

**FACT SHEET
AND SUPPLEMENTARY INFORMATION
FOR FINAL GENERAL PERMIT ARG790000**

For the issuance of the new General Permit for Groundwater and Surface Water Petroleum Remediation Facilities located within the State of Arkansas, Permit Number ARG790000:

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1 Background

Under 40 CFR 122.28, general permits may be written to cover categories of point sources having common elements, such as facilities that involve the same or substantially similar types of operations, that discharge the same types of wastes, or that are more appropriately regulated by a general permit. Given the number of groundwater and surface water petroleum remediation facilities that require NPDES permit coverage, DEQ has elected to renew the ARG790000 General Permit for Groundwater and Surface Water Petroleum Remediation Facilities located within the State of Arkansas.

The previous permit took effect on April 1, 2016 and expires on March 31, 2021.

2 Significant Changes

The permittee is responsible for carefully reading the permit in detail and becoming familiar with all of the requirements therein. The following changes were made to the previously issued permit:

- 2.1 The language on the cover page was updated to remove details of application requirements from the cover page. The requirements for obtaining coverage are detailed in Part 1 of the permit.
- 2.2 The Table of Contents was expanded to the corresponding Parts of the permit.
- 2.3 Multiple web links were updated to stay consistent with DEQ website changes.

- 2.4 The term “Operator”, when it was previously used with regards to a person, or entity, with primary management and ultimate decision-making responsibility of the facility, has been changed to “permittee” or “applicant” to clarify the difference between a permittee or applicant and a licensed wastewater operator.
- 2.5 Multiple instances of “treatment system” were revised to “facility” when referring to the source of the discharge.
- 2.6 The language in Part 1.2 of the permit was updated to better clarify the types of discharges covered.
- 2.7 Part 1.2.4 was added to specify the requirements to discharge under this permit.
- 2.8 The exclusion of dischargers to Outstanding Resource Waters was split into its own condition as Part 1.3.1.
- 2.9 The exclusion of dischargers to reservoirs was split into its own condition as Part 1.3.2. Lakes were added to this exclusion.
- 2.10 The exclusion of facilities that discharge to losing stream segments was split into its own condition as Part 1.3.3. The exclusion of facilities that discharge to losing stream segments no longer applies to currently permitted facilities and facilities that demonstrate that the pollutant limits and requirements of the permit are adequate to provide sufficient reduction of all pollutants of concern and protection of the designated uses of the receiving waters. APC&EC Rule No. 6.301 specifies additional effluent limitations only for facilities receiving domestic waste. Facilities proposing to discharge to a potentially losing stream segment may be required to submit additional documentation as part of the demonstration that the pollutant limits and requirements of the permit are adequate to protect the receiving waters.
- 2.11 Part 1.3.5 now clarifies that facilities discharging into a receiving water with a TMDL are only excluded if the pollutant of concern is present in the discharge and the requirements of the permit are inadequate to provide sufficient reduction of the listed pollutant.
- 2.12 Part 1.3.6 was added to exclude facilities that the Director determines to be reasonably expected to contribute to a violation of water quality standards.
- 2.13 The exclusion of facilities requiring financial assurance in accordance with Arkansas Code Annotated 8-4-203(b) was removed. The Division is unaware of any cases where financial assurance is applicable to these facilities. If financial assurance requirements become applicable to a facility covered under this permit, it will be implemented as needed.
- 2.14 The explicit exclusion of facilities implementing a groundwater remediation project outside the scope of this permit was removed from Part 1.3. If a project is outside of the scope of this permit, then it is not eligible for coverage as detailed in Part 1.2 of the permit.
- 2.15 The Notice of Intent (NOI) requirements were revised to add the latitude and longitude of the outfalls and remove the requirement to specify the stream segment and hydrological basin code.

