

TECHNICAL SUPPORT DOCUMENT FOR REPEALING AIR QUALITY REGULATIONS SECTION 50, “STORAGE OF PETROLEUM PRODUCTS,” AND SECTION 51, “PETROLEUM PRODUCT LOADING INTO TANK TRUCKS AND TRAILERS”

Background

On September 17, 2024, the Board of County Commissioners approved amendments to Clark County Air Quality Regulations (AQRs) Section 13, "National Emission Standards for Hazardous Air Pollutants" (NESHAP), and Section 14, "New Source Performance Standards" (NSPS). The new amendments included subsections 13.3 and 14.2, which will be included in the Nevada State Implementation Plan (SIP) to satisfy federal obligations to reduce volatile organic compounds in a moderate nonattainment area for ozone. These sections regulate petroleum storage tanks, bulk gasoline plants and terminals, and associated equipment leaks. AQR Sections 50, “Storage of Petroleum Products,” and 51, “Petroleum Product Loading into Tank Trucks and Trailers,” have become obsolete with the adoption of the new subsections 13.3 and 14.2, thus should be repealed. The new regulations are at least as stringent as AQRs 50 and 51 and improve rule effectiveness by promoting consistency and thoroughness in compliance obligations, including the addition of (as applicable) comprehensive monitoring, recordkeeping, and reporting requirements.

SIP Requirements and Submittal

Upon approval of the ordinance, the Division of Air Quality (DAQ) will submit a request to the Nevada Division of Environmental Protection that the U.S. Environmental Protection Agency (EPA) rescind AQRs 50 and 51 from the SIP and replace them with subsections 13.3 and 14.2. These requirements will strengthen the SIP and satisfy requirements from Sections 110(l) and 193 of the Clean Air Act (Act).

Replacement of AQRs 50 and 51 in the SIP

Replacement of AQR 50

SIP-approved AQR 50 requires 40,000-gallon or larger tanks storing petroleum liquid with a vapor pressure of 78 mm Hg or more to equip the tank with a vapor recovery system or floating roof unless the tank is pressurized. The regulation includes provisions for reducing equipment leaks, though there is no requirement to use double seals. After EPA approval, subsections 13.3 and 14.2 will replace AQR 50 in the SIP by incorporating by reference Subparts K, Ka, and Kb of Title 40, Part 60 of the Code of Federal Regulations (40 CFR Part 60 (federal NSPS) and 40 CFR Part 63, Subpart BBBB (federal NESHAP).

Although there are some differences in the applicability elements of the NSPS/NESHAP and AQR 50, DAQ has determined that adopting this group of federal regulations fills the gaps left by any individual one: for example, 40 CFR Part 60, Subpart Kb exempts bulk gasoline plants from its requirements, but 40 CFR Part 63, Subpart BBBB regulates such tanks with

requirements more stringent than AQR 50; and though Subpart BBBBBB exempts aviation fuel loading at airports, DAQ will regulate these activities under AQR 102.

DAQ has determined that 40 CFR Part 60, Subparts K, Ka, and Kb and 40 CFR Part 63, Subpart BBBBBB represent the most current assessment of emissions control capabilities that will meet the best available system of emissions reduction under Section 111 of the Act and maximum achievable control technology under Section 112 of the Act. Together these standards exceed the statutory requirement for Control Technique Guidelines Reasonably Available Control Technology (CTG RACT). In addition, the federal regulations are written more clearly than AQR 50 and include more comprehensive compliance obligations. Table 1 shows how the federal regulations are as or more stringent than AQR 50 and meet presumptive RACT for CTG source categories.

Table 1. Comparison of Federal Rules to AQR 50 and Presumptive RACT

Construc. / Reconst. Date	Reg. Citation (40 CFR)	Requirement	General Exemptions	AQR 50 Comp.	CTGs Comp.
3/6/74–5/19/78	§ 60.112: Storage Vessels	If true vapor pressure of >78 mm Hg (1.5 psia) but <570 mm Hg (11.1 psia), equip with floating roof, vapor recovery system, or equivalent	Storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer	Meets AQR 50.1 applicability threshold and control and vapor pressure requirements, exemption not relevant to HA 212	Meets or exceeds internal or external floating roof and seal requirement and presumptive RACT includes similar exemption
6/11/73–5/19/78		If true vapor pressure of the petroleum liquid >570 mm Hg (11.1 psia), equip with vapor control system or equivalent			
5/19/78–7/23/84*	§ 60.112a: Storage Vessels	If true vapor pressure of >10.3 kPa (1.5 psia) but <76.6 kPa (11.5 psia), equip with external floating roof meeting specs, fixed roof with internal floating roof meeting specs, or vapor recovery system	Each petroleum liquid storage vessel < 1,589,873 liters (420,000 gallons) used for petroleum or condensate stored, processed, or treated before custody transfer to unaffected facility	Meets AQR 51.1 applicability threshold, vapor pressure, and control requirements	Meets or exceeds internal or external floating roof and seal requirement and presumptive RACT includes similar exemption
		If true vapor pressure of the petroleum liquid >76.6 kPa (11.1 psia), equip with vapor recovery system meeting 95% reduction by weight			

