

Unless otherwise noted all effluent limitations are expressed as maximums. MR indicates monitoring and reporting.

PARAMETER	UNITS	AVERAGING PERIOD	TABLE 1 - FINAL LIMITS	TABLE 2 - FINAL LIMITS	TABLE 3 - FINAL LIMITS
Flow	GPD	Monthly Avg. Daily Max.	MR MR	MR MR	MR MR
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	MR 40 (1)	MR 40 (1)	MR 25
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	10 15	10 15	10 15
Total Organic Carbon	mg/L	Monthly Avg. Daily Max.	MR 20	MR 20	MR 20
pH Range	S.U.	Monthly Min. Monthly Max.	6.0 9.0	6.0 9.0	6.5 8.5
Benzene	µg/L	Monthly Avg. Daily Max.	MR 7	MR 7	MR 7
Naphthalene	µg/L	Monthly Avg. Daily Max.	22 59	22 59	MR 8.0
Effluent MTBE	µg/L	Monthly Avg. Daily Max.	MR 70	MR 70	MR 70
Effluent TBA	µg/L	Monthly Avg. Quarterly Avg. Daily Max.	MR 500 MR	500 -- MR	100 -- MR
Total Recoverable Lead	µg/L	Monthly Avg. Daily Max.	MR 10 (2)	MR 10	MR 10
Chronic Toxicity, IC25	%	Minimum	61 (3) (4)	N/A	61 (3) (4)
Other Metals, Volatile Organics, Base/Neutral Compounds, Acid Extractables, Pesticides	µg/L	Monthly Avg. Daily Max.	Applied as needed – see Part III – Attachment (5)	Applied as needed – see Part III – Attachment (5)	Applied as needed – see Part III – Attachment (5)

Footnotes and Abbreviations:

- (1) The daily maximum TSS limit is 25 mg/L for FW2-TM and FW2-TP waters.
- (2) A lead limit and monitoring requirement is only applied if lead is present in the influent application data at quantities comparable to the lead limitation found in Part III – Attachment. A limited number of renewal authorizations have lead requirements of 37 µg/L as a monthly average and 79 µg/L as a daily maximum which has been retained.
- (3) Limit is only applicable if one or more metals are present in quantities comparable to or greater than the remediation standards at N.J.A.C. 7:14A-12, Appendix B.
- (4) For new authorizations - Chronic WET limit is imposed with a three-year compliance schedule beginning with commencement of pumping.
- (5) Limits are applied as needed where parameters are detected at quantities comparable to the remediation standards at N.J.A.C. 7:14A-12, Appendix B.

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. [B]
2. 40 CFR Part 131, Federal Water Quality Standards. [B]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System. [B]
4. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A]
5. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A]
6. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A]
7. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A]
8. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [A]
9. DRBC: Administrative Manual – Part III Water Quality Regulations.
10. Interstate Environmental Commission Regulations, N.J.S.A. 32:18-1 et seq.
11. Requirements of the Pinelands Commission (N.J.A.C. 7:50-6.81 to 6.87).
12. Requirements of the Highlands Commission (N.J.S.A. 13:20-1 et seq.).

Guidance Documents / Reports:

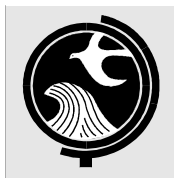
1. "Field Sampling Procedures Manual", published by the NJDEP.
2. "NJPDES Monitoring Report Form (MRF) Reference Manual", published by the NJDEP.
3. "EPA Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991.
4. New Jersey's 2018/2020 Integrated Water Quality Monitoring and Assessment Report (*includes 305 (b) Report 303(d) List*). [A]
5. DMRs reviewed from January 1, 2019 through August 31, 2023.

Permits / Applications:

1. NJPDES/DSW General Petroleum Product Cleanup (GPPC) Permit No. NJ0102709 issued December 26, 2018 and effective January 1, 2019.

Footnotes:

- [A] Denotes items that may be found on the New Jersey Department of Environmental Protection (NJDEP) website located at "<https://dep.nj.gov/>".
- [B] Denotes items that may be found on the United States Environmental Protection Agency (USEPA) website at <http://www.epa.gov/>."



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: NJ0102709

Draft: Surface Water Master General Permit Renewal

Permittee:

NJPDES Master General Permit Program Interest
Category B4B
Per Individual Notice of Authorization
Division of Water Quality
Mail Code: 401-02B, P.O. Box 420
401 East State Street
Trenton, NJ 08625

Property Owner:

NJPDES Master General Permit Program Interest
Category B4B
Per Individual Notice of Authorization
Division of Water Quality
Mail Code: 401-02B, P.O. Box 420
401 East State Street
Trenton, NJ 08625

Location Of Activity:

NJPDES Master General Permit Program Interest
Category B4B
Per Individual Notice of Authorization
Division of Water Quality
Mail Code: 401-02B, P.O. Box 420
401 East State Street
Trenton, NJ 08625

Authorization Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
B4B - Groundwater Petroleum Product Cleanup (GP) - Renewal	<i>Pending</i>	<i>Pending</i>	<i>Pending</i>

By Authority of:
Commissioner's Office

DEP AUTHORIZATION
Susan Rosenwinkel
Assistant Director
Water Pollution Management Element

(Terms, conditions and provisions attached hereto)

PART I GENERAL REQUIREMENTS: NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