- 2.16 The NOI submission procedure was moved to Part 1.4.5.3. Electronic submission of documents through ePortal is required in accordance with the NPDES Electronic Reporting Rule (80 FR 64063).
- 2.17 A timeliness requirement was added to Part 1.7.2 to require permittees to respond to a notification that an individual permit is required in a timely manner.
- 2.18 Part 1.8 was added to specify permit termination requirements.
- 2.19 An operational plan is required as specified in Part 1.9 of the permit. The purpose of this plan is to ensure that documentation regarding the treatment system is available to personnel at the facility.
- 2.20 Significant digits were added to or removed from multiple limitations for consistency with the basis of the limitations. See Section 6 of this Fact Sheet for additional information.
- 2.21 The Monthly Average limitations for Total Petroleum Hydrocarbons (TPH), Benzene, Benzo(a)pyrene (BaP), and Total BTEX were updated from 3.4 to 3.3 mg/l, 3.4 to 3.3 µg/l, 0.14 to 0.13 µg/l, and 68.5 to 67 µg/l, respectively. See Sections 6.1.1.1, 6.1.2.2, 6.1.4, and 6.1.2.1 of this Fact Sheet for additional information.
- 2.22 pH limits are now specified as instantaneous minimum and instantaneous maximum.
- 2.23 A new section regarding applicable federal, state, or local requirements was added as Part 3.10 of the permit. This replaces the section regarding local, state, and federal laws in the previous permit.
- 2.24 The section in Part 3 of the previous permit regarding permit applicability was removed. Permit applicability is determined in accordance with Part 1.2 of the permit.
- 2.25 The representative sampling requirements condition in Part 5.1 was updated.
- 2.26 The monitoring procedures condition in Part 5.3 was updated to include minimum spike and duplicate sampling requirements.
- 2.27 Part 5.5 of this permit now requires electronic reporting of monitoring results through NetDMR.
- 2.28 The additional monitoring condition in Part 5.6 was updated.
- 2.29 Part 5.8 was updated to include the equipment information and calibration records in the required record contents.
- 2.30 Part 6.2 was updated to clarify that a permit transfer may not be required for a change in signatory authorization. A new section was added as Part 6.8.3 to specify the requirements for a change in signatory authorization.
- 2.31 Part 6.2 was updated to clarify that a disclosure statement is required for the new owner unless exempted by Arkansas Code Annotated § 8-1-106(b).

- 2.32 The duty to provide information condition in Part 6.7 was updated.
- 2.33 The language in Part 6.8 was updated to match the language in 40 CFR 122.22.
- 2.34 The language regarding monitoring frequency for WET testing in Part 7.1.1.5 was removed. Initial monitoring frequency is specified in Part 2 of the permit, and monitoring frequency reduction is specified in Part 7.1.4.2, and detailed in 7.2.
- 2.35 The duration of monitoring frequency reduction for WET testing is specified in Part 7.1.4.2.
- 2.36 The best management practices plan requirement in Part 7 of the previous permit was removed. This permit does not cover any stormwater or sanitary wastewater discharges.
- 2.37 The monitoring frequency reduction conditions for Benzene, Total BTEX, BaP, Total PAH, and TPH were consolidated into a single condition as Part 7.2.1 of the permit.
- 2.38 Several definitions in Part 8 were updated for clarity, or for consistency with Section 502 of the Clean Water Act, 40 CFR Part 122.2, or APC&EC rules including:
 - 2.38.1 ADEQ (removed);
 - 2.38.2 Administrator;
 - 2.38.3 BTEX;
 - 2.38.4 Bypass;
 - 2.38.5 DEQ (replaces ADEQ and Department);
 - 2.38.6 Department (removed);
 - 2.38.7 Director;
 - 2.38.8 Instantaneous flow measurement;
 - 2.38.9 Monitoring and reporting;
 - 2.38.10 Operator (removed)
 - 2.38.11 NOI;
 - 2.38.12 Total maximum daily load; and
 - 2.38.13 Units of measure
- 2.39 On additional review, TSS limits are expressed to three significant digits in the final permit. See Section 6.1.5 of this Fact Sheet for additional information.

3 Permit Coverage

This general permit covers discharges from both proposed and existing groundwater and surface water petroleum remediation facilities, except facilities which are excluded in Part 1.3 of the general permit. Treatment systems shall be constructed in accordance with Part 1.2.1 of the general permit.

4 Monitoring Requirements

The requirements for sample type and sampling frequency have been based on the current permit.

