State of New Jersey

PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

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

CATHERINE R. McCABE
Commissioner

Via Email Only
July 28, 2020

To: Distribution List

Re: New Jersey Pollutant Discharge Elimination System (NJPDES) - Final Discharge to Surface Water
Master General Permit Renewal - Statewide
Category: BGR - General Remediation Clean-up Permit
NJPDES Permit No. NJ0155438

Enclosed is a **final** NJPDES permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. This permit renewal authorizes the discharge to surface water of treated groundwater resulting from groundwater remediations, dewatering projects and other similar type projects. This master general permit serves to renew the existing general remediation clean-up permit which expired on June 30, 2020.

The New Jersey Department of Environmental Protection (the Department) issued the draft permit on May 27, 2020. Notice of this draft action also appeared in three major newspapers to represent all New Jersey counties and was published in the Department's May 27, 2020 *DEP Bulletin*. The public comment period closed on June 29, 2020. A full copy of the Master BGR General Permit is available on the Department's website at: www.nj.gov/dep/dwq.

A summary of the significant and relevant comments received on the draft action during the public comment period, the Department's responses, and an explanation of any changes from the draft action have been included in the Response to Comments document attached hereto as per N.J.A.C. 7:14A-15.16.

Individual renewal authorizations for any applications requesting to be covered under the Master BGR Renewal will be issued subsequent to the issuance of this Master BGR Permit. Until such time as the new permit takes effect, the existing permit conditions will continue to remain in full force and effect pursuant to N.J.A.C. 7:14A-2.8.

New applicants can request authorization to be covered under the general permit by submitting a NJPDES Form 1 and Supplemental Application forms that can be obtained from the Department's Division of Water Quality website. A guidance checklist for filing a request for authorization application for this general permit is also available. The checklist and the application forms are available at https://www.nj.gov/dep/dwq/forms_surfacewater.htm.

Questions or comments regarding the final action should be addressed to Tara Klimowicz either by phone at (609) 292-4860 or by email at Tara.Klimowicz@dep.nj.gov.

Sincerely,

Susan Rosenwinkel
Bureau Chief
Bureau of Surface Water Permitting

Enclosures

cc: Permit Distribution List

Masterfile #: 39609; PI #: 50577

Table of Contents for the Final Permit

This permit package contains the items below:

List of Acronyms

ACR	Acute to Chronic Ratio
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 Permitting

RESPONSE TO COMMENTS

Comments were received on the NJPDES draft Surface Water Master General Permit Renewal No. NJ0155438 (Master BGR Renewal) as issued on May 27, 2020. The thirty (30) day public comment period began on May 27, 2020. The public notice was published in the *DEP Bulletin* (May 27, 2020), *The Press of Atlantic City* (May 28, 2020), *Star Ledger* (May 28, 2020) and *The Times* (May 28, 2020). The public comment period ended on June 29, 2020.

A summary of the significant and relevant comments received on the draft action during the public comment period, the Department's responses, and an explanation of any changes from the draft action have been included in the Response to Comments document attached hereto as per N.J.A.C. 7:14A-15.16.

The following person commented during the public comment period:

A. Katherine Kolibas, Project Manager, APTIM on behalf of Quality Distribution, Inc. in correspondence dated June 26, 2020.

1. COMMENT:
We are not required to report Total Suspended Solids (TSS) results under our current permit authorization for Quality Distribution, Inc. If required to report TSS under the final permit authorization for the Chemical Leaman site, please provide the justification for the addition of this parameter. Please note that the spelling for this site is Chemical Leaman (not Leamen).

RESPONSE:
As noted in this comment, the Master BGR permit includes TSS requirements as part of Tables 1 and 2. As a result, when new authorizations under the Master BGR are processed, the Department routinely includes TSS requirements in new individual authorizations to characterize the wastewater and to collect baseline data.

The master BGR permit was last renewed on March 19, 2015 and this subject permit serves to renew that action which includes both new authorizations as well as the renewal of various existing individual authorizations such as this site. The majority of existing permits contain effluent limitations and monitoring conditions consistent with Part III of this Master BGR permit. Existing limits that are more stringent than specified in this permit have been retained pursuant to N.J.A.C. 7:14A-13.19.

Effluent limitations as established for individual BGR authorizations are dependent on the contaminants detected or known to be present at the site, the duration of the effluent discharge and the receiving waterbody. Note that while Section 2 on page 1 of the Fact Sheet references that site specific effluent limits and monitoring requirements are included in the Master BGR Permit Summary Table Attachment, the reference to the Permit Summary Table Attachment was in error where these requirements will be included in Part III of each individual authorization.