- a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.
- b. General Conditions
 - Penalties for Violations N.J.A.C. 7:14-8.1 et seq.
 - Incorporation by Reference N.J.A.C. 7:14A-2.3
 - Toxic Pollutants N.J.A.C. 7:14A-6.2(a)4i
 - Duty to Comply N.J.A.C. 7:14A-6.2(a)1 & 4
 - Duty to Mitigate N.J.A.C. 7:14A-6.2(a)5 & 11
 - Inspection and Entry N.J.A.C. 7:14A-2.11(e)
 - Enforcement Action N.J.A.C. 7:14A-2.9
 - Duty to Reapply N.J.A.C. 7:14A-4.2(e)3
 - Signatory Requirements for Applications and Reports N.J.A.C. 7:14A-4.9
 - Effect of Permit/Other Laws N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
 - Severability N.J.A.C. 7:14A-2.2
 - Administrative Continuation of Permits N.J.A.C. 7:14A-2.8
 - Permit Actions N.J.A.C. 7:14A-2.7(c)
 - Reopener Clause N.J.A.C. 7:14A-6.2(a)10
 - Permit Duration and Renewal N.J.A.C. 7:14A-2.7(a) & (b)
 - Consolidation of Permit Process N.J.A.C. 7:14A-15.5
 - Confidentiality N.J.A.C. 7:14A-18.2 & 2.11(g)
 - Fee Schedule N.J.A.C. 7:14A-3.1
 - Treatment Works Approval N.J.A.C. 7:14A-22 & 23
- c. Operation And Maintenance
 - Need to Halt or Reduce not a Defense N.J.A.C. 7:14A-2.9(b)
 - Proper Operation and Maintenance N.J.A.C. 7:14A-6.12
- d. Monitoring And Records
 - Monitoring N.J.A.C. 7:14A-6.5
 - Recordkeeping N.J.A.C. 7:14A-6.6
 - Signatory Requirements for Monitoring Reports N.J.A.C. 7:14A-6.9
- e. Reporting Requirements
 - Planned Changes N.J.A.C. 7:14A-6.7
 - Reporting of Monitoring Results N.J.A.C. 7:14A-6.8
 - Noncompliance Reporting
 - Hotline/Two Hour & Twenty-four Hour Reporting N.J.A.C. 7:14A-6.10 & 6.8(h)
 - 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

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 at least 180 days prior to the expiration of the permit.

3. Notification of Non-Compliance

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

4. Notification of Changes

- a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.
- b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

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

6. Operator Certification

- a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.
 - i. Notifications shall be submitted to:
NJDEP
Bureau of Water System Engineering
Mail Code 401-04Q
PO Box 420
Trenton, New Jersey 08625 - 0420
(609) 292-2957
or via email to www@dep.nj.gov.
- b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

7. Operation Restrictions

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

8. Residuals Management

- a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:
 - i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;
 - ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;
 - iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;
 - iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;
 - v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and
 - vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.

- vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)
- b. If any applicable standard for residual use or disposal is promulgated under section 405(d) of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.
- c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.
- d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.
- e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C. 7:14A-20.7(j).
- f. The preparer who provides residual to another person who further prepares the residual for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.
- g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to provide written notice to the Department and to the permitting authority for the State in which the bulk residual is proposed to be applied.

9. Standard Reporting Requirements – Monitoring Report Forms (MRFs)

- a. MRF data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee.
- b. MRFs shall be submitted at the frequencies identified in Part III of this permit.
- c. All MRFs shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

- d. The highest ranking official may delegate responsibility to certify the MRFs in his or her absence. Authorizations for other individuals to certify shall be made in accordance with N.J.A.C. 7:14A-4.9(b).
- e. Monitoring results shall be submitted in accordance with the current NJPDES Monitoring Report Form Reference Manual and any updates thereof.
- f. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.
- g. If, for a monitored location, there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results by checking the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

10. Standard Reporting Requirements - Electronic Submission of NJPDES Information

- a. The below identified documents and reports, if required to be submitted by this permit, shall be electronically submitted to the NJDEP via the Department's designated Electronic Submission Service.
 - i. General permit authorization requests (i.e. RFAs)
 - ii. General permit termination/revocation requests

PART III LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:

AB4B Table 1

RECEIVING STREAM:

Varies

STREAM CLASSIFICATION:

DISCHARGE CATEGORY(IES):

B4B - Groundwater Petroleum Product
Cleanup (GP)

Location Description

This table is utilized for remediation discharges into eligible waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC where petroleum related constituents are present. Other metals, volatile organics, acid extractables, base-neutrals and pesticides may also be present and will be included based on the limits referenced in Part III - Attachment.

Contributing Waste Types

Groundwater Remediation

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:

If a WET limitation is applied, a 3 year WET compliance schedule for new authorizations may be imposed beginning with the start of discharging; TSS limitation varies based on waterbody classification.

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

PHASE: Final

PHASE Start Date:

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GPD	*****	*****	*****	*****	1/Month	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Monthly Minimum	*****	9.0 Monthly Maximum	SU	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	40 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	61 Report Per Minimum	*****	*****	%EFFL	1/Quarter	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:

If a WET limitation is applied, a 3 year WET compliance schedule for new authorizations may be imposed beginning with the start of discharging; TSS limitation varies based on waterbody classification.

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

PHASE: Final

PHASE Start Date:

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	1/Quarter	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	20 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Lead, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	10 Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Naphthalene	Effluent Gross Value	*****	*****	*****	*****	22 Monthly Average	59 Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Methyl tert-butyl Ether	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	70 Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Benzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	7 Daily Maximum	UG/L	1/Month	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:

If a WET limitation is applied, a 3 year WET compliance schedule for new authorizations may be imposed beginning with the start of discharging; TSS limitation varies based on waterbody classification.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:****PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Tertiary Butyl Alcohol (TBA)	Effluent Gross Value	*****	*****	*****	500 Quarterly Average	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION:

BB4B Table 2

RECEIVING STREAM:

Varies

STREAM CLASSIFICATION:DISCHARGE CATEGORY(IES):B4B - Groundwater Petroleum Product
Cleanup (GP)**Location Description**

This table is utilized for short term dewatering or pump test discharges into eligible waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC where petroleum related constituents are present. Other metals, volatile organics, acid extractables, base-neutrals and pesticides may also be present and will be included based on the limits referenced in Part III - Attachment.