5 Other Conditions

5.1 Geographic Area and Covered Facilities

The general permit, when issued, will authorize discharges from groundwater and surface water petroleum remediation facilities throughout the State of Arkansas. The permit will be applicable only to facilities which discharge to waters of the State and are, therefore, subject to the requirements of Section 301 and 402 of the Clean Water Act.

5.2 Timing of Requests

Requests for coverage shall be submitted as follows:

5.2.1 For new dischargers, at least 90 days prior to the first proposed discharge; or

5.2.2 For existing dischargers covered under ARG790000, no later than March 31, 2021.

5.3 Expiration Date

In accordance with 40 CFR 46(a), the general permit will expire five (5) years from the effective date of the permit. An expired permit will continue in effect until such time that the permit is renewed or a new permit is issued.

5.4 Individual Permits

The Director of DEQ may require the issuance of individual permits according to the criteria in 40 CFR 122.28(b)(3).

6 Development and Basis for Permit Conditions

Conditions in Parts 2 through 4 are incorporated in the permit based on 40 CFR 122.41, 40 CFR 122.43, 40 CFR 122.62, 40 CFR 124.5, 40 CFR 136, 40 CFR 122.44(d), 40 CFR 122.44(l), Appendix D of the Continuing Planning Process (CPP), APC&EC Rule No. 2, and APC&EC Rule No. 3 in order to provide and ensure compliance with all applicable requirements of the CWA, rules, and regulations.

The following is an explanation of the derivation of the conditions of the permit and the reasons for them, or in cases of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 CFR Part 124.7.

6.1 Justification for Limitations and Conditions of the Final Permit

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Concentration (µg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.		
Flow	Report	Report	twice/week	instantaneous
Total Petroleum Hydrocarbons (TPH)	3.3 mg/l	5.0 mg/l	once/week	Grab
Benzene	3.3	5.0	once/week	Grab
Polynuclear Aromatic Hydrocarbons (PAH)	6.7	10	once/week	Grab
Benzo(a)pyrene (BaP)	0.13	0.20	once/week	Grab
Total BTEX	67	100	once/week	Grab
Total Suspended Solids (TSS)	35.0 mg/l	52.5 mg/l	once/week	Grab
pH	<u>Inst. Minimum</u> 6.0 s.u.	<u>Inst. Maximum</u> 9.0 s.u.	once/week	Grab
Acute WET	Not < 100%		once/month	Grab
<u>Pimephales promelas (Acute)</u> Pass/Fail Lethality (48-Hr NOEC) TEM6C Survival (48-Hr NOEC) TOM6C Coefficient of Variation (48-Hr NOEC) TQM6C	<u>48-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		once/month once/month once/month	Grab Grab Grab
<u>Daphnia pulex (Acute)</u> Pass/Fail Lethality (48-Hr NOEC) TEM3D Survival (48-Hr NOEC) TOM3D Coefficient of Variation (48-Hr NOEC) TQM3D	<u>48-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		once/month once/month once/month	Grab Grab Grab

6.1.1 Total Petroleum Hydrocarbons (TPH)

The EPA has incorporated TPH as a parameter at many petroleum related site remediation projects nationwide. Historically, “oil & grease” was the primary petroleum related parameter limited in many individual NPDES permits, and “oil & grease” is listed as a common parameter in many of EPA’s promulgated industrial effluent guidelines. However, the hydrocarbon fraction of the oil and grease parameter, or TPH, is the most appropriate parameter for setting effluent limits in this permit. A total oil and grease analysis would include other non-petroleum fats and greases in the result, which would not be relevant to the activities covered by this General Permit.

Similarly, due to the number of chemicals contained in refined petroleum products, measurement of all of the component chemicals is not practical, cost effective, or needed for adequate attainment of water quality standards. An aggregate measurement of the hydrocarbon compounds serves as an indicator of overall relative pollutant concentration, and as an indicator for assessing water quality impacts.

Individual compounds of TPH, such as benzene which is also included in this permit, provide additional chemical-specific controls on the discharge.

In establishing the effluent limit for TPH, DEQ reviewed a number of sources including monitoring data being submitted pursuant to approved site remediation projects, and other EPA and state issued general permits. In general, ground water cleanup permits have consistently required an effluent limit maximum value for TPH of 5.0 mg/l. Review of monitoring information indicates that this limit is readily attainable with standard treatment technology and facilities discharging TPH rarely exceed 3.0 mg/l in the effluent results reported. Therefore, the limits in the previous permit have been continued.