Construc. / Reconst. Date	Reg. Citation (40 CFR)	Requirement	General Exemptions	AQR 50 Comp.	CTGs Comp.
7/24/84 and after	§ 60.112b: Storage Vessels	Vessel either with a design capacity >151 m ³ (39,890 gal) containing a VOL with max true vapor pressure >5.2 kPa but <76.6 kPa or with a design capacity >75 m ³ but <151 m ³ containing a VOL with maximum true vapor pressure >27.6 kPa but <76.6 kPa, equip with fixed roof and internal floating roof, external floating roof, or closed vent system with control device with 95% efficiency	Capacity ≥ 51 m ³ storing a liquid with a maximum true vapor pressure <3.5 kPa or with a capacity >75 m ³ but <151 m ³ storing a liquid with a maximum true vapor pressure <15.0 kPa	More stringent than AQR 50's applicability and control requirements. Although AQR 50 does not exempt bulk gasoline plants, these will be regulated under Subpart BBBBBB	Meets or exceeds presumptive RACT controls, but CTGs do not discuss exemption for bulk gasoline plants
		Vessel with a design capacity >75 m ³ which contains a VOL with maximum true vapor pressure >76.6 kPa, equip with closed vent system and 95% control or equivalent	Vessels located at bulk gasoline plants; vessels at gasoline service stations, vessels subject to 40 CFR Part 63, Subpart GGGG	More stringent than AQR 50's applicability by specifying control efficiency of vapor control system. Although AQR 50 does not exempt bulk gasoline plants, these will be regulated under Subpart BBBBBB	
None	§ 63.11086: Bulk Gasoline Plant Loading Tanks and Trucks	If >250 gal, load tank or truck using submerged fill that meets specs by date installed; all tanks, minimize gasoline spills and follow other work practices (such as monthly leak inspection)	Gasoline storage tanks used only for dispensing gasoline in a manner consistent with tanks located at a gasoline station are not subject to any of the requirements in this subpart but must comply with subpart CCCCCC	Meets AQR 51.1.1 submerged fill requirement	Meets presumptive RACT control Option 1
	§ 63.11087 & Table 1: Bulk Gasoline Terminal Storage Tanks	If gasoline storage is <75 m ³ or <151 m ³ and throughput <480 gal/day, equip with fixed roof and set pressure relief valves to >18" water	Aviation fuel loading at airports and marine tank loading	Exceeds AQR 50.1 40,000-gal applicability threshold and imposes controls not required by AQR 50. AQR 50 does not exempt airports, but they are regulated under AQR 102. Marine tank loading exemption not relevant to HA 212	Tanks not covered by presumptive RACT because they are below applicability threshold

Construc. / Reconstruct. Date	Reg. Citation (40 CFR)	Requirement	General Exemptions	AQR 50 Comp.	CTGs Comp.
	§ 63.11087 & Table 1: Bulk Gasoline Terminal Storage Tanks	If gasoline storage tank >75 m ³ , equip with close vent system with 95% control by weight, internal floating roof, or external floating roof; surge control tanks, fixed roof with pressure vacuum vent with pressure >0.5" water	Bulk gasoline terminal not subject to controls in Subparts R or CC of § 63 (Subpart R provides equation for exemption but Subpart CC would likely cover all CTG tanks)	Exceeds AQR 50.1 40,000-gal applicability threshold; and requires controls exceeding AQR 50 by specifying control efficiency for vapor collection system	Exceeds presumptive RACT control level

Replacing AQR 50 with 40 CFR Part 60, Subparts K, Ka, and Kb and 40 CFR Part 63, Subpart BBBBBB satisfies the anti-backsliding provisions in Sections 110(l) and 193 of the Act because these federal regulations are at least equivalent in stringency. Adopting the federal regulations will improve rule effectiveness by consolidating regulatory compliance obligations under their detailed compliance demonstration requirements.

Replacement of AQR 51

SIP-approved AQR 51 regulates some bulk gasoline plants and all bulk gasoline terminals, and requires these facilities to use (1) submerged- or bottom-filling methods, (2) vapor collection and disposal methods, or (3) some equivalent that achieves a control efficiency of 90%, depending on the facility's annual throughput. Subsections 13.3 and 14.2, which will replace AQR 51, incorporate 40 CFR Part 60, Subparts XX and XXa and 40 CFR Part 63, Subpart BBBBBB to meet CTG RACT requirements.

Table 2 shows the general control requirements of 40 CFR Part 60, Subparts XX and XXa and 40 CFR Part 63, Subpart BBBBBB for adoption into the SIP to meet RACT. It explains how the federal regulations meet the existing requirements of AQR 51 and are at least as stringent as EPA's presumptive RACT.