Contributing Waste Types

Groundwater Remediation

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:

Limits are applied as needed where parameters are detected at quantities comparable to the remediation standards at N.J.A.C. 7:14A-12, Appendix B; TSS limitation varies based on waterbody classification. The Department reserves the right to adjust the monitoring frequency on an as needed basis based on site-specific factors.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:****PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GPD	*****	*****	*****	*****	1/4 Days	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Monthly Minimum	*****	9.0 Monthly Maximum	SU	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	40 Daily Maximum	MG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	1/4 Days	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:

Limits are applied as needed where parameters are detected at quantities comparable to the remediation standards at N.J.A.C. 7:14A-12, Appendix B; TSS limitation varies based on waterbody classification. The Department reserves the right to adjust the monitoring frequency on an as needed basis based on site-specific factors.

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

PHASE: Final

PHASE Start Date:

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	20 Daily Maximum	MG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Lead, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	10 Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Naphthalene	Effluent Gross Value	*****	*****	*****	*****	22 Monthly Average	59 Daily Maximum	UG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Methyl tert-butyl Ether	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	70 Daily Maximum	UG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Benzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	7 Daily Maximum	UG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			
Tertiary Butyl Alcohol (TBA)	Effluent Gross Value	*****	*****	*****	*****	500 Monthly Average	REPORT Daily Maximum	UG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION:

CB4B Table 3

RECEIVING STREAM:

Varies

STREAM CLASSIFICATION:DISCHARGE CATEGORY(IES):B4B - Groundwater Petroleum Product
Cleanup (GP)**Location Description**

This table is utilized for remediation discharges into waters classified as C1 (Category 1) .

Contributing Waste Types

Groundwater Remediation

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:

If a WET limitation is applied, a 3 year WET compliance schedule for new authorizations may be imposed beginning with the start of discharging. The Department reserves the right to adjust this monitoring frequency on an as needed basis based on site-specific factors.

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:****PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GPD	*****	*****	*****	*****	1/2 Weeks	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.5 Monthly Minimum	*****	8.5 Monthly Maximum	SU	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	25 Daily Maximum	MG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	61 Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	1/2 Weeks	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:

If a WET limitation is applied, a 3 year WET compliance schedule for new authorizations may be imposed beginning with the start of discharging. The Department reserves the right to adjust this monitoring frequency on an as needed basis based on site-specific factors.

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

PHASE: Final

PHASE Start Date:

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	20 Daily Maximum	MG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
Lead, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	10 Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Naphthalene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	8 Daily Maximum	UG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
Methyl tert-butyl Ether	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	70 Daily Maximum	UG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
Benzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	7 Daily Maximum	UG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			
Tertiary Butyl Alcohol (TBA)	Effluent Gross Value	*****	*****	*****	*****	100 Monthly Average	REPORT Daily Maximum	UG/L	1/2 Weeks	Grab
January thru December	QL	***	***		***	***	***			

Auxiliary Toxic Pollutants that may be Limited

In addition to complying with the effluent limitations and monitoring conditions of Table(s) 1, 2 and 3 on the preceding pages, any other parameters indicated below may also be limited in an individual authorization. These additional parameters will be included in Part III of the individual authorization. All units are in µg/L. Monitoring and reporting shall be required where 'MR' acronym is specified.

Parameter	FW2 Waters		SE, SC Waters		Table 3
	Monthly / Daily		Monthly / Daily		Daily
	Average	Maximum	Average	Maximum	Maximum
Volatile Organics					
Acrolein	MR	100	MR	100	50
Acrylonitrile	MR	50	MR	50	50
Bromoform	MR	8.6	29	58	8
Carbon Tetrachloride	MR	6	8.8	MR	6
Chlorobenzene	15	28	15	28	6
Chlorodibromomethane	MR	8.2	MR	14	6
Chloroethane	104	268	104	268	-
Chloroform	MR	11.4	21	46	5
Dichlorobromomethane	MR	5	MR	12	5
1,1-Dichloroethane	22	59	22	59	23.5
1,2-Dichloroethane	MR	3	68	211	3
1, 1-Dichloroethylene	MR	6	16	25	6
1,2-Dichloropropane	153	230	153	230	-
1,3-Dichloropropylene	10	20	29	44	-
Ethylbenzene	32	108	32	108	6
Methyl Bromide	20	40	20	40	9
Methyl Chloride	86	190	86	190	10
Methylene Chloride	MR	9.4	40	89	6
1,1,2,2 Tetrachloroethane	MR	10	MR	10	10
Tetrachloroethylene	MR	16	22	56	9
Toluene	26	80	26	80	6
1,2-Trans-Dichloroethylene	21	54	21	54	4
1,1,1-Trichloroethane	21	54	21	54	6
1,1,2-Trichloroethane	MR	12	21	54	6
Trichloroethylene	MR	5.4	21	54	5
Vinyl Chloride	MR	10	104	268	10
Acid Compounds					
2-Chlorophenol	31	98	31	98	20
2,4 Dichlorophenol	39	112	39	112	10
2,4 Dimethylphenol	18	36	18	36	13.5
4,6 Dinitro-O-Cresol	MR	60	78	277	60
2,4 Dinitrophenol	71	123	71	123	40
2-Nitrophenol	41	69	41	69	18
4-Nitrophenol	72	124	72	124	12
Pentachlorophenol	MR	30	MR	30	30
Phenol	15	26	15	26	10
2,4,6 Trichlorophenol	MR	20	MR	20	20