The Department acknowledges that the current permit authorization as issued to Quality Distribution, Inc. for the Chemical Leaman site (NJPDES Permit No. NJG0105589) does not currently require TSS monitoring. The inclusion of TSS for renewal authorizations is decided on a case-by-case basis based on a review of effluent data as collected under previous authorizations. The individual authorization for this site authorizes the discharge of treated groundwater where the contaminants of concern are primarily volatile organics and base/neutrals with some metals. The Department also notes that most toxic parameters are routinely not detected. In addition, the Department reviewed the influent data as submitted with the application and determined that the constituents of concern are appropriately regulated in the existing individual authorization.

As a result, the Department will not include TSS requirements in the individual authorization for Chemical Leaman.

No change to the final Master BGR Renewal is necessary as a result of this comment.

2. COMMENT:
We are not required to report Total Organic Carbon (TOC) results under our current permit. If required to report TSS under the final permit authorization for the Chemical Leaman site, please provide the justification for the addition of this parameter.

RESPONSE:
Similar to the rationale included in RESPONSE 1, the Department determines whether or not to include TOC requirements for renewal authorizations on a case-by-case basis. Based on a review of the discharge data, which shows primarily non-detectable toxics, as well as a review of the application data, the Department will not include a TOC requirement in the individual authorization for Chemical Leaman.

No change to the final Master BGR Renewal is necessary as a result of this comment.

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: NJ0155438

Final: Surface Water Master General Permit Renewal

Permittee:
NJPDES Master General Permit Program Interest
Category BGR
Per Individual Notice of Authorization
Division of Water Quality
Bureau of Surface Water Permitting
Mail Code 401-02B, PO Box 420
401 East State Street
Trenton, NJ 08625-0420

Co-Permittee:

Property Owner:
NJPDES Master General Permit Program Interest
Category BGR
Per Individual Notice of Authorization
Division of Water Quality
Bureau of Surface Water Permitting
Mail Code 401-02B, PO Box 420
401 East State Street
Trenton, NJ 08625-0420

Location Of Activity:
NJPDES Master General Permit Program Interest
Category BGR
Per Individual Notice of Authorization
Division of Water Quality
Bureau of Surface Water Permitting
Mail Code 401-02B, PO Box 420
401 East State Street
Trenton, NJ 08625-0420

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
BGR - General Remediation Clean-up Permit (non-petroleum) – Master Renewal	07/28/2020	08/01/2020	07/31/2025

By Authority of:
Commissioner's Office

Susan Rosenwinkel

DEP AUTHORIZATION
Susan Rosenwinkel, Bureau Chief
Bureau of Surface Water Permitting
Water Pollution Management Element
Division of Water Quality

(Terms, conditions and provisions attached hereto)

PART I
GENERAL REQUIREMENTS:
NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

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

b. General Conditions

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

c. Operation And Maintenance

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

d. Monitoring And Records

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

e. Reporting Requirements

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

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. Requirements for Discharges to Surface Waters

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

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

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 Licensing and Registration
Mail Code 401-04E
P.O. Box 420
Trenton, New Jersey 08625-0420
(609) 984-6507

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

7. Operation Restrictions

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

8. Residuals Management

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

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

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

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

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

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

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

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

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

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

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

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

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

g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to 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. Effective December 21, 2020, 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:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
ABGR Table 1	Varies		BGR - General Remediation Clean-up (GP)

Location Description

This table is utilized for long term discharges into eligible waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC. Metals, volatile organics, acid extractables, base-neutrals, PCBs, pesticides and other pollutants (Priority Pollutant Scan) will be included for any parameter detected or known present. Limits for these parameters are specified in the BGR Effluent Standards for Toxic Pollutants attachment. Refer to Part III of the individual authorizations for limitations and monitoring requirements.

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:

For new authorizations a chronic whole effluent toxicity limit shall become effective three years from the effective start date of the permit.

Specific toxics will be included for parameters that are detected in the untreated representative sample or known suspected in place of the "Priority Pollutant Scan"

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 Report Per Minimum	*****	9.0 Report Per 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	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:

For new authorizations a chronic whole effluent toxicity limit shall become effective three years from the effective start date of the permit.

Specific toxics will be included for parameters that are detected in the untreated representative sample or known suspected in place of the "Priority Pollutant Scan"

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
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	20 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Priority Pollutant Scan	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
BBGR Table 2	Varies		BGR - General Remediation Clean-up (GP)

Location Description

This table is utilized on a case-by-case basis for short term discharges into eligible waters classified as FW2-NT, FW2-TM, FW2-TP, SE or SC. Metals, volatile organics, acid extractables, base-neutrals, PCBs, pesticides and other pollutants (Priority Pollutant Scan) will be included for any parameter detected or known present. Limits for these parameters are specified in the BGR Effluent Standards for Toxic Pollutants attachment. Refer to Part III of the individual authorizations for limitations and monitoring requirements.

