§ 435.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

BAT EFFLUENT LIMITATIONS

Waste source	Pollutant parameter	BAT effluent limitation
Produced water	Oil & grease	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Drilling fluids and drill cuttings:		
(A) For facilities located within 3 miles from shore.	.....	No discharge.[1]
(B) For facilities located beyond 3 miles from shore:.		
Water-based drilling fluids and associated drill cuttings.	SPP Toxicity	Minimum 96-hour LC_{50} of the SPP Toxicity Test[2] shall be 3% by volume.
	Free oil	No discharge.[3]
	Diesel oil	No discharge.
	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
Non-aqueous drilling fluids (NAFs).	.....	No discharge.
Drill cuttings associated with non-aqueous drilling fluids:		
Stock Limitations (C_{16}–C_{18} internal olefin).	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
	Polynuclear Aromatic Hydrocarbons (PAH).	PAH mass ratio[5] shall not exceed $1x10^{-5}$.
	Sediment toxicity.	Base fluid sediment toxicity ratio[6] shall not exceed 1.0.
	Biodegradation rate.	Biodegradation rate ratio[7] shall not exceed 1.0.
Discharge Limitations.	Diesel oil	No discharge.
	SPP Toxicity	Minimum 96-hour LC_{50} of the SPP Toxicity Test[2] shall be 3% by volume.
	Sediment toxicity.	Drilling fluid sediment toxicity ratio[8] shall not exceed 1.0.
	Formation Oil	No discharge.[9]
	Base fluid retained on cuttings.	For NAFs that meet the stock limitations (C_{16}–C_{18} internal olefin) in this table, the maximum weighted mass ratio averaged over all NAF well sections shall be 6.9 g-NAF base fluid/100 g-wet drill cuttings.[10]
		For NAFs that meet the C_{12}–C_{14} ester or C_8 ester stock limitations in footnote 11 of this table, the maximum weighted mass ratio averaged over all NAF well sections shall be 9.4 g-NAF base fluid/100 g-wet drill cuttings.
Well treatment, completion, and workover fluids.	Oil and grease.	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Deck drainage	Free oil	No discharge.[4]
Produced sand	.....	No discharge.
Domestic Waste	Foam	No discharge.

[1] All Alaskan facilities are subject to the drilling fluids and drill cuttings discharge limitations for facilities located beyond 3 miles offshore.

[2] As determined by the suspended particulate phase (SPP) toxicity test (Appendix 2 of subpart A of this part).

[3] As determined by the static sheen test (appendix 1).

[4] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

[5] PAH mass ratio = Mass (g) of PAH (as phenanthrene)/Mass (g) of stock base fluid as determined by EPA Method 1654, Revision A, (specified at § 435.11(u)) entitled ''PAH Content of Oil by HPLC/UV,'' December 1992, which is published in *Methods for the Determination of Diesel, Mineral, and Crude Oils in Offshore Oil and Gas Industry Discharges,* EPA–821–R–92–008. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the National Technical Information Service, Springfield, VA 22161, 703–605–6000. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

[6] Base fluid sediment toxicity ratio = 10-day LC_{50} of C_{16}–C_{18} internal olefin/10-day LC_{50} of stock base fluid as determined by ASTM E 1367–92 [specified at § 435.11(ee)] method: ''Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods,'' 1992, after preparing the sediment according to the method specified in Appendix 3 of subpart A of this part. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA, 19428. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

[7] Biodegradation rate ratio = Cumulative gas production (ml) of C_{16}–C_{18} internal olefin/Cumulative gas production (ml) of stock base fluid, both at 275 days as determined by ISO 11734:1995 [specified at § 435.11(e)] method: ''Water quality—Evaluation of the 'ultimate' anaerobic biodegradability of organic compounds in digested sludge—Method by measurement of the biogas production (1995 edition)'' as modified for the marine environment (Appendix 4 of subpart A of this part). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

[8] Drilling fluid sediment toxicity ratio = 4-day LC_{50} of C_{16}–C_{18} internal olefin drilling fluid/4-day LC_{50} of drilling fluid removed from drill cuttings at the solids control equipment as determined by ASTM E 1367–92 (specified at § 435.11(ee)) method: ''Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods,'' 1992, after preparing the sediment according to the method specified in Appendix 3 of subpart A of this part. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA, 19428. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

[9] As determined before drilling fluids are shipped offshore by the GC/MS compliance assurance method (Appendix 5 of subpart A of this part), and as determined prior to discharge by the RPE method (Appendix 6 of subpart A of this part) applied to drilling fluid removed from drill cuttings. If the operator wishes to confirm the results of the RPE method (Appendix 6 of subpart A of this part), the operator may use the GC/MS compliance assurance method (Appendix 5 of subpart A of this part). Results from the GC/MS compliance assurance method (Appendix 5 of subpart A of this part) shall supercede the results of the RPE method (Appendix 6 of subpart A of this part).

[10] Maximum permissible retention of non-aqueous drilling fluid (NAF) base fluid on wet drill cuttings averaged over drilling intervals using NAFs as determined by the API retort method (Appendix 7 of subpart A of this part). This limitation is applicable for NAF base fluids that meet the base fluid sediment toxicity ratio (Footnote 6), biodegradation rate ratio (Footnote 7), PAH, mercury, and cadmium stock limitations (C_{16}–C_{18} internal olefin) defined above in this table.

[11] Maximum permissible retention of non-aqueous drilling fluid (NAF) base fluid on wet drill cuttings average over drilling intervals using NAFs as determined by the API retort method (Appendix 7 of subpart A of this part). This limitation is applicable for NAF base fluids that meet the ester base fluid sediment toxicity ratio and ester biodegradation rate ratio stock limitations defined as: (a) ester base fluid sediment toxicity ratio = 10-day LC_{50} of C_{12}–C_{14} ester or C_8 ester /10-day LC_{50} of stock base fluid as determined by ASTM E 1367–92 (specified at § 435.11(ee)) method: ''Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods,'' 1992, after preparing the sediment according to the method specified in Appendix 3 of subpart A of this part. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA, 19428. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460. (b) ester biodegradation rate ratio = Cumulative gas production (ml) of C_{12}–C_{14} ester or C_8 ester/Cumulative gas production (ml) of stock base fluid, both at 275 days as determined by ISO 11734:1995 (specified at § 435.11(e)) method: ''Water quality—Evaluation of the 'ultimate' anaerobic biodegradability of organic compounds in digested sludge—Method by measurement of the biogas production (1995 edition)'' as modified for the marine environment (Appendix 4 of subpart A of this part). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460. (c) PAH mass ratio (Footnote 5), mercury, and cadmium stock limitations (C_{16}–C_{18} internal olefin) defined above in this table.

[58 FR 12504, Apr. 13, 1979, as amended at 66 FR 6898, Jan. 22, 2001]

§ 435.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT):

BCT EFFLUENT LIMITATIONS

Waste source	Pollutant parameter	BCT effluent limitation
Produced water	Oil & grease	The maximum for any one day shall not exceed 72 mg/l; the average of values for 30 consecutive days shall not exceed 48 mg/l.
Drilling fluids and drill cuttings:		
(A) For facilities located within 3 miles from shore.	.....	No discharge.[1]