Parameter	<u>FW2 Waters</u>		<u>SE, SC Waters</u>		<u>Table 3</u>
	Monthly / Daily	<u>Average / Maximum</u>	Monthly / Daily	<u>Average / Maximum</u>	Daily <u>Maximum</u>
<i>Base/Neutral Compounds</i>					
Anthracene	22	59	22	59	10
Benidine	MR	50	MR	50	50
Benzo (a) Anthracene	MR	10	MR	10	10
Benzo (a) Pyrene	MR	20	MR	20	20
Benzo (b) fluoranthene	MR	10	MR	10	-
Benzo (k) fluoranthene	MR	20	MR	20	20
Bis (2-Chloroethyl) Ether	MR	10	MR	10	10
Bis (2-Chloroisopropyl) Ether	301	757	301	757	10
Bis (2-Ethylhexyl)Phthalate	MR	36	59	118	30
Butyl Benzyl Phthalate	MR	24	MR	24	20
Chrysene	MR	20	MR	20	20
Dibenzo (a,h) Anthracene	MR	20	MR	20	20
1,2 Dichlorobenzene	77	163	77	163	9
1,3 Dichlorobenzene	31	44	31	44	9
1,4 Dichlorobenzene	MR	28	MR	28	20
3,3 Dichlorobenzidine	MR	60	MR	60	60
Diethyl Phthalate	81	203	81	203	10
Dimethyl Phthalate	19	47	19	47	10
Di-N-Butyl Phthalate	27	57	27	57	20
2,4 Dinitrotoluene	MR	10	MR	18.2	10
2,6 Dinitrotoluene	255	641	255	641	9.5
Fluoranthene	25	68	25	68	10
Fluorene	22	59	22	59	10
Hexachlorobenzene	MR	10	MR	10	10
Hexachlorobutadiene	MR	10	20	49	10
Hexchloropentadiene	240	480	MR	1800	10
Hexachloroethane	19	38	21	54	10
Ideno (1,2,3-cd) Pyrene	MR	20	MR	20	20
Isophorone	MR	20	MR	20	10
Nitrobenzene	17	34	27	68	10
N-Nitrosodimethylamine	MR	20	MR	20	20
N-Nitrosodiphenylamine	MR	20	MR	20	20
Phenanthrene	22	59	22	59	10
Pyrene	25	67	25	67	20
1,2,4 Trichlorobenzene	68	140	68	140	10
<i>Pesticides</i>					
Aldrin	MR	0.04	MR	0.04	0.04
Alpha-BHC	MR	0.02	MR	0.02	0.02
Beta-BHC	0.137	0.274	0.46	0.92	0.04
Gamma-BHC (Lindane)	MR	0.08	MR	0.03	0.03
Chlordane	MR	0.2	MR	0.2	0.2

Parameter	FW2 Waters		SE, SC Waters		Table 3
	Monthly / Daily Average / Maximum		Monthly / Daily Average / Maximum		Daily Maximum
Pesticides (continued)					
4,4'-DDT	MR	0.06	MR	0.06	0.06
4,4'-DDE	MR	0.04	MR	0.04	0.04
4,4'-DDD	MR	0.04	MR	0.04	0.04
Dieldrin	MR	0.03	MR	0.03	0.03
Alpha-Endosulfan	MR	0.02	MR	0.02	0.02
Beta-Endosulfan	MR	0.04	MR	0.04	0.04
Endosulfan Sulfate	0.93	1.86	2	4	0.08
Endrin	MR	0.04	MR	0.04	0.04
Endrin Aldehyde	0.76	1.52	0.81	1.62	0.1
Heptachlor	MR	0.02	MR	0.02	0.02
Heptachlor Expoxide	MR	0.4	MR	0.4	0.4
Toxaphene	MR	1	MR	1	1
Metals and Cyanide					
Arsenic *	50	100	50	100	8
Cadmium *	50	100	50	100	4
Chromium *	50	100	50	100	10
Copper *	50	100	50	100	10
Iron	MR	MR	MR	MR	MR
Lead **	MR	10	MR	10	10
Mercury *	MR	1	MR	1	1
Nickel *	72	144	50	100	10
Selenium *	50	100	50	100	10
Silver *	25	50	25	50	2
Zinc *	100	200	100	200	30
Cyanide	100	200	100	200	40

* If this parameter is regulated in the individual authorization, a chronic WET limit is also applicable for Tables 1 and 3.

** The Lead daily maximum effluent limitation of 10 µg/L continues to be applicable to those discharges where Lead is shown to be detectable in the permittee's B4B permit application or in other available data.

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

General Groundwater Petroleum Product Cleanup Permit

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 in writing or as otherwise specified in the permit.
- c. When more than one test procedure is approved for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 136, 40 CFR 122.21(e)(3), and 40 CFR 122.44(i)(1)(iv).
- d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedure 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. If annual and semi-annual wastewater testing is specified, it shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.
- h. Flow shall be measured using a meter unless specified otherwise in the individual authorization.

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. SUBMITTALS

1. Standard Submittal Requirements

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

D. 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.

2. Delaware River Basin Commission (DRBC) Requirements - applicable to those facilities which discharge to the Delaware River Basin

- a. The permittee shall comply with the DRBC "Water Quality Regulations."
- b. Except as otherwise authorized by this permit, if the permittee seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the permittee shall apply for approval from the DRBC Executive Director and NJDEP for a permit revision.
- c. Specific Requirements apply to facilities discharging to Zone 1 and its tributaries that are designated as Special Protection Waters by the DRBC.
 - i. Prior to the permittee initiating any substantial alterations or additions to the existing WWTP as defined in Section 3.10.3A2.a.16 of the Delaware River Basin Commission's Water Quality Regulations (18 CFR Part 410), a No Measurable Change to the Existing Water Quality Analysis must be conducted by the Delaware River Basin Commission. The No Measurable Change to Existing Water Quality Analysis shall be conducted prior to final design to ensure that the Commission can provide the permittee with proposed effluent limitations to be included in a future NJPDES permit for Special Protection Waters specific parameters as guidance for treatment design purposes. The permittee is encouraged to contact DRBC staff during the planning stages of any project that meets the definition of substantial alteration or additions, as per DRBC.
- d. NJDEP may require TDS monitoring for those facilities that discharge to the Delaware River Basin.
 - i. The permittee may conduct a study to determine if specific conductance may be substituted for TDS in the permit. The study should include effluent specific data to be used to

determine a correlation between TDS and specific conductance. Upon review, the Delaware River Basin Commission will determine if the permit may be modified to allow the substitution of specific conductivity for TDS monitoring. The TDS limit would then be supplanted by a specific conductance limit in the permit.

- e. Based upon the written recommendation of the DRBC staff, when the discharge is operated in accordance with the provisions and conditions established by this permit, then with respect to effluent quality and stream quality objectives, the project does not substantially impair or conflict with the Commission's Comprehensive Plan.

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 NJAC 7:14A-6.12(d).

