**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR REMEDIATION ACTIVITY DISCHARGES**

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**APPENDICES**

Appendices should include: Site Location Map, Site Plan and Treatment System Diagram

**BEST MANAGEMENT PRACTICES PLAN (BMPP)**

# Name and location of the site

# Any necessary system schematics, drawings or maps, including up to date site plans with a detailed outfall diagram

# Identification and contact information for the operator(s)

# Identification of potential sources of pollution

# Description of the specific control measures, including BMPs, the operator will take to reduce the pollutants associated with the following:

### Influent and effluent;

### Storage and handling areas;

### Site runoff;

### On-site transfer;

### Loading or unloading operations;

### Spillage or leaks;

### Sludge and waste disposal; and

### Drainage from material storage and handling areas.

# Specific control measures, including BMPs, used to meet the requirements of this general permit and including the specific BMPs required for all discharges in Part 2.5.2, below.

### An Effluent Flow BMP must include, at a minimum:

##### Flow control measures that prevent discharge(s) in exceedance of the design flow of the discharge (i.e., the maximum flow through the component with the lowest limiting capacity); and

##### Documentation of the method(s) for measuring effluent flow.

### A Preventative Maintenance BMP must include, at a minimum:

##### Documented procedures and protocols that ensure all control measures, including all treatment system components and related appurtenances used to achieve the limitations in this general permit remain in effective operating condition and do not result in leaks, spills, and other releases of pollutants;

##### A maintenance schedule for all treatment system components and related appurtenances used to meet the limitations of this general permit; and

##### Records of the completion of regular maintenance activities.

### A Site Management BMP must include, at a minimum:

##### Control measures that ensure proper management of solid and hazardous waste and prevent solids, sludge, or other pollutants removed in the course of treatment or control of water and wastewaters from entering Waters of the United States;

##### Run-on and runoff management practices which divert, infiltrate, reuse, contain, or otherwise reduce extraneous uncontaminated waters and minimize the extent to which such uncontaminated waters commingle with remediation activity discharges; and

##### Water quality control measures must ensure that the discharges covered by this general permit do not adversely affect existing water quality by preventing any erosion, stream scouring, or sedimentation, and/or any direct or indirect discharge which contributes additional pollutants.

### A Pollutant Minimization BMP must include, at a minimum:

##### Identification and assessment of the type and quantity of pollutants, including their potential to impact receiving water quality;

##### Water quality control measures must ensure dilution is not used as a form of treatment, or as a means to achieve the limitations and requirements in this general permit; and

##### Selection, design, installation and proper operation and maintenance of pollution control technologies necessary to meet the limitations and requirements in this general permit. The treatment technologies may include, but are not limited to any combination of the following: [[1]](#footnote-1)

* Adsorption/Absorption
* Advanced Oxidation Processes
* Air Stripping
* Granulated Activated Carbon (GAC)/Liquid Phase Carbon Adsorption
* Ion Exchange
* Precipitation/Coagulation/Flocculation
* Separation/Filtration

### An Administrative Controls BMP must include, at a minimum:

##### Documentation of the site security procedures appropriate for the treatment and other systems related to the NPDES discharge(s);

##### Documentation of employee training conducted at least annually (or once, for discharges lasting less than one year) for site personnel who have direct or indirect responsibility for ensuring compliance with this general permit;

##### Procedures for initiating corrective action and completing within a reasonable timeframe: evaluation, and revision (i.e., repair, modification, or replacement), if necessary, of any control measure used at the site if the control measure is identified as missing, installed incorrectly, or ineffective in ensuring the discharge meets applicable water quality standards and/or effluent limitations and requirements in this general permit. The following actions are required upon discovery of a violation of a permit limitation or requirement, at a minimum:

* The discharge must stop immediately, unless the operator is otherwise instructed by EPA and/or the appropriate State;
* The operator must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is achieved;
* Notification must be provided to EPA and to the appropriate State via telephone, e-mail or other verbal or written means in accordance with Part 4.6.3.b or c within twenty-four (24) hours; and
* The cause of the permit violation must be identified and corrective action must be initiated within seventy-two (72) hours, if necessary, prior to resuming discharge in accordance with Part 4.3, or Part 4.1.2 when a treatment system is not in use, unless otherwise instructed by EPA and/or the appropriate State.