A tenths digit was added to the daily maximum limit to ensure the required accuracy in reporting.

The monthly average limit for TPH was revised from 3.4 mg/l to 3.3 mg/l. This is a correction of a mathematical error in the previous permit. The monthly average limit was calculated using methodology from the TSD, as detailed in Section 6.3 of this Fact Sheet.

6.1.2 Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)

The four alkyl benzene volatile organic compounds (benzene, toluene, ethylbenzene, and the ortho, para, and meta xylenes) are common constituents of petroleum fuels. This parameter has been adapted for use by EPA and state agencies to serve as a measure of effluent quality and an “indicator” parameter representing the wide variety of chemical compounds that may be found in petroleum products (see EPA’s *Model NPDES Permit for Discharges Resulting from the Cleanup of Gasoline Released from Underground Storage Tanks*, June 1989). Since air stripping and carbon adsorption are the most widely used treatment technologies for control of volatile, semi-volatile, or non-volatile organic compounds in water, the evaluation of the chemical characteristics of the organic compounds will allow for a subsequent evaluation of the potential ease of their removal by these common treatment technologies. In general, the more soluble a substance is in water, the more difficult it is to remove by air stripping and carbon treatment. Rather than attempt to establish effluent limits for every compound found in a petroleum release, the selection of those compounds that would be most difficult to remove to low levels, coupled with an evaluation of the degree of toxicity of the compound, provides an adequate indicator of the potential removal of the other compounds in the contaminated water being treated with the common technologies mentioned here. Benzene has commonly been selected as a primary indicator of effluent quality for these reasons. EPA’s June 1989 *Model NPDES Permit for Cleanup of Gasoline Released from Underground Storage Tanks* discusses the rationale for selection of Benzene and BTEX as appropriate parameters for discharge permits.

6.1.2.1 BTEX Limits

Most of the existing EPA and state issued permits for petroleum-contaminated groundwater remediation discharges limit BTEX as a secondary parameter. All of the BTEX compounds have closely related chemical characteristics to benzene. However, the composition of gasoline is highly variable and for some gasoline products, any one of the four BTEX compounds could be the dominant constituent. Therefore, regulating the total of the four, rather than individually, provides a useful secondary indicator for control of water discharges containing volatile petroleum contaminants. EPA's June 1989 *Model NPDES Permit* recommends a total maximum BTEX limit of 100 µg/l. This limit is based on the typical removal efficiency of 99.5% or better for BTEX using a commercially available air stripper unit. Based on EPA's 1989 *Model NPDES Permit* and the observed performance of control equipment at historical or existing cleanup sites submitting DMRs, DEQ is retaining the technology-based daily maximum limit of 100 µg/l from the existing 2016 permit.

The monthly average limit for BTEX was revised from 68.5 µg/l to 67 µg/l. This is a correction of a mathematical error in the previous permit. The monthly average limit was calculated using methodology from the TSD, as detailed in Section 6.3 of this Fact Sheet.

6.1.2.2 Benzene Limits:

Benzene is a toxic constituent (listed as a carcinogen in EPA's national primary drinking water regulations), and is the risk driver at most petroleum contaminated sites. Therefore, an effluent limitation on benzene is needed to meet Rule 2.409, and will ensure adequate control of the majority of the many other volatile gasoline constituents.

The most commonly used technology based limit for benzene is 5.0 µg/l, which is also the current Maximum Contaminant Level (MCL) set limiting benzene in drinking water. Review of monitoring information indicates that this limit is readily attainable with standard treatment technology. Therefore, the limits in the previous permit have been continued.

A tenths digit was added to the daily maximum limit to ensure the required accuracy in reporting.

The monthly average limit for Benzene was revised from 3.4 µg/l to 3.3 µg/l. This is a correction of a mathematical error in the previous permit. The monthly average limit was calculated using methodology from the TSD, as detailed in Section 6.3 of this Fact Sheet.