4. Applicability of Discharge Limitations and Effective Dates

- a. Surface Water Discharge Monitoring Report (DMR) Form Requirements
 - i. For new authorization under Table 1 and Table 3: The Chronic WET compliance schedule, if applicable, is as follows:

The "initial" phase requirement of monitoring and reporting as a minimum is effective on the effective date of the individual authorization (EDP) until EDP + 36 months.

The "final" phase limit of IC25 \geq 61% becomes effective three on EDP + 36 months as specified in the individual authorizations.
 - ii. For renewal authorizations under Table 1 and Table 3, the final limit becomes effective on the date specified in the individual authorization.

5. Toxicity Testing Requirements - Chronic Whole Effluent Toxicity (applicable only if a chronic toxicity requirement is specified in Part III)

- a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.
- b. Chronic toxicity 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 contained in the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Program" document must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.
- d. IC25 - Inhibition Concentration - Concentration of effluent which has an inhibitory effect on 25% of the test organisms for the monitored effect, as compared to the control (expressed as percent effluent).

- e. Test results shall be expressed as the IC25 for each test endpoint. Where a chronic toxicity testing endpoint yields IC25's from more than one test endpoint, the most sensitive endpoint will be used to evaluate effluent toxicity.
- f. For new authorizations: Submit a Chronic Methodology Questionnaire within 60 days from the effective date of the permit (EDP).
- g. For renewal authorizations: The permittee shall resubmit a Chronic Methodology Questionnaire within 60 days of any change in laboratory.
- h. If a quarterly monitoring frequency is specified for Chronic WET: Submit a chronic whole effluent toxicity test report within twenty-five days after the end of every quarterly monitoring period beginning from the effective date of the permit (EDP).
- i. If a semi-annual monitoring frequency is specified for Chronic WET: The permittee shall submit a chronic whole effluent toxicity test report due within twenty-five days after the end of every six (6) month monitoring period beginning from the effective date of the permit.
- j. If an annual monitoring frequency is specified for Chronic WET: Submit a chronic whole effluent toxicity test report due within twenty-five days after the end of every annual monitoring period beginning from the effective date of the permit.
- k. Chronic WET test reports shall be submitted to the Department at: biomonitoring@dep.nj.gov.

6. Toxicity Reduction Implementation Requirements (TRIR) (applicable only if a chronic toxicity limit is specified in Part III)

- a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit specified in Part III of this permit.
 - i. If the exceedance of the toxicity limit is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.
- b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits in Part III. The monitoring frequency for toxicity testing shall be increased to semi-monthly (i.e., every two months). Up to 12 additional tests may be required.
 - i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit.
 - ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.
- c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the fourth exceedance of the toxicity limit specified in Part III during the 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) evaluation of chemical use and processes at the facility, and
 - (3) an evaluation of toxic pollutants present in the effluent.
- iii. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.
- d. The permittee must demonstrate compliance with the WET limitation in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.
- e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit in Part III cannot be made.
 - i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.
 - ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit in Part III, a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.
 - iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.
 - iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.
- f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.
 - i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit in Part III in four consecutive toxicity tests.
 - ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit in Part III, the permittee shall submit a plan for resuming the CTI.
 - iii. Documents regarding Toxicity Investigations shall be sent to the Department at: biomonitoring@dep.nj.gov

E. Notification Requirements

1. Outfall Tag

- a. For new discharges, the permittee shall notify the Department that a tag to mark the location of the outfall pipe has been installed consistent with N.J.A.C. 7:14A-6.2(a)9.

F. Conditions for Modification

1. 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. For new dischargers where a chronic whole effluent toxicity requirement is imposed – the Department may issue a minor modification further deferring the effective date of the chronic whole effluent toxicity limitation if a facility is implementing the Toxicity Reduction Implementation Requirements (TRIR) in Part IV of this permit.
- c. The Department may modify individual authorizations under this permit through a minor modification in accordance with N.J.A.C. 7:14A-16.5(a)1 to reduce WET monitoring to either semi-annual, annual or once per permit cycle. The criteria for such reduction is a minimum of 4 data points with a result of >100. The Department may also consider site-specific characteristics such as discharge volume, location and wastewater constituents.
- d. The Department may modify individual authorizations under this permit through a minor modification in accordance with N.J.A.C. 7:14A-16.5(a)1 to reduce toxics and conventionals monitoring to quarterly or an alternate monitoring frequency provided that all parameters are consistently in compliance and in consideration of flow volumes. The permittee may request a reduction in monitoring frequency when 4 consecutive test results of "non-detect" have occurred using the specified sufficiently sensitive detection level and method.

G. Custom Requirements

1. Operational Requirements

- a. The treatment works shall operate at the optimal average design flow rate for maximum groundwater clean-up.
- b. No backwash from any treatment unit(s) for maintenance purposes or any other reasons shall be discharged through the authorized outfall(s).
- c. The permittee shall not attain any effluent limitations by dilution pursuant to N.J.A.C. 7:14A-6.2. Specifically, the permittee shall not pump from a recovery well and divert such waters to the treatment system for the purposes of diluting groundwater from other contaminated recovery wells.
- d. Samples taken in compliance with the specified monitoring requirements shall be taken at the discharge outfall(s) specified in Part III of this permit authorization at the nearest accessible point after final treatment but prior to actual discharge.

2. Use of Treatment Additives

- a. If a permittee proposes addition of any chemical or treatment enhancement product in its treatment

system in order to enhance treatment effectiveness and system performance, the permittee must obtain permission from the Department in writing prior to use of such compounds.

- b. The permittee shall submit a letter to the Department describing the use of such chemical addition agents, including information pertaining to dosage rates and frequency of dosage, and shall include a Safety Data Sheet for the product(s) that contains toxicological data. The letter shall be submitted electronically to the Bureau of Surface Water and Pretreatment Permitting at dwq_bswp@dep.nj.gov 30 days before the anticipated use. The Department will evaluate the submittal and notify the permittee in writing or via email as to whether the compound can be utilized under the conditions of the individual authorization. Please note that N.J.A.C. 7:14A-22.4(a)7 does not require a treatment works approval (TWA) modification for chemical addition where it is used for the purposes of improving treatment system performance.

