

Clarification of Analytical Requirements of the
Generic Permit for Discharges from Petroleum Contaminated Sites

Chapter 62-621, Florida Administrative Code (F.A.C.) sets forth the procedures to obtain National Pollutant Discharge Elimination System (NPDES) and Non-NPDES generic permits authorized under Chapter 403, Florida Statutes (F.S.), and Chapter 62-620, F.A.C. NPDES permits are required in order to discharge treated groundwater to surface water bodies, usually via stormwater sewers. The groundwater must be treated by air stripping, followed by activated carbon adsorption (or equivalent treatment), and the effluent must be analyzed to demonstrate that discharge requirements are met. Supplemental guidance is provided in "BPSS-3, Design Requirements and Procedures for NPDES Discharges," and in a June 23, 2004 memorandum titled "Generic Permit for Short Term Discharges from Petroleum Contaminated Sites, Supplemental Procedural Guidance." NPDES is a federal program, and pursuant to federal regulations, analytical methods for organic chemical analysis of municipal and industrial wastewater are required (SW 846 methods are not acceptable even if they are equivalent to the wastewater methods). The "Generic Permit for Discharges from Petroleum Contaminated Sites" (see attachment) specifies the effluent limitations and monitoring requirements. However, there has been some confusion on the actual analytical requirements resulting in either unnecessary or inadequate analyses being conducted.

Note: It is anticipated that these requirements will change in the near future as a result of amendments to Chapter 62-621, F.A.C. which are proposed; additional guidance will be provided at that time.

- 1) Long-term discharge (more than 30 days), contamination by Automotive Gasoline.
 - a) Representative samples of the effluent, taken after final treatment, must be analyzed (one time only during the coverage of the permit) for Purgeable Organics [Priority Pollutant Volatile Organics] (EPA Method 624 list) and Acid and Base/Neutral Extractable Organics [Priority Pollutant Extractable Organics] (EPA Method 625 list [to comply with NELAP certification requirements, in all cases it will be necessary to analyze the effluent for EPA Methods 625 and 608]) and the analytical results must be submitted within 60 days after the effective date of the permit or startup of the discharge.
 - b) In addition, an Acute Whole Effluent Toxicity test must be conducted monthly until three consecutive valid and passing monthly tests have been completed. The first Acute Whole Effluent Toxicity test must be conducted within 30 days after commencement of the discharge. One Acute Whole Effluent Toxicity test must be conducted annually thereafter for the duration of the permit.
 - c) If the analytical results and toxicity test result show that all requirements are met, subsequent monthly effluent samples (see Table 1 of the Generic Permit) must be analyzed for Benzene (maximum acceptable concentration 1 µg/L) and, if contamination resulted from a leaded fuel discharge, for Total Lead (maximum acceptable concentration 30 µg/L). In addition, pH must be monitored monthly. The preferred method for Benzene is EPA Method 624 but EPA Method 602 is

acceptable, and Lead may be analyzed by EPA Method 200.7, 200.8, 200.9, or 239.2.

- d) If the analytical results show that the maximum acceptable concentration for Benzene and/or the maximum acceptable concentration for Lead (if applicable) were exceeded, the permittee must turn the system off and contact the FDEP District Office immediately for guidance. If any other analyte is detected, the FDEP District Office will evaluate the results during review of the Discharge Monitoring Report (DMR) and will provide guidance if needed.
 - e) If the results of a "routine" toxicity test (any one of the three monthly tests after initiation of the discharge or the single annual test in subsequent years) show that unacceptable acute toxicity is found, a minimum of two supplemental acute toxicity tests must be conducted in the same manner as the "routine" test on the species (invertebrate and/or vertebrate) that indicated the unacceptable toxicity. The system may continue operation following the failed test so that effluent samples for supplemental tests can be collected. The first supplemental test must begin within two weeks of the end of the "routine" test, and subsequent supplemental tests must be conducted weekly thereafter until two supplemental, valid tests are completed. Independently of which "routine" toxicity test failed during the first year of operation, a minimum of two additional "routine" monthly toxicity tests must be conducted (following two consecutive passing supplemental tests) until three consecutive valid and passing monthly tests have been completed. For subsequent years, if there is a failure of the "routine" test two consecutive passing supplemental tests will satisfy the requirement for the annual passing test.
 - f) The analytical results and the results of the default toxicity tests (and supplemental toxicity tests if applicable) must be reported on the DMR form for the month in which analytical results were obtained and each test was begun. The DMR forms must be completed monthly and compiled into a quarterly report, except that when supplemental toxicity tests need to be conducted, such test results must be submitted within 45 days of completion of the second additional, valid toxicity test.
- 2) Long-term discharge (more than 30 days), contamination by Aviation Gasoline, Jet Fuel or Diesel Fuel.
- a) Representative samples of the effluent, taken after final treatment, must be analyzed (one time only during the coverage of the permit) for Purgeable Organics [Priority Pollutant Volatile Organics] (EPA Method 624 list) and Acid and Base/Neutral Extractable Organics [Priority Pollutant Extractable Organics] (EPA Method 625 list [to comply with NELAP certification requirements, in all cases it will be necessary to analyze the effluent for EPA Methods 625 and 608]) and the analytical results must be submitted within 60 days after the effective date of the permit or startup of the discharge.
 - b) In addition, an Acute Whole Effluent Toxicity test must be conducted monthly until three consecutive valid and passing monthly tests have been completed. The first Acute Whole Effluent Toxicity test must be conducted within 30 days after commencement of the discharge. One Acute Whole Effluent Toxicity test must be conducted annually thereafter for the duration of the permit.