6.1.3 Polycyclic Aromatic Hydrocarbons (PAH)

PAHs include a large group of organic compounds that have similar chemical structures and chemical characteristics. They are found in fuels, oil, coal, wood, and natural gas, and are often associated with releases of petroleum products, resin coatings, dyes, pharmaceuticals, insecticides, and many other products. PAH compounds are also reported at many contaminated construction dewatering sites. EPA has listed 16 PAH compounds as priority

pollutants under the CWA, seven of which have been identified as probable carcinogens. Accordingly, the PAH have been divided into two separate groups:

Group I: Carcinogenic PAH: Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)Fluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenzo(a,h)Anthracene, Indeno(1,2,3-cd) Pyrene, and

Group II: Non Carcinogenic PAH: Acenaphthene, Acenaphthylene, Anthracene, Benzo(ghi)-Perylene, Fluoranthene, Fluorene, Phenanthrene, and Pyrene.

The daily maximum limit for Total PAHs in the previous permit was 10 µg/l, which was based on equivalent general permits in other states, including Louisiana, Texas, New Hampshire, and Massachusetts. The 16 PAHs that make up the parameter Total PAH are from the list of priority pollutants of the Clean Water Act, which can be found in Appendix A to 40 CFR 423. Review of monitoring information indicates that this limit is readily attainable with standard treatment technology. Therefore, the limits in the previous permit have been continued.

6.1.4 Benzo(a)pyrene:

Benzo(a)pyrene is one of the PAHs. It is not produced or used commercially but is commonly found because it is formed as a result of incomplete combustion of organic materials.

The daily maximum limit is based on the MCL for benzo(a)pyrene of 0.20 µg/l (40 CFR 141.61(c)). Review of monitoring information indicates that this limit is readily attainable with standard treatment technology. Therefore, the limits in the previous permit have been continued.

A hundredths digit was added to the daily maximum limit to ensure the required accuracy in reporting.

The monthly average limit for Benzo(a)pyrene was revised from 0.14 µg/l to 0.13 µg/l. This is a correction of a mathematical error in the previous permit. The monthly average limit was calculated using methodology from the TSD, as detailed in Section 6.3 of this Fact Sheet.

6.1.5 Total Suspended Solids (TSS)

Suspended solids are considered a “conventional pollutant” (as opposed to toxic). Suspended materials in water can cause turbidity, discoloration, interruption of light passage for aquatic growth, coating of fish gills, and sedimentation on stream bottoms interfering with egg laying and feeding. They can also act as carriers (through sorption) of toxic materials and cause interference with proper operation and maintenance of the typical treatment systems used for the pollutant control in this permit (e.g. air stripping, carbon adsorption, ion exchange, etc.). Groundwater is typically low in TSS. However, TSS is often a problem in construction operations where soils and organic materials are being disturbed and mixed with groundwater or stormwater.

The monthly average limit in the previous permit was 35 mg/l. Review of monitoring information indicates that this limit is readily attainable with standard treatment technology. Therefore, the monthly average limit in the previous permit has been continued.

Based on additional DEQ review, TSS limits are expressed to three significant digits in the final permit. Therefore, the daily maximum TSS limit was revised to 52.5 mg/l in accordance with the formula in Section 6.3 of this Fact Sheet.

6.1.6 pH

The water quality-based limits for pH have been based on the Arkansas Water Quality Standards (AWQS), Rule No. 2, Section 2.504. This limit has been continued from the previous permit.

pH limits are now specified as instantaneous minimum and instantaneous maximum.

6.1.7 Acute Whole Effluent Toxicity (WET) Limit:

WET tests are used to measure the acute and chronic toxicity of an effluent on the receiving water. Acute toxicity tests are used to determine the concentration of the effluent that results in mortality within a group of test organisms, during a 24, 48, or 96-hour exposure. The permit contains acute WET testing requirements and a limit. The requirements specify testing frequency and methods, quality assurance responsibilities, and reporting protocols.

Rather than including limits for all toxic substances listed in Rule 2.508, which would be expensive and require additional treatment systems, the acute WET limit was continued as not less than 100% in order to meet Rule 2.409 and Rule 2.508 (No toxics in toxic amounts).

6.2 Anti-backsliding

This permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402 (o) [40 CFR 122.44(l)]. The final effluent limitations for reissuance permits must be as stringent as those in the previous permit, unless the less stringent limitations can be justified using exceptions listed in CWA 402(o)(2), CWA 303(d)(4), or 40 CFR 122.44(l)(2)(i).