3. Third Party Storm Sewers

- a. If the permittee proposes to discharge or discharges through an off-site public or private storm drainage system, please note that this B4B permit authorization to discharge does not exempt, nor shall be construed to exempt, the permittee from compliance with rules, regulations, policies, and/or laws lodged in any agency or subdivision of the state having legal jurisdiction over the storm sewer system proposed for use as a wastewater conveyance.

4. Permanent Cessation of Discharge to Surface Waters

- a. If the permittee permanently discontinues its discharge to surface waters for 30 days or more the appropriate Regional Bureau of Water and Compliance Enforcement shall be notified:
 - i. Northern Bureau: (973) 656-4099 (Counties of Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union and Warren).
 - ii. Southern Bureau: (609) 292-3010 (Counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean and Salem).

5. Revocation of an Individual Authorization under the B4B Permit

- a. If the permittee has permanently ceased its discharge to surface water, the permittee shall request revocation of its individual authorization under the B4B permit. The permittee can obtain the necessary revocation forms by accessing https://www.nj.gov/dep/dwq/pdf/njpdes4_revocation_form.pdf or by contacting the Department's Bureau of Ground Water, Residuals and Permit Administration at (609) 984-4428. The permittee can also contact the appropriate Regional Enforcement Office for further guidance on closure proceedings.
 - i. Discharge Monitoring Report (DMR) Forms must continue to be submitted even after the discharge is ceased until such time as the DMRs are inactivated or the permit is revoked.
- h. Upon receipt of an administratively complete revocation request, the Department will verify with the appropriate Regional Enforcement Office that the discharge has ceased, and that the treatment works has undergone closure, in conformance with N.J.A.C. 7:14A-23.34. The Department will then revoke such individual authorization by preparing a copy of the individual authorization page showing the revocation date of the individual authorization and sending such to the permittee.

APPENDIX A:

**CHRONIC TOXICITY TESTING SPECIFICATIONS
FOR USE IN THE NJPDES PERMIT PROGRAM**

Version 3.0

May 2017

TABLE OF CONTENTS

I. AUTHORITY AND PURPOSE

II. GENERAL CONDITIONS

- A.** Laboratory Safety and Glassware
- B.** Test Concentrations / Replicates
- C.** Dilution Water
- D.** Effluent Sample Collection
- E.** Physical Chemical Measurements
- F.** Statistics

III. TEST ACCEPTABILITY CRITERIA

IV. STANDARD REFERENCE TOXICANT TESTING

- A.** Initial Testing Requirements
- B.** Subsequent Testing Requirements
- C.** Changing an Established Reference Toxicant
- D.** Control Charts
- E.** Unacceptable SRT Results
- F.** Annual Submittals

V. TEST CANCELLATION / RESCHEDULING EVENTS

VI. REPORTING

VII. METHODS SPECIFICATIONS

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

VIII. REFERENCES

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

I. AUTHORITY AND PURPOSE

These methods specifications for the conduct of whole effluent chronic toxicity testing are established under the authority of the NJPDES permitting program, N.J.A.C. 7:14A-6.5(a)2 and 40 CFR 136, for discharges to waters of the State. The methods referenced herein are included by reference in 40 CFR 136, Table 1.A. and, therefore, constitute approved methods for chronic toxicity testing. The information contained herein serves to clarify testing requirements and outline and implement the interlaboratory Standard Reference Toxicant Program until specific chronic requirements are incorporated into the laboratory certification regulations under N.J.A.C. 7:18. As such these methods are intended to be used to determine compliance with discharge permits issued under the authority of the NJPDES permit program. Tests are to be conducted in accordance with the general conditions and method specifications (test organism specific) contained in this document. All other conditions and specifications can be found in 40 CFR 136 and USEPA methodologies.

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

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

This document constitutes the fifth version of the NJDEP's interim chronic methodologies. This version contains no significant changes to the test methods themselves.

II. GENERAL CONDITIONS

A. LABORATORY SAFETY, GLASSWARE, ETC.

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

B. TEST CONCENTRATIONS / REPLICATES

All testing is to be performed with a minimum of five effluent concentrations plus a dilution water control. A second reference water control is optional when a dilution water other than culture water is used. The use of both a 0.5 or 0.75 dilution factor is acceptable for the selection of test concentrations. The Department recommends the use of the 5 standard dilutions plus a dilution water control to cover the entire range of effluent test concentrations e.g. 0%, 6.25%, 12.5%, 25%, 50%, 100%.

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

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

C. DILUTION WATER

1. Marine and Estuarine Waters

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

The standard test salinity shall be 25 ppt. Since most effluents are freshwater based, in most cases it will be necessary to adjust the salinity of the test concentrations to the standard test salinity.

2. Fresh Waters

A high quality natural water, such as Round Valley Reservoir (if access is allowed) or Lake Hopatcong, is recommended as the dilution water source for chronic toxicity testing with freshwater organisms. It is not required to perform the toxicity testing with the receiving water as dilution water. Tests performed with reconstituted water or up to 20% Diluted Mineral Water (DMW) as dilution water is acceptable. For testing with *Ceriodaphnia dubia*, the addition of 5 µg/l selenium (2 µg/l selenium with natural water) and 1 µg/l vitamin B12 is recommended (Keating and Dagbusan, 1984; Keating, 1985 and 1988). The source of a dilution water for a permittee may not be changed without the prior approval of the Department through the completion of a Whole

Effluent toxicity testing methodology questionnaire. Reconstituted water and DMW should be prepared with Millipore Super Q^R or equivalent, meet the requirements of N.J.A.C. 7:18-6 and should be aerated a minimum of 24 hrs prior to use, but not supersaturated.