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:

A monitoring frequency of 1/4 days shall apply for discharges lasting for 1 month or less. 1/week for discharges lasting from 1 month to 3 months. And 1/2 weeks for discharges lasting greater than 3 months. Specific toxics will be included in place of the "Priority Pollutant Scan" on a case-by-case basis.

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 Report Per Minimum	*****	9.0 Report Per 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	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	20 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:

A monitoring frequency of 1/4 days shall apply for discharges lasting for 1 month or less. 1/week for discharges lasting from 1 month to 3 months. And 1/2 weeks for discharges lasting greater than 3 months. Specific toxics will be included in place of the "Priority Pollutant Scan" on a case-by-case basis.

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
Priority Pollutant Scan	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/4 Days	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION: SI6A Residuals Requirements

DISCHARGE CATEGORY(IES): BGR - General Remediation Clean-up (GP)

Location Description

Sludge sampling and analysis determined on a case-by-case basis and in conformance with the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C).

Contributing Waste Types

Ind Residual-Other

Residuals DMR Reporting Requirements:

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

Comments:

Sampling and analysis of the sludge for the parameters contained on "Part III - Attachment Residuals" determined on a case-by-case basis. For existing dischargers, please refer to tables in Attachments 1 and 2 for the requirements that will be contained in the individual authorizations.

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

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

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/Year	Composite
January thru December	QL	***	***		***	***	***			

Residuals WCR - Annual Reporting Requirements:

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

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

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

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

Residuals Transfer Reporting Requirements:

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

Toxic Pollutant Limitations if Detected or Known Present

In addition to complying with the effluent limitations and monitoring conditions listed on Table 1 and Table 2 in Part III in this Master BGR permit, each parameter listed below that is detected or known to be present will be included in Part III - Surface Water DMR Reporting Requirements of the individual authorization. The limits are based on N.J.A.C. 7:14A-12 Appendix B Effluent Standards for Site Remediation Projects.

All units are in µg/L. MR is defined as monitoring and reporting.

Parameter	FW2 Waters		SE, SC Waters	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Volatile Organics				
Acrolein	MR	100	MR	100
Acrylonitrile	MR	50	MR	50
Benzene	MR	7	37	136
Bromoform	MR	8.6	29	58
Carbon Tetrachloride	MR	6	MR	8.8
Chlorobenzene	15	28	15	28
Chlorodibromomethane	MR	8.2	MR	14
Chlorethane	104	268	104	268
Chloroform	MR	11.4	21	46
Dichlorobromomethane	MR	5	MR	12
1,1-Dichloroethane	22	59	22	59
1,2-Dichloroethane	MR	3	68	211
1, 1-Dichloroethylene	MR	6	16	25
1,2-Dichloropropane	153	230	153	230
1,3-Dichloropropylene	10	20	29	44
Ethylbenzene	32	108	32	108
Methyl Bromide	20	40	20	40
Methyl Chloride	86	190	86	190
Methylene Chloride	MR	9.4	40	89
1,1,2,2 Tetrachloroethane	MR	10	MR	10
Tetrachloroethylene	MR	16	22	56
Toluene	26	80	26	80
1,2-Trans-Dichloroethylene	21	54	21	54
1,1,1-Trichloroethane	21	54	21	54
1,1,2-Trichloroethane	MR	12	21	54
Trichloroethylene	MR	5.4	21	54
Vinyl Chloride	MR	10	104	268

Parameter	**FW2 Waters**		**SE, SC Waters**	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Acid Compounds				
2-Chlorophenol	31	98	31	98
2,4 Dichlorophenol	39	112	39	112
2,4 Dimethylphenol	18	36	18	36
4,6 Dinitro-O-Cresol	MR	60	78	277
2,4 Dinitrophenol	71	123	71	123
2-Nitrophenol	41	69	41	69
4-Nitrophenol	72	124	72	124
Pentachlorophenol	MR	30	MR	30
Phenol	15	26	15	26
2,4,6 Trichlorophenol	MR	20	MR	20
Base/Neutral Compounds				
Anthracene	22	59	22	59
Benzidine	MR	50	MR	50
Benzo (a) Anthracene	MR	10	MR	10
Benzo (a) Pyrene	MR	20	MR	20
Benzo (b) fluoranthene	MR	10	MR	10
Benzo (k) fluoranthene	MR	20	MR	20
Bis (2-Chloroethyl) Ether	MR	10	MR	10
Bis (2-Chloroisopropyl) Ether	301	757	301	757
Bis (2-Ethylhexyl)Phthalate	MR	36	59	118
Butyl Benzyl Phthalate	MR	24	MR	24
Chrysene	MR	20	MR	20
Dibenzo (a,h) Anthracene	MR	20	MR	20
1,2 Dichlorobenzene	77	163	77	163
1,3 Dichlorobenzene	31	44	31	44
1,4 Dichlorobenzene	MR	28	MR	28
3,3 Dichlorobenzidine	MR	60	MR	60
Diethyl Phthalate	81	203	81	203
Dimethyl Phthalate	19	47	19	47
Di-N-Butyl Phthalate	27	57	27	57
2,4 Dinitrotoluene	MR	10	MR	18.2
2,6 Dinitrotoluene	255	641	255	641
Fluoranthene	25	68	25	68
Fluorene	22	59	22	59
Hexachlorobenzene	MR	10	MR	10
Hexachlorobutadiene	MR	10	20	49
Hexchloropentadiene	240	480	MR	1800
Hexachloroethane	19	38	21	54
Ideno (1,2,3-cd) Pyrene	MR	20	MR	20
Isophorone	MR	20	MR	20