The permit meets or exceeds the requirements of the previous permit.

6.3 Limits Calculations

The daily maximum limit for TSS and the monthly average limits for TPH, Benzene, PAH, BaP, and Total BTEX are based on Section 5.4.2 of the Technical Support Document for Water Quality-based Toxics Control:

$$\text{daily maximum limits} = \text{monthly average limits} \times 1.5$$

$$\text{monthly average limits} = \text{daily maximum limits} \div 1.5$$

7 Public Notice

The public notice of the draft permit was published for public comment on February 23, 2020. The last day of the comment period was thirty (30) days after the publication date. No public comments were received on the draft permit.

A copy of the draft permit and public notice were sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Arkansas Heritage, the EPA, and the Arkansas Department of Health.

8 Economic Impact

This permit does not place any additional undue burden on any private business entity, large or small. It does not restrict any opportunities that are available to any small businesses. The inspection and control requirements are set at a level to protect water quality while minimizing the resources required for compliance.

The permit fee of \$500 is allowed by APC&EC Rule No. 9. If a construction authorization is also required under this permit, then an additional \$500 fee will be required based on APC&EC Rule No. 9.402(A). This permit incorporates construction requirements into the ARG790000. The construction requirements listed in Part 1.4.4 are consistent with the minimum requirements for a state construction permit and will not have any additional economic impact.

There may be minimal additional cost for commercial facilities to obtain a Certificate of Good Standing from the Secretary of State of any State other than Arkansas.

No significant changes were made to this permit that would cause additional economic impact to the facility.

9 Contact Information

For additional information regarding this permit, please contact the NPDES Permits Branch of the Office of Water Quality:

via mail at:

NPDES Permits Branch
Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72218-5317

via phone at: (501) 682-0623; or

via email at water-draft-permit-comment@adeq.state.ar.us

10 Sources

- 10.1 APC&EC Rule No. 2.
- 10.2 APC&EC Rule No. 3.

- 10.3 APC&EC Rule No. 6 which includes Title 40 Code of Federal Regulations adapted verbatim by DEQ in Rule 6.104.
- 10.4 APC&EC Rule No. 8.
- 10.5 APC&EC Rule No. 9.
- 10.6 2014 Edition of Recommended Standards for Wastewater Facilities (10 State Standards).
- 10.7 Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*).
- 10.8 40 CFR 122.
- 10.9 40 CFR 124.
- 10.10 40 CFR 136.
- 10.11 40 CFR 141.
- 10.12 ARG790000 existing permit.
- 10.13 Discharge Monitoring Reports (DMRs) submitted by the facilities covered by the existing ARG790000 Permit.
- 10.14 Continuous Planning Process.
- 10.15 Technical Support Document for Water Quality-based Toxics Control, [TSD (EPA-505-2-90-001, March 1991)].
- 10.16 NPDES Electronic Reporting Rule (80 FR 64063).
- 10.17 <http://water.epa.gov/drink/contaminants/basicinformation/benzo-a-pyrene.cfm>
- 10.18 EPA. 1989. Model NPDES Permit for Discharges Resulting From the Cleanup of Gasoline Released From Underground Storage Tanks. Office of Water. June 1989.
<http://www.epa.gov/npdes/pubs/owm0236.pdf>
- 10.19 EPA. 1991. Technical Support Document for Water Quality-Based Toxics Control. U.S. Environmental Protection Agency, Office of Water, EPA/505/2-90-001, March 1991.
http://water.epa.gov/scitech/datait/models/upload/2002_10_25_npdes_pubs_owm0264.pdf
- 10.20 EPA. 2012. 2012 Edition of the Drinking Water Standards and Health Advisories. U.S. Environmental Protection Agency, EPA-822-S-12-001, April 2012.
<http://water.epa.gov/action/advisories/drinking/upload/dwstandards2012.pdf>
- 10.21 Agency for Toxic Substances and Disease Registry. Public Health Statement: Polycyclic Aromatic Hydrocarbons (PAHs). <http://www.atsdr.cdc.gov/ToxProfiles/tp69-c1-b.pdf>