D. EFFLUENT SAMPLE COLLECTION

Effluent samples shall be representative of the discharge being regulated. For each discharge serial number (DSN), the effluent sampling location shall be the same as that specified in the NJPDES permit for other sampling parameters unless an alternate sampling point is specified in the NJPDES discharge permit. For continuous discharges, effluent sampling shall consist of 24 hour composite samples consisting either of equal volumes taken once every hour or of a flow-proportionate composite sample, unless otherwise approved by the Department. Unless otherwise specified, three samples shall be collected as specified above, preferably one every other day. The first sample should be used for test initiation and the first renewal. The second sample for the next two renewals. The third sample should be used for the final three renewals. For the *Selenastrum* test, a single sample shall be collected not more than 24 hours prior to test initiation. In no case, shall more than 36 hours' elapse between collection and first use of the sample. It is acceptable to collect samples more frequently for chronic WET testing and if samples are collected daily for acute toxicity testing conducted concurrently, available samples may be used to renew the test solutions as appropriate.

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

If a municipal discharger has concerns that the concentrations of ammonia and/or chlorine in an effluent are adequate to cause violations of the permit limit for chronic toxicity testing, the permittee should conduct analyses, as specified in USEPA's toxicity investigation methods documents, to illustrate the relationship between chronic effluent toxicity and chlorine and/or ammonia as applicable. This data may then be submitted to the Department as justification for a request to use modified test procedures, which account for ammonia and/or chlorine toxicity, in future chronic toxicity tests. The Department may, where adequate justification exists, permit the adjustment of these pollutants in the effluent sample if discharge limits for these pollutants are contained in the NJPDES permit and those permit limitations are adequate for the protection of water quality. Any proposed modified test procedures to adjust effluent chlorine and/or ammonia shall be approved by the Department prior to use of those test procedures for any compliance testing.

Except for filtration through a 2 mm or larger screen or an adjustment to the standard test salinity, no other adjustments to the effluent sample shall be made without prior written approval by the Department. When a laboratory adjusts a freshwater effluent salinity and the pH of the test concentration changes more than 0.5 pH units from the initial pH, the laboratory shall readjust the pH of the test concentration to within 0.5 pH units of the original test concentration. Aeration of samples prior to test start shall be minimized where possible and samples shall not be aerated where adequate saturation exists to maintain dissolved oxygen.

E. PHYSICAL CHEMICAL MEASUREMENTS

At a minimum, the physical chemical measurements shall be as follows unless more stringent criteria is required by the method:

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

- ☐ Temperature shall either be monitored continuously, measured daily in at least two locations in the environmental control system, or measured at the beginning and end of each 24 hr exposure period in at least one replicate for each treatment.
- ☐ Salinity shall be measured in all salt water tests at the beginning and end of each 24 hour exposure period, in at least one replicate for each treatment.
- ☐ For all freshwater tests, alkalinity, hardness and conductivity shall be measured in each new sample (100% effluent) and control.
- ☐ When natural salt water is used; nitrite, nitrate, and ammonia shall be measured in the control before each renewal in the mysid test only.
- ☐ For samples of discharges where concentrations of ammonia and/or chlorine are known or are suspected to be sufficient to cause toxicity, it is recommended that the concentrations of these pollutants be determined and submitted with the standardized report form. The laboratory is advised to consult with the permittee to determine if these parameters should be measured in the effluent. Where such measurements are deemed appropriate, measurements shall be conducted at the beginning of each 24 hour exposure period. Also, since a rise in the test pH can affect the toxicity of ammonia in the effluent, analysis of ammonia during the test may be appropriate if a rise in pH is accompanied by a significant increase in mortality.

F. STATISTICS

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

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

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

For point estimate techniques, statistical analysis must follow the protocol contained in the approved testing method. The linear interpolation estimate IC_p values and not the bootstrap mean IC_p, shall be reported for permit compliance purposes. The IC_p value reported on the Discharge Monitoring Report shall be rounded off as specified in the Department's "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 for further information.

If the result reported by the IC_p method is greater than 100% effluent, the test result is reported as ">100%"

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

III. TEST ACCEPTABILITY CRITERIA

Any test that does not meet the test acceptability criteria of the chronic toxicity method will not be used by the Department for any purpose and must be repeated as soon as practicable, with freshly collected samples.

1. Tests must be performed by a laboratory approved for the conduct of chronic toxicity tests and certified for chronic toxicity testing under N.J.A.C. 7:18.
2. Test results may be rejected due to inappropriate sampling, including the use of less than three effluent samples in a test and/or use of procedures not specified in a permit or methodology questionnaire, use of frozen samples, not refrigerating samples upon collection, or unapproved pretreatment of an effluent sample.
3. Controls shall meet, at a minimum, the applicable performance criteria specified in the Table 2.0 and in the individual method specifications contained herein.
4. Acceptable and applicable Standard Reference Toxicant Data must be available for the test.
5. No unapproved deviations from the applicable test methodology may be present.
6. When using hypothesis testing techniques, a deviation from the dose response as explained in the statistical portion of this document shall not be present in the data.
7. If more stringent criteria are required within the chronic toxicity test method or rule, the more stringent criteria must be met.

Table 2.0:

CONTROL PERFORMANCE

TEST ORGANISM	MINIMUM SURVIVAL	MINIMUM WEIGHT GAIN	MINIMUM FECUNDITY/ REPRODUCTION
<i>Pimephales promelas</i>	80%	0.25 mg avg	N/A
<i>Ceriodaphnia dubia</i>	80%	N/A	Average of ≥ 15 young per surviving female
<i>Selenastrum capricornutum</i>	Density $\geq 2 \times 10^5$ cells/ml	N/A	Variability in controls not to exceed 20%.
<i>Cyprinodon variegatus</i>	80%	0.60 mg (unpreserved) avg 0.50 mg (preserved) avg	N/A
<i>Menidia beryllina</i>	80%	0.50 mg (unpreserved) avg 0.43 mg (preserved) avg	N/A
<i>Mysidopsis bahia</i>	80%	0.20 mg per mysid avg	egg production by 50% of control females if fecundity is used as an endpoint.