Parameter	**FW2 Waters**		**SE, SC Waters**	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Base/Neutral Compounds				
Naphthalene	22	59	22	59
Nitrobenzene	17	34	27	68
N-Nitrosodimethylamine	MR	20	MR	20
N-Nitrosodiphenylamine	MR	20	MR	20
Phenanthrene	22	59	22	59
Pyrene	25	67	25	67
1,2,4 Trichlorobenzene	68	140	68	140
Pesticides				
Aldrin	MR	0.04	MR	0.04
Alpha-BHC	MR	0.02	MR	0.02
Beta-BHC	0.137	0.274	0.46	0.92
Gamma-BHC (Lindane)	MR	0.08	MR	0.03
Chlordane	MR	0.2	MR	0.2
4,4'-DDT	MR	0.06	MR	0.06
4,4'-DDE	MR	0.04	MR	0.04
4,4'-DDD	MR	0.04	MR	0.04
Dieldrin	MR	0.03	MR	0.03
Alpha-Endosulfan	MR	0.02	MR	0.02
Beta-Endosulfan	MR	0.04	MR	0.04
Endosulfan Sulfate	0.93	1.86	2	4
Endrin	MR	0.04	MR	0.04
Endrin Aldehyde	0.76	1.52	0.81	1.62
Heptachlor	MR	0.02	MR	0.02
Heptachlor Expoxide	MR	0.4	MR	0.4
Toxaphene	MR	1	MR	1
Metals and Cyanide				
Arsenic	50	100	50	100
Cadmium	50	100	50	100
Chromium	50	100	50	100
Copper	50	100	50	100
Iron	MR	MR	MR	MR
Lead	50	100	50	100
Mercury	MR	1	MR	1
Nickel	72	144	50	100
Selenium	50	100	50	100
Silver	25	50	25	50
Zinc	100	200	100	200
Cyanide	100	200	100	200

Parameter	**FW2 Waters**		**SE, SC Waters**	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Dioxin				
2,3,7,8-Tetrachlorodibenzo-p-dioxin	MR	0.01	MR	0.01
PCBs				
PCBs- 1242, 1254, 1221, 1232, 1248, 1260 and 1016	MR	0.5	MR	0.5
Other				
Methyl-Tert-Butyl Ether (MTBE)	MR	70	MR	70
Tert-Butyl-Alcohol (TBA)	500	MR	500	MR

Appendix - Monitoring Parameter Tables

Table I
Primary Metals and Selected Chemical Parameters

Total Solids, (percent by weight)
Arsenic, total
Beryllium, total
Cadmium, total
Calcium, total
Chromium, total
Copper, total
Lead, total
Mercury, total
Molybdenum, total
Nickel, total
Nitrogen, Total Kjeldahl (TKN)
Nitrogen, Ammonia (NH3-N)
Nitrogen, Nitrate (NO3-N)
Phosphorous, total
Potassium, total
Selenium, total
Zinc, total
Radionuclides (pCi/g)[1]
Dioxins and PCBs[2]

Notes:
[1] Radionuclides are required to be tested in the sludge if the industrial or domestic treatment works receives source water or uses additives known to or suspected of having elevated radionuclide concentrations. The radionuclides required to be tested for include, but are not limited to, radium-226, radium-228, uranium-238, uranium-234, uranium-235, and thorium-232.
[2] Dioxin and dioxin-like compounds, including dibenzofurans, and individual PCB congeners are required to be tested in the sludge on a case by case basis as established in a NJPDES permit issued pursuant to N.J.A.C. 7:14A.

