



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**PAG-05
FACT SHEET
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR DISCHARGES FROM
PETROLEUM PRODUCT CONTAMINATED GROUNDWATER REMEDIATION SYSTEMS**

DEP regulations at 25 Pa. Code §§92.81 - 92.83 provide for the issuance of the General Permit. The General Permit is allowed when:

- A. The same, or substantially similar, types of operations are involved;
- B. The same types of waste are being discharged;
- C. The same effluent limitations and/or operations conditions are required;
- D. The same or similar monitoring is required;
- E. The discharge does not contain any toxic pollutants including, but not limited to, Dieldrin, DDT, Endrin, Toxaphene, Benzidine or Polychlorinated Biphenyls, or any other substance which - because of its quantity, concentration, or physical, chemical, or infectious characteristics - may cause or contribute to an increase in mortality or morbidity in either an individual or the total population, or pose a substantial present or future hazard to human health or the environment when discharged into navigable waters;
- F. In the opinion of DEP, the discharges are more appropriately controlled under the General Permit than under individual permits;
- G. Individually and cumulatively, the discharges do not have the potential to cause significant adverse environmental impact, and;
- H. The discharge is not to "High Quality" (HQ) or "Exceptional Value" (EV) waters.

APPLICATION FOR COVERAGE UNDER THE GENERAL PERMIT AND ADMINISTRATION OF THE PERMIT

Any eligible discharger who wishes to be covered by the General Permit must file an NOI for coverage with DEP. If the application for coverage is accepted, DEP will formally notify the discharger of the coverage by transmitting a copy of the General Permit bearing an individual identification number. Notice of each application for coverage and each approval for coverage will be published by DEP in the *Pennsylvania Bulletin*.

Discharges from Petroleum Product Contaminated Groundwater Remediation Systems (PPCGRS) are NOT authorized by the General Permit when one or more of the following conditions exist:

- A. The discharges contain toxic or hazardous pollutants, or any other substance which - because of its quantity, concentration, or physical, chemical, or infectious characteristics - may cause or contribute to an increase in mortality or morbidity in either an individual or the total population, or pose a substantial present or future hazard to human health or the environment when discharged into surface waters;
- B. The discharges individually or cumulatively have the potential to cause significant adverse environmental impact;
- C. The discharges are to waters classified as HQ or EV under Chapter 93 of DEP Rules and Regulations;
- D. The discharges are not, or will not be, in compliance with any of the terms or conditions of the General Permit;

- E. The applicant has failed, and continues to fail, or has shown a lack of ability or intention to comply with a regulation, permit, schedule of compliance, or order issued by DEP;
- F. The discharges do not, or will not, result in compliance with applicable effluent limitations or water quality standards;
- G. The discharges are from contaminated groundwater remediation activities, which DEP determines require an individual NPDES permit to ensure compliance with the Clean Water Act, the Clean Streams Law, or rules and regulations promulgated thereto, or where a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
- H. The discharges are associated with an activity which would adversely affect a listed endangered or threatened species or its habitat;
- I. Discharges of any substance other than from PPCGRS, including stormwater, domestic sewage, industrial waste, or other commercial or manufacturing wastes;
- J. Discharges, which would interfere with a downstream riparian landowner's reasonable use of surface waters, or property rights, or otherwise cause a private or public nuisance;
- K. Discharges from any facility that does not meet the definition of PPCGRS as defined in Part B 4. of the General Permit;
- L. The discharges are associated with an activity that is subject to an existing NPDES individual or General Permit, except as allowed herein, or are from a facility where an NPDES permit has been terminated or denied; and
- M. The discharges contain pollutants with concentrations exceeding those listed in Part A 1. and/or Part A 2. of the General Permit.

PUBLIC NOTICE OF THE GENERAL PERMIT AND PUBLIC HEARING

Public notice of the General Permit will be published in the *Pennsylvania Bulletin*.

There will be a 30-day comment period during which interested persons may submit written comments or petition for a public hearing. All written comments received during the 30-day comment period will be considered in the formulation of the final permit. The period for comment may be extended, at the discretion of DEP, for one additional 15-day period.

A hearing will be held if there is significant public interest in holding a hearing. If a public hearing is to be held, DEP will publish a notice in the *Pennsylvania Bulletin* and in at least one newspaper of general circulation within the geographic areas where the discharges are of concern. This notice will be published at least thirty (30) days before the hearing.

TYPE OF OPERATION AND AREA OF APPLICABILITY

For the purposes of the General Permit, PPCGRS refers to the combination of wells, piping, pumping and treatment facilities installed for the purpose of extracting contaminated groundwater for treatment prior to discharge to surface waters of the Commonwealth. This definition includes remediation systems at gasoline service stations and at other sites with petroleum product contamination. This does not apply to sites where contamination is due to other pollutants. The General Permit applies to all such discharges located in Pennsylvania.