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

IV. STANDARD REFERENCE TOXICANT TESTING

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

A. INITIAL STANDARD REFERENCE TOXICANT (SRT) TESTING REQUIREMENTS

At a minimum, this testing shall include an initial series of at least five SRT tests for each test species method. Acceptable SRT testing for chronic toxicity shall be performed utilizing the short term chronic toxicity test methods as specified herein. Reference toxicant tests utilizing acute toxicity testing methods, or any method other than those contained in this document are not acceptable. The laboratory should forward results of the initial SRT testing, including control charts, the name of the reference toxicant utilized, the supplier and appropriate chemical analysis of the toxicant to the Department's laboratory certification program prior to obtaining certification for chronic toxicity testing. Certification for the applicable chronic toxicity method must be obtained prior to the conduct of any chronic toxicity testing for compliance purposes.

B. SUBSEQUENT SRT TESTING REQUIREMENTS

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

1. Where organisms used in testing are cultured at the testing laboratory, SRT testing must be conducted at least once per month for each species/method.
2. Where the laboratory purchases organisms for the conduct of chronic toxicity testing for the test organism in question, the testing laboratory must conduct a concurrent SRT per lot of organisms, unless the supplier provides at least the most recent five monthly SRT's using the same toxicant and control conditions. SRT data provided by the supplier for each lot of organisms purchased is acceptable as long as the SRT test result falls within the control limits of the control chart established by the supplier for that organism. The laboratory using purchased organisms is responsible for the results of any compliance tests they perform.
3. A testing laboratory purchasing organisms from a supplier laboratory must still perform SRT testing on a monthly basis at a minimum, for each species they test with, in order to adequately document their own interlaboratory precision.
4. If a testing laboratory purchasing organisms elects not to use the SRT data from a "supplier laboratory" or such data is unavailable or where organisms are purchased from another organism supplier, the testing laboratory must conduct SRT testing on each lot of organisms purchased.
5. If a testing laboratory conducts testing for a species/method less frequently than monthly, then an SRT shall be run concurrent with the toxicity test.

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

C. CHANGING OF AN ESTABLISHED REFERENCE TOXICANT

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

1. A series of at least three reference toxicant tests are conducted with the new reference toxicant and the results of those tests are identified as satisfactory, in writing, by the Department.
2. Laboratories must continue using the already approved SRT in their ongoing QA/QC program, until such time as the letter referenced above, is received by the laboratory.

D. CONTROL CHARTS

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

1. The upper and lower control limits shall be calculated by determining +/- two standard deviations above and below the mean.
2. SRT test results which exhibit an IC25 that is greater than the highest concentration tested or less than the lowest concentration tested (i.e. a definitive endpoint cannot be determined), shall not be used to establish control charts.
3. SRT tests which do not meet the acceptability criteria for a specific species shall not be used to establish control charts.
4. All values used in the control charts should be as nominal concentrations. However, the control charts shall be accompanied by a chart tabulating the test results as measured concentrations.
5. An outlier (i.e. values which fall outside the upper and lower control limits) should be included on the control chart unless it is determined that the outlier was caused by factors not directly related to the test organisms (e.g., test concentration preparation) as the source of variability would not be directly applicable to effluent tests. In such case, the result and explanation shall be reported to the Department within 30 days of the completion of the SRT test.

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

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

1. Once a laboratory has completed twenty acceptable SRT tests for a test species, the upper and lower control limits shall be recalculated with those twenty values.
2. For each successive SRT test conducted after these first twenty tests, a moving average shall be calculated and the control limits reevaluated using the last twenty consecutive test results.
3. The upper and lower control limits shall be reported on the "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" along with the SRT test result.

E. UNACCEPTABLE SRT TEST RESULTS

If a laboratory produces any SRT test results which are outside the established upper and lower control limits for a test species at a frequency greater than one test in any twenty tests, the laboratory shall investigate sources of variability, take corrective actions to reduce identified sources of variability, and perform an additional SRT during the same month. The Department may not accept or may require repeat testing for any toxicity testing that may have been affected by such an occurrence.

If a laboratory produces two consecutive SRT test results or three out of any twenty test results which are outside the established upper and lower limits for a specific test species, the laboratory shall cease to conduct chronic toxicity tests for compliance purposes for that test species until the reason(s) for the outliers have been resolved. Approval to resume testing may be contingent upon the laboratory producing SRT test results within the established upper and lower control limits for that test species in two consecutive SRT tests. If one or both of those test results again fall outside the established control levels, the laboratory is unapproved for that test species until five consecutive test results within the established upper and lower control limits are submitted and approved by the Department.

F. ANNUAL SUBMITTALS

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

V. TEST CANCELLATION / RESCHEDULING EVENTS

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

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

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

VI. REPORTING

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

biomonitoring@dep.nj.gov

Toxicity@drbc.gov

In addition, the results of all chronic toxicity tests conducted must be reported on the DMR form under the appropriate parameter code in the monitoring period in which the test was conducted.

VII. METHOD SPECIFICATIONS

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

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

VIII. REFERENCES

1. NJPDES Monitoring Report Form Reference Manual October 2007
http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf

2. USEPA. 2002. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA-821-R-02-014. October 2002. Third Edition.
3. USEPA. 2002. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013. October 2002. Fourth Edition.

**CHRONIC WHOLE EFFLUENT TOXICITY TESTING
TEST CANCELLATION / RESCHEDULING EVENT FORM**

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

NJPDES No.: _____

FACILITY NAME: _____

LOCATION: _____

CONTACT: _____ PHONE: _____

CANCELLATION EVENT:

LABORATORY NAME / NUMBER: _____

CONTACT: _____

TEST START DATE: ____/____/____ TEST END DATE: ____/____/____

REASON FOR CANCELLATION: _____

When is retest scheduled to be performed?

EFFLUENT SAMPLING:

SAMPLING POINT / DESCRIPTION OF SAMPLING SITE: _____

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

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

NUMBER OF EFFLUENT SAMPLES COLLECTED: _____

SAMPLE TYPE (GRAB/COMPOSITE): _____

RECEIVED IN LAB BY/FROM: _____

METHOD OF SHIPMENT: _____

(ALL APPLICABLE RAW DATA SHEETS MUST BE ATTACHED)

c: Permittees authorized agent.