Table II
Additional Miscellaneous Compounds

Parameter	CAS RN[1]
Antimony, total	
Silver, total	
Thallium, total	
Cyanide, total	**57-12-5**

Notes:
[1] Chemical Abstracts Service registry number

Table III
Volatile Organic Compounds

Parameter - Name(s)	CAS RN[1]
Acrolein; (2-Propenal)	**107-02-8**
Acrylonitrile; (2-Propenenitrile)	**107-13-1**
Benzene	**71-43-2**
Bromoform; (Tribromomethane)	**75-25-2**
Carbon Tetrachloride; (Tetrachloromethane)	**56-23-5**
Chlorobenzene	**108-90-7**
Chlorodibromomethane; (Dibromochloromethane)	**124-48-1**
Chloroethane; (Ethyl chloride)	**75-00-3**
2-Chloroethylvinyl Ether	**110-75-8**
Choroform; (Trichloromethane)	**67-66-3**
Dichlorobromomethane; (Bromodichloromethane)	**75-27-4**
1,1-Dichloroethane; (Ethylidene chloride)	**75-34-3**
1,2-Dichloroethane; (Ethylene dichloride)	**107-06-2**
1,1-Dichloroethylene; (1,1-Dichloroethene); (Vinylidene chloride)	**75-35-4**
1,2-Dichloropropane; (Propylene dichloride)	**78-87-5**
trans-1,3-Dichloropropene	**10061-02-6**
Ethylbenzene	**100-41-4**
Methyl bromide; (Bromomethane)	**74-83-9**
Methyl chloride; (Chloromethane)	**74-87-3**
Methylene chloride; (Dichloromethane)	**75-09-2**
1,1,2,2-Tetrachloroethane	**79-34-5**
Tetrachloroethylene; (Tetrachloroethene); (Perchloroethylene)	**127-18-4**
Toluene; (Methylbenzene)	**108-88-3**
1,2-trans-Dichloroethylene; (trans-1,2-Dichloroethene)	**156-60-5**
1,1,1-Trichloroethane; (Methylchloroform)	**71-55-6**
1,1,2-Trichloroethane	**79-00-5**
Trichloroethylene; (Trichloroethene)	**79-01-6**
Vinyl Chloride; (Chloroethene)	**75-01-4**

Notes:
[1] Chemical Abstracts Service registry number

Table IV
Acid-extractable compounds

Parameter	CAS RN[1]
2-Chlorophenol	**95-57-8**
2,4-Dichlorophenol	**120-83-2**
2,4-Dimethylphenol; (m-Xylenol)	**105-67-9**
4,6-Dinitro-o-cresol; (4,6-Dinitro-2-methylphenol)	**534-52-1**
2,4-Dinitrophenol	**51-28-5**
2-Nitrophenol; (o-Nitrophenol)	**88-75-5**
4-Nitrophenol; (p-Nitrophenol)	**100-02-7**
p-Chloro-m-cresol; (4-Chloro-3-methylphenol)	**59-50-7**
Pentachlorophenol	**87-86-5**
Phenol	**108-95-2**
2,4,6-Trichlorophenol	**88-06-2**

Notes:
[1] Chemical Abstracts Service registry number

Table V
Base-Neutral Compounds

Parameter	CAS RN[1]
Acenaphthene; (1,2-dihydro-Acenaphthylene)	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzidine	92-87-5
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
3,4-Benzofluoranthene; (Benzo(b)fluoranthene)	205-99-2
Benzo(g,h,i)perylene	191-24-2
Benzo(k)Fluoranthene	207-08-9
bis(2-Chloroethoxy)methane	111-91-1
bis(2-Chloroethyl)ether	111-44-4
bis(2-Chloroisopropyl)ether; (Bis(2-chloro-1-methylethyl)ether)	108-60-1
bis(2-Ethylhexyl)phthalate	117-81-7
4-Bromophenyl phenyl ether; (1-bromo-4-phenoxy Benzene)	101-55-3
Butyl benzyl phthalate; (Benzyl butyl phthalate)	85-68-7
2-Chloronaphthalene	91-58-7
4-Chlorophenyl phenyl ether;	7005-72-3
Chrysene	218-01-9
Dibenzo(a,h)anthracene	53-70-3
1,2-Dichlorobenzene; (o-Dichlorobenzene)	95-50-1
1,3-Dichlorobenzene; (m-Dichlorobenzene)	541-73-1
1,4-Dichlorobenzene; (p-Dichlorobenzene)	106-46-7
3,3-Dichlorobenzidine	91-94-1
Diethyl phthalate	84-66-2
Dimethyl phthalate	131-11-3
Di-n-butyl phthalate	84-74-2
2,4-Dinitrotoluene; (1-methyl-2,4-dinitrobenzene)	121-14-2
2,6-Dinitrotoluene; (2-methyl-1,3-dinitrobenzene)	606-20-2
Di-n-octyl phthalate	117-84-0
1,2-Diphenylhydrazine	122-66-7
Fluoranthene	206-44-0
Fluorene	86-73-7
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
Indeno(1,2,3-c,d)pyrene	193-39-5
Isophorone	78-59-1
Naphthalene	91-20-3