Table 2. Comparison of Federal Rules to AQR 51 and Presumptive RACT

Construct/ Reconstruct Date	Reg. Citation (40 CFR)	Affected Source	Req't	General Exemptions	AQRs 51, 60.1 Comp.	CTGs Comp.
12/17/80– 6/10/22	§ 60.502: Bulk Gasoline Terminal Loading Rack	All loading racks at bulk gasoline terminal (>75,700 L/day gasoline or 20,000 gal/day throughput) delivering liquid product into gasoline tank trucks	Exceeds 90% control efficiency in AQR 51.4, equip with vapor-tight vapor collection system designed to collect total organic compound vapors displaced from tank trucks during product loading with emissions ≤35 mg TOC/L gasoline loaded, or if		Exceeds 90% control efficiency in AQR 51.4 for new sources, and is roughly equivalent to control efficiency requirement for existing sources	Meets or exceeds 80 mg/L presumptive RACT

Construct/ Reconstruct Date	Reg. Citation (40 CFR)	Affected Source	Req't	General Exemptions	AQRs 51, 60.1 Comp.	CTGs Comp.
			equipped with existing system constructed before 12/17/80 ≤ 80 mg/L			
6/11/22 or after	§ 60.502a: Bulk Gasoline Terminal Loading Rack	Loading racks at a bulk gasoline terminal (>75,700 L/day gasoline or 20,000 gal/day throughput) that deliver liquid product into gasoline cargo tanks, including the gasoline loading racks, the vapor collection systems, and the vapor processing system	Use submerged fill and equip with vapor-tight vapor collection system to collect vapors from cargo tanks during loading New Units: use Thermal Oxidizer reduce emissions to <1.0 mg TOC/L; 3-hour rolling average temp, or vapor recovery system ≤ 550 ppm TOC on 3-hour rolling average		Meets emissions control system requirement in AQR 51.1, and exceeds control requirement for new sources	Meets required control for existing sources and exceeds required controls for new sources
None	§ 63.11086: Bulk Gasoline Plant Loading Tanks and Trucks	Area source bulk gasoline terminal ($\geq 20,000$ gal/day gasoline throughput), pipeline breakout station, pipeline pumping station, and bulk gasoline plant (<20,000 gal) as specified	If >250 gal, load tank or truck using submerged fill that meets specifications by date installed; all tanks, minimize gasoline spills and follow other work practices such as monthly leak inspection	Gas service stations	Meets AQR 51.1.1 requirement to use submerged fill; although rule has no exemption, exempt facilities are covered by AQR 102	Meets presumptive RACT control Option 1
	§ 63.11088 & Table 2: Bulk Gasoline Terminal Loading Rack		If total gasoline throughput $\geq 250,000$ gal/day, equip with vapor collection system and reduce to 80 mg TOC/L		Meets 51.1 and 51.4.1 requirement for vapor collection and disposal.	Meets 80 mg/L presumptive RACT control requirement
	§ 63.11088 and Table 2: Bulk Gasoline Terminal Loading Rack		If total gasoline throughput <250,000 gal/day, use submerge fill with pipe <6" from bottom		Meets AQR 51.1.1 requirement to use submerged fill	Does not meet presumptive RACT emissions limitation of 80 mg/L, but this level of emissions control would be

Construct/ Reconstruct Date	Reg. Citation (40 CFR)	Affected Source	Req't	General Exemptions	AQRs 51, 60.1 Comp.	CTGs Comp.
						required for sources under Subpart XX
	§ 63.11089: Bulk Gasoline Terminal and Plants		Monthly leak inspection		Meets AQR 60.1 best practice requirement	Meets or exceeds presumptive RACT leak detection program

Although there are some differences in the applicability elements of the NSPS/NESHAP and AQR 51, DAQ has determined these differences are not so meaningful as to decrease SIP stringency by incorporating by reference the federal regulations: for example, 40 CFR Part 60, Subpart XX regulates facilities with a throughput greater than 20,000 gal/day; AQR 51 includes an annual throughput limit that, when divided evenly throughout the year, would yield an applicability criterion with a lower daily throughput. DAQ used the annual throughput limit to provide greater flexibility in operations; a facility is more likely to exceed the 20,000-gal/day applicability of Subpart XX than the annual limit in AQR 51, making the applicability in Subpart XX more stringent than that in AQR 51.

While Subpart XXa does not include a specific throughput limit equivalent to the presumptive RACT emissions limitation (80 mg/L), facilities subject to Subpart XXa are likely also subject to 40 CFR Part 63, Subpart BBBB, which includes this specific limit. DAQ has determined that 40 CFR Part 60, Subparts XX and XXa and 40 CFR Part 63, Subpart BBBB collectively represent the most current assessment of emissions control capabilities to meet the best available system of emissions reduction under Section 111 of the Act and maximum achievable control technology under Section 112 of the Act. These regulatory standards exceed the statutory requirement for CTG RACT, and are as or more stringent than AQR 51. DAQ concludes that adopting these federal regulations into the SIP will satisfy CTG RACT requirements.

DAQ estimates no additional emissions reductions will result from these CTG RACT requirements, but there will be no loss in emissions reduction from rescinding AQR 51