EFFLUENT LIMITATIONS AND COMPLIANCE WITH WATER QUALITY STANDARDS

The following effluent limitations and monitoring requirements apply:

A. General Requirements (All values expressed in mg/L, unless otherwise noted.)

Gasoline				
Discharge Parameter	Average Monthly	Instantaneous Maximum	Sample Type	Monitoring Frequency
Flow	Monitor/Report		Measured Flow	2/month
Benzene	0.001	0.0025	Grab	2/month
Total BTEX	0.1	0.25	Grab	2/month
Toluene	Monitor/Report	Monitor/Report	Grab	2/month
Ethylbenzene	Monitor/Report	Monitor/Report	Grab	2/month
Xylenes, Total	Monitor/Report	Monitor/Report	Grab	2/month
MTBE	Monitor/Report	Monitor/Report	Grab	2/month
pH (Standard Units)	Between 6.0 – 9.0		Grab	2/month
Oil & Grease	15.0	30.0	Grab	once every six months
Iron, Dissolved		7.0	Grab	1/year
Total Suspended Solids	30.0	75.0	Grab	1/year
Petroleum Products Other Than Gasoline				
Discharge Parameter	Average Monthly	Instantaneous Maximum	Sample Type	Monitoring Frequency
Flow	Monitor/Report		Measured Flow	2/month
Benzene	0.001	0.0025	Grab	2/month
Naphthalene	0.01	0.025	Grab	2/month
Fluorene	1.0	2.5	Grab	2/month
Toluene	Monitor/Report	Monitor/Report	Grab	2/month
Ethylbenzene	Monitor/Report	Monitor/Report	Grab	2/month
Chrysene	Monitor/Report	Monitor/Report	Grab	2/month
Cumene	Monitor/Report	Monitor/Report	Grab	2/month
Pyrene	Monitor/Report	Monitor/Report	Grab	2/month
Phenanthrene	Monitor/Report	Monitor/Report	Grab	2/month
pH (Standard Units)	Between 6.0 – 9.0		Grab	2/month
Oil & Grease	15.0	30.0	Grab	once every six months
Iron, Dissolved		7.0	Grab	1/year
Total Suspended Solids	30.0	75.0	Grab	1/year

B. Other Conditions For All Discharges

1. Samples shall be taken at least 10 days apart for a minimum of two sampling events.
2. There shall be no discharge of floating solids or visible foam in other than trace amounts.
3. Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge pipe after treatment.
4. BTEX shall be measured as the sum of benzene, toluene, ethylbenzene, and xylenes. Benzene shall be measured by an EPA-approved method with a sensitivity of 0.001 mg/L or lower. Ethylbenzene, toluene, and xylenes shall be measured by an EPA-approved method. Measurement for xylenes shall include ortho-, meta-, and para-xylene.

5. For all discharges under the General Permit, a water quality-based effluent limitation may be required under applicable state and federal law, upon notice from DEP, when necessary to ensure that the water quality standards of the receiving water are attained. Discharges under the General Permit shall not result in a violation of the water quality criteria prescribed in 25 Pa. Code Chapters 16 and 93 for the various designated and existing uses of the receiving waters.

The effluent limits are based on Best Professional Judgment (BPJ) as authorized by Section 402(a)(1) of the Clean Water Act. In developing these limits, the specific factors required in 40 CFR Part 125.3(d) were considered.

Benzene was selected as the main pollutant of concern because it is a more significant constituent of petroleum products and has a relatively high solubility, making it more difficult to strip from groundwater. Other highly soluble compounds such as propylene and naphthalene are minor constituents of petroleum products and would not dissolve in groundwater at levels of concern. Benzene serves as an indicator parameter. It is assumed that if benzene is removed, then other compounds with similar treatability characteristics will also be removed. This will also serve to reduce the overall monitoring requirements. The aggregate parameter of benzene, toluene, ethyl benzene, and xylenes (BTEX) has been selected for limitation for the following reasons. First, the composition of gasoline is highly variable and any one of the four BTEX constituents can predominate. Second, water quality criteria have been developed for the BTEX parameters. Third, BTEX have the lowest Henry's Law Constants (most difficult to strip). Finally, BTEX has traditionally been used for characterizing petroleum product contaminated effluents.

The technology-based limits are considered readily achievable based on the expected dissolved product, after free product recovery, and treatment efficiencies of 99 percent for air stripping, carbon adsorption and combinations of these technologies.

The limitations also reflect the discharge standards for pH, dissolved iron, and oil and grease contained in Chapter 95 of DEP's Rules and Regulations. The total suspended solids BPJ limitation is easily achievable and reflects a properly operated treatment system.

Water quality standards are met by establishing effluent limitations at levels lower than the applicable water quality criteria.

MONITORING AND REPORTING REQUIREMENTS

In order to determine compliance with the General Permit, the permittee must submit monthly Discharge Monitoring Reports (DMRs) 28 days after the month recorded to the regional DEP office. The General Permit requires representative grab sampling of the effluent twice per month, which is considered adequate to determine compliance with the effluent limits.

COVERAGE UNDER THE GENERAL PERMIT

As each NOI to be covered under the General Permit is received, it will be reviewed to see if approval of coverage is appropriate. DEP will notify the applicant of its findings.

PERMIT RENEWALS

Coverage may be renewed if:

- A. the General Permit is reissued or renewed;
- B. the General Permit requirements have not been significantly amended;
- C. there has been no significant change in the information provided by the permittee in the original NOI;
- D. the permittee's coverage has not been revoked or terminated;
- E. the permittee has been in compliance with the terms of the permit;
- F. the permittee has not applied for an individual permit; or

G. the activity has not been completed or terminated by a written notice to DEP.

The coverage under the General Permit will be renewed once DEP receives a "NPDES General Permit Renewal" postcard indicating permittee's desire to continue coverage when the General Permit is re-issued.

DRAFT