Nitrobenzene	**98-95-3**
N-Nitrosodimethylamine	**62-75-9**
N-Nitrosodi-n-propylamine; (N-Nitrosodipropylamine) (Di-n-propylnitrosamine)	**621-64-7**
N-Nitrosodiphenylamine	**86-30-6**
Phenanthrene	**85-01-8**
Pyrene	**129-00-0**
1,2,4-Trichlorobenzene	**120-82-1**

Notes:
[1] Chemical Abstracts Service registry number

Table VI
Pesticides and PCB

Parameter	CAS RN[1]
Aldrin	**309-00-2**
alpha-BHC	**319-84-6**
beta-BHC	**319-85-7**
gamma-BHC; (Lindane)	**58-89-9**
delta-BHC	**319-86-8**
Chlordane	**(see note 2)**
4,4'-DDT	**50-29-3**
4,4'-DDE	**72-55-9**
4,4'-DDD	**72-54-8**
Dieldrin	**60-57-1**
alpha-Endosulfan	**959-98-8**
beta-Endosulfan	**33213-65-9**
Endosulfan sulfate	**1031-07-8**
Endrin	**72-20-8**
Endrin aldehyde	**7421-93-4**
Heptachlor	**76-44-8**
Heptachlor epoxide	**1024-57-3**
PCB-1242	**53469-21-9**
PCB-1254	**11097-69-1**
PCB-1221	**11104-28-2**
PCB-1232	**11141-16-5**
PCB-1248	**12672-29-6**
PCB-1260	**11096-82-5**
PCB-1016	**12674-11-2**
Toxaphene	**8001-35-2**

Notes:

[1] Chemical Abstracts Service registry number

[2] Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6).

Table VII
Conventional and Nonconventional Pollutants

Parameter
Aluminum, Total
Barium, Total
Boron, Total
Cobalt, Total
Iron, Total
Magnesium, Total
Manganese, Total
Strontium, Total
Tin, Total
Titanium, Total
Vanadium, Total
Zirconium, Total

Hazardous Substances

Parameter	CAS RN[1]
Acetone; (2-Propanone)	**67-64-1**
Acetonitrile; (Methyl cyanide)	**75-05-8**
Acetophenone	**98-86-2**
2-Acetylaminofluorene; (2-AFF)	**53-96-3**
Acrylamide	**79-06-1**
Allyl chloride	**107-05-1**
4-Aminobiphenyl	**92-67-1**
Atrazine	**1912-24-9**
Benzaldehyde	**100-52-7**
Benzyl alcohol	**100-51-6**
1,1 Biphenyl	**92-52-4**
Bromochloromethane; (Chlorobromomethane)	**74-97-5**
Caprolactam	**105-60-2**
Carbazole	**86-74-8**
Carbon disulfide	**75-15-0**
p-Chloroaniline; (4-chlorobenzenamine)	**106-47-8**
Chlorobenzilate	**510-15-6**
Chloroprene; (2-chloro-1,3-butadiene)	**126-99-8**
m-Cresol; (3-methylphenol)	**108-39-4**
o-Cresol; (2-methylphenol)	**95-48-7**
p-Cresol; (4-methylphenol)	**106-44-5**
2,4-D; (2, 4-Dichlorophenoxyacetic acid)	**94-75-7**
Diallate	**2303-16-4**