- c) If the analytical results and toxicity test result show that all requirements are met, subsequent monthly effluent samples (see Table 2 of the Generic Permit) must be analyzed for Benzene (maximum acceptable concentration 1 µg/L), Naphthalene (maximum acceptable concentration 100 µg/L) and, if contamination resulted also from a leaded fuel discharge, for Total Lead (maximum acceptable concentration 30 µg/L). In addition, pH must be monitored monthly. The preferred method for Benzene is EPA Method 624 but EPA Method 602 is acceptable, the preferred method for Naphthalene is EPA Method 625 but EPA Method 610 is acceptable, and Lead may be analyzed by EPA Method 200.7, 200.8, 200.9, or 239.2.
 - d) If the analytical results show that the maximum acceptable concentration for Benzene, the maximum acceptable concentration for Naphthalene and/or the maximum acceptable concentration for Lead (if applicable) were exceeded, the permittee must turn the system off and contact the FDEP District Office immediately for guidance. If any other analyte is detected, the FDEP District Office will evaluate the results during review of the Discharge Monitoring Report (DMR) and will provide guidance if needed.
 - e) If the results of a “routine” toxicity test (any one of the three monthly tests after initiation of the discharge or the single annual test in subsequent years) show that unacceptable acute toxicity is found, a minimum of two supplemental acute toxicity tests must be conducted in the same manner as the “routine” test on the species (invertebrate and/or vertebrate) that indicated the unacceptable toxicity. The system may continue operation following the failed test so that effluent samples for supplemental tests can be collected. The first supplemental test must begin within two weeks of the end of the “routine” test, and subsequent supplemental tests must be conducted weekly thereafter until two supplemental, valid tests are completed. Independently of which “routine” toxicity test failed during the first year of operation, a minimum of two additional “routine” monthly toxicity tests must be conducted (following two consecutive passing supplemental tests) until three consecutive valid and passing monthly tests have been completed. For subsequent years, if there is a failure of the “routine” test two consecutive passing supplemental tests will satisfy the requirement for the annual passing test.
 - f) The analytical results and the results of the default toxicity tests (and supplemental toxicity tests if applicable) must be reported on the DMR form for the month in which analytical results were obtained and each test was begun. The DMR forms must be completed monthly and compiled into a quarterly report, except that when supplemental toxicity tests need to be conducted, such test results must be submitted within 45 days of completion of the second additional, valid toxicity test.
- 3) Short-term discharge (30 days or less) when the site assessment has been performed and the results of the site assessment indicate that the only petroleum related contamination is present. This provision also may be used for discharges from a pumping test that will last eight hours or less, performed to characterize the aquifer.
- a) The effluent (see Table 3 of the Generic Permit) must be analyzed weekly for Benzene, Naphthalene and, if contamination resulted from a leaded fuel discharge, for Total Lead (if the discharge will last less than one week, effluent samples must

be collected and analyzed daily). In addition, pH must be monitored weekly. The preferred method for Benzene is EPA Method 624 but EPA Method 602 is acceptable, the preferred method for Naphthalene is EPA Method 625 but EPA Method 610 is acceptable, and Lead may be analyzed by EPA Method 200.7, 200.8, 200.9, or 239.2.

- b) If the analytical results show that the maximum acceptable concentration for Benzene, the maximum acceptable concentration for Naphthalene and/or the maximum acceptable concentration for Lead (if applicable) were exceeded, the permittee must turn the system off and contact the FDEP District Office immediately for guidance.
- 4) Short-term discharge (30 days or less) when the site assessment has not been performed. Before any discharge may occur, untreated groundwater samples must be obtained to demonstrate that they meet applicable screening values (see Table 4 of the Generic Permit and exceptions described below the table). This provision also may be used for discharges from a pumping test that will last eight hours or less, performed to characterize the aquifer. Once it has been demonstrated that the Table 4 criteria are not exceeded, the effluent analytical requirements are the same as in 3 above.

Coverage is limited to a term not to exceed five years from the effective date of coverage, but may be extended upon request. A Notice of Termination must be provided in writing within 30 days after the permanent termination of the discharge. Please read the Generic Permit and other supplemental program guidance for reporting requirements, including frequency, and all other notification requirements. Test failures are considered violations of the permit and require that the system be turned off.