##### A schedule for and record of routine inspections conducted at least monthly by site personnel who have direct knowledge of the remediation activity at the site, the control measure(s) in use at the site, and the ability to assess the effectiveness of any control measure(s) in use at the site to meet the limitations and requirements of this general permit. Routine inspections must, at a minimum:

* + - * Assess the influent, effluent, treatment system, and remediation activity areas, including the outfall, where practicable;
			* Identify any uncontrolled leaks, spills or discharges; and
			* Conduct visual inspection for indicators of pollution, including, but not limited to: objectionable aesthetic properties including color, odor, clarity, floating solids, settled solids, suspended solids, foam, and oil sheen.

### Quality Assurance/Quality Control (QA/QC) BMP must include, to the maximum extent practicable:

##### A description of applicable monitoring requirements;

##### A map and/or treatment system diagram indicating the location of each monitoring point with a geographic identifier (i.e., latitude and longitude coordinates);

##### Specifications for the number of samples, type of sample containers, type of preservation, holding times, type and number of quality assurance field samples (i.e., matrix spiked and duplicate samples and sample blanks), sample preparation requirements (e.g., sampling equipment calibration, clean sampling procedures), and sample storage and shipping methods, including EPA QA/QC and chain-of-custody procedures;[[2]](#footnote-2)

##### Name(s), address(es), and telephone number(s) of the laboratories used by the operator;

##### Specifications for analytical methods, analytical detection and quantitation limits for each required parameter, and laboratory data delivery and documentation requirements;

##### A schedule for review of sample results, which must be reviewed by the operator no more than seventy-two (72) hours from receipt of the results; and

##### A description of data validation and data reporting processes.

### Materials Management BMP must include, at a minimum:

##### i. Good housekeeping practices and/or control measures that maintain areas that are potential sources of pollutants, including, but not limited to: contaminated soil and groundwater and treatment system chemicals, additives, materials or appurtenances;

##### ii. Material compatibility practices and/or control measures must ensure safe handling, use and storage of materials including, but not limited to chemicals and additives (e.g., algaecides/biocides, antifoams, coagulants, corrosion/scale inhibitors/coatings, disinfectants, flocculants, neutralizing agents, oxidants, oxygen scavengers, pH conditioners, surfactants and bioremedial agents, including microbes);

##### iii. For any chemical and/or additive used or stored at a site, operators must document, at a minimum:

* + - * Product name, chemical formula, and manufacturer of the chemical or additive;
			* Purpose or use of the chemical or additive;
			* Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical or additive;
			* The frequency (e.g., hourly, daily), duration (e.g., hours, days), magnitude (i.e., frequency as maximum and average concentration), and method of application for the chemical or additive;
			* Any material compatibility risks for storage of the chemical or additive;
			* If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 for aquatic organism(s)); and
			* A description of the material management control measures employed (e.g., inventory, containment devices, protected storage building(s) and/or cabinet(s)) and any measures taken to ensure material compatibility.

##### Spill prevention practices and spill control measures, including other handling and collection methods, when necessary (e.g., containment devices), must reduce spills and leaks from the treatment system and the release of chemical and/or additives in use at a site. The following actions are required upon detection of a leak, spill, or other release containing a hazardous substance or oil, such as visual observation of a visible sheen, at a minimum:

* + - * The discharge must stop immediately;
			* Notification must be provided to EPA in accordance with Part 4.6.3.b or c within twenty-four (24) hours;[[3]](#footnote-3)
			* The source of the leak, spill or other release must be identified and corrective action must be taken in accordance with Part 2.5.2.e, above, if necessary, prior to resuming discharge, unless instructed otherwise by EPA and/or the appropriate State; and
			* When a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs, the operator must document a description of the release, the circumstances leading to the release, the date of the release, a description of any corrective actions taken and the date such corrective actions are completed.
1. Descriptions of these treatment technologies can be found in the Federal Remediation Technology Roundtable *Remediation Technologies Screening Matrix and Reference Guide, Version 4.0 (2007)* available at<http://www.frtr.gov/scrntools.htm>. [↑](#footnote-ref-1)
2. Described in *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). [↑](#footnote-ref-2)
3. State, tribal, or local requirements may necessitate additional notification to local emergency response, public health, and/or drinking water supply agencies. [↑](#footnote-ref-3)