Dibenzofuran	**132-64-9**
1,2-Dibromo-3-chloropropane; (DBCP)	**96-12-8**
1,2-Dibromoethane; (Ethylene dibromide); (EDB)	**106-93-4**
trans-1,4-Dichloro-2-butene	**110-57-6**
Dichlorodifluoromethane; (CFC 12)	**75-71-8**
cis-1,2-Dichloroethylene; (cis-1,2-Dichloroethene)	**156-59-2**
2,6-Dichlorophenol	**87-65-0**
1,3-Dichloropropane; (Trimethylene dichloride)	**142-28-9**
2,2-Dichloropropane; (Isopropylidene chloride)	**594-20-7**
1,1- Dichloropropene	**563-58-6**
cis-1,3-Dichloropropene	**10061-01-5**
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; (Thionazin)	**297-97-2**
Dimethoate	**60-51-5**
p-(Dimethylamino)azobenzene	**60-11-7**
7,12-Dimethylbenz[a]anthracene	**57-97-6**
3,3-Dimethylbenzidine	**119-93-7**
m-Dinitrobenzene; (1,3-dinitrobenzene)	**99-65-0**
Dinoseb; (DNBP)	**88-85-7**
Diphenylamine; (N-phenylbenzenamine)	**122-39-4**
Disulfoton	**298-04-4**
Ethylbenzene	**100-41-4**
Ethyl methacrylate	**97-63-2**
Ethyl methanesulfonate	**62-50-0**
Famphur	**52-85-7**
Hexachloropropene	**1888-71-7**
2-Hexanone; (Methyl butyl ketone)	**591-78-6**
Isobutyl alcohol	**78-83-1**
Isodrin	**465-73-6**
Isosafrole	**120-58-1**
Kepone	**143-50-0**
Methacrylonitrile	**126-98-7**
Methapyrilene	**91-80-5**
Methoxychlor	**72-43-5**
Methyl acetate	**79-20-9**
3-Methylcholanthrene	**56-49-5**
Methylcyclohexane	**108-87-2**
Methylene bromide; (Dibromomethane)	**74-95-3**
Methyl ethyl ketone; (MEK); (2-Butanone)	**78-93-3**
Methyl iodide; (Iodomethane)	**74-88-4**
Methyl methacrylate	**80-62-6**
Methyl methanesulfonate	**66-27-3**
2-Methylnaphthalene	**91-57-6**
Methyl parathion; (Parathion methyl)	**298-00-0**
4-Methyl-2-pentanone; (Methyl isobutyl ketone)	**108-10-1**
Methyl-tert-butyl ether (MTBE)	**1634-04-4**

1,4-Naphthoquinone; (1,4-Naphthalenedione)	**130-15-4**
1-Naphthylamine; (1-Naphthalenamine)	**134-31-7**
2-Naphthylamine; (2-Naphthalenamine)	**91-59-8**
o-Nitroaniline; (2-Nitroaniline); (2-nitrobenzenamine)	**88-74-4**
m-Nitroaniline; (3-Nitroaniline); (3-nitrobenzenemine)	**99-09-2**
p-Nitroaniline; (4-Nitroaniline); (4-nitrobenzenamine)	**100-01-6**
N-Nitrosodi-n-butylamine	**924-16-3**
N-Nitrosodiethylamine	**55-18-5**
N-Nitrosomethylethalamine	**10595-95-6**
N-Nitrosopiperidine	**100-75-4**
N-Nitrosopyrrolidine	**930-55-2**
5-Nitro-o-toluidine	**99-55-8**
Parathion	**56-38-2**
Pentachlorobenzene	**606-93-5**
Pentachloronitrobenzene	**82-68-8**
Phenacetin	**62-44-2**
p-Phenylenediamine; (1,4-Benzenediamine)	**106-50-3**
Phorate	**298-02-2**
Pronamide	**23950-58-5**
Propionitrile; (Ethyl cyanide); (Propanenitrile)	**107-12-0**
Safrole	**94-59-7**
Silvex; (2,4,5-TP); [2-(2,4,5-Trichlorophenoxy)propanoic acid]	**93-72-1**
Styrene	**100-42-5**
Sulfide	**18496-25-8**
2,4,5-T; (2,4,5-Trichlorophenoxyacetic acid)	**93-76-5**
Tertiary butyl alcohol (TBA)	**75-65-0**
1,2,4,5-Tetrachlorobenzene	**95-94-3**
1,1,1,2-Tetrachloroethane	**630-20-6**
2,3,4,6-Tetrachlorophenol	**58-90-2**
o-Toluidine	**95-53-4**
Trichlorofluoromethane; (CFC- 11)	**75-69-4**
2,4,5-Trichlorophenol	**95-95-4**
1,2,3-Trichloropropane	**96-18-4**
1,1,2-Trichloro-1,2,2-trifluoroethane	**76-13-1**
0,0,0-Triethyl phosphorothioate	**126-68-1**
sym-Trinitrobenzene; (1,3,5-trinitrobenzene)	**99-35-4**
Vinyl accetate	**108-05-4**
Xylene (total)[2]	

Notes:

[1] Chemical Abstracts Service registry number

[2] Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

General Remediation Clean-up (GP)

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

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

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

c. 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 CFR 122.44(i)(1)(iv).

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

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

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

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

i. 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. REPORTING

1. Standard Reporting Requirements

a. Please refer to Part II, Section B.9. for Standard Reporting Requirements

D. SUBMITTALS

1. Standard Submittal Requirements

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

E. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location(s) specified in Part III of this permit.

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

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

d. The discharge shall not exhibit a visible sheen.

