

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) GUIDELINE 3.1

Equipment Category:	Emergency Standby Compression Ignition Engines
Revision:	1.2
Date:	March 6, 2026

Pollutant	BACT Requirement	BACT Technology	Performance Standard	AIP/TF
NO _x	1	≥ 50 bhp engine: EPA Tier 4 Final certified engine or equivalent	Applicable EPA Tier 4 Final certification level (standards vary by engine rating)	AIP
ROC	1	≥ 50 bhp engine: EPA Tier 4 Final certified engine or equivalent	Applicable EPA Tier 4 Final certification level (standards vary by engine rating)	AIP
CO	1	≥ 50 bhp engine: EPA Tier 4 Final certified engine or equivalent	Applicable EPA Tier 4 Final certification level (standards vary by engine rating)	AIP
SO _x	1	CARB ultra-low sulfur diesel	≤ 15 ppmw sulfur	AIP
PM, PM ₁₀ , PM _{2.5}	1	≥ 50 bhp engine: EPA Tier 4 Final certified engine or equivalent	0.01 g/bhp-hr or 85% control	AIP

Notes:

1. NO_x means oxides of nitrogen (as NO₂) and SO_x means oxides of sulfur (as SO₂).
2. This equipment category includes emergency standby electrical generator engines, emergency flood control engines, and firefighting engines.
3. AIP means Achieved in Practice. TF means Technologically Feasible.
4. BACT is the most stringent control technique for the emissions unit and equipment category that is either achieved in practice or technologically feasible/cost effective.
5. BACT determinations are subject to periodic updates without advanced notice.
6. See EPA Tier Standards for compression ignition engines at <https://www.ourair.org/wp-content/uploads/epatiers1-4.pdf>.
7. Engines that are packaged by the engine manufacturer or retrofit by a third party to comply with EPA Tier 4 final standards, but which have not been certified by EPA to meet Tier 4 final standards, may require source testing to demonstrate compliance with BACT.
8. Direct-drive firewater pump engines are not subject to BACT guideline 3.1