2. 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).

3. Applicability of Discharge Limitations and Effective Dates

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

i. For new authorizations under Table 1: The chronic WET compliance schedule, if applicable, is as follows:

The "initial" phase monitoring conditions are effective from the effective date of the permit (EDP) until EDP + 36 months.
The "final" phase limitation of 61% becomes effective on EDP + 36 months as specified in the individual authorizations.

ii. For renewal authorizations, under Table 1: The final acute or chronic WET limit becomes effective on the date specified in the individual authorization.

4. Acute Toxicity Testing Requirements (applicable only if a acute toxicity limit or action level 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. Acute toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

c. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

d. For renewal authorizations: The permittee shall submit an Acute Methodology Questionnaire within 60 days of commencement of discharge or of any change in laboratory.

e. If an annual monitoring frequency is specified for Acute WET: The permittee shall submit an acute 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.

f. Test reports shall be submitted to the Department's WET report mailbox at: biomonitoring@dep.nj.gov.

5. Chronic Toxicity Testing Requirements (applicable only if a chronic toxicity limit 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: The permittee shall 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 commencement of discharge or of any change in laboratory.

h. If a quarterly monitoring frequency is specified for Chronic WET: The permittee shall submit a chronic whole effluent toxicity test report within twenty-five days after the end of every quarterly month during which a chronic whole effluent toxicity test was performed (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: The permittee shall 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. Test reports shall be submitted to the Department's WET report mailbox at: biomonitoring@dep.nj.gov.

6. Toxicity Reduction Implementation Requirements (TRIR) (applicable only if a whole effluent toxicity limit or action level 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/action level specified in Part III of this Permit.

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

b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limit/action level 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/action level.

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

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

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

ii. As appropriate, the PTI shall include:
(1) treatment plant performance evaluation,
(2) evaluation of chemical use and processes at the facility, and
(3) an evaluation of incidental facility procedures and chemical spill disposal which may contribute to effluent toxicity.

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/action level in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.

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

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

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

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

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

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

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

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

iii. Documents regarding Toxicity Investigations shall be submitted to the Department's WET report mailbox at: biomonitoring @dep.nj.gov.

F. CONDITIONS FOR MODIFICATION

1. Notification requirements

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.

2. Causes for modification

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

b. 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 or annual. The criteria for such reduction is consistent compliance with the WET limit for 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. OPERATIONAL ISSUES

1. Operational Requirements

a. The treatment works shall operate at the optimal average design flow rate for maximum groundwater clean-up.

b. Filter backwash water must be returned through the treatment system prior to discharge.

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 Chemical Addition Agents

a. 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 in writing or via email 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 also include a Safety Data Sheet for the product(s). The letter shall be submitted via email to the Department's Bureau of Surface Water Permitting at dwq_bswp@dep.nj.gov 30 days before the anticipated use. The Department will then 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. 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 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 permit 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 the appropriate Regional Bureau of Water and Compliance Enforcement shall be notified:

i. NORTHERN BUREAU (Counties of Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren) - (973) 656-4099.

ii. CENTRAL BUREAU (Counties of Mercer, Middlesex, Monmouth, Ocean and Union) - (609) 292-3010.

iii. SOUTHERN BUREAU (Counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem) - (856) 614-3655.

5. Revocation of an Individual Authorization under the Permit.

a. If the permittee has permanently ceased its discharge to surface water, the permittee can request revocation of its individual authorization under the BGR permit. The permittee can obtain the necessary revocation forms by accessing https://www.nj.dep.dov/dep/dwq/pdf/revocation_form.pdf or by contacting the Department's Permit Administration Section at (609) 984-4428. The permittee can also contact the appropriate Regional Enforcement Office for further guidance on closure proceedings.

b. 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

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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 ICp values and not the bootstrap mean ICp, shall be reported for permit compliance purposes. The ICp value reported on the Discharge Monitoring Report shall be rounded off as specified in the Department's “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 ICp 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
Pimephales promelas	80%	0.25 mg avg	N/A
Ceriodaphnia dubia	80%	N/A	Average of $\geq$15 young per surviving female
Selenastrum capricornutum	Density $\geq 2x10^5$cells/ml	N/A	Variability in controls not to exceed 20%.
Cyprinodon variegatus	80%	0.60 mg (unpreserved) avg 0.50 mg (preserved) avg	N/A
Menidia beryllina	80%	0.50 mg (unpreserved) avg 0.43 mg (preserved) avg	N/A
Mysidopsis bahia	80%	0.20 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.

New Jersey Department of Environmental Protection
Water Pollution Management Element
Bureau of Surface Water Permitting
biomonitoring@dep.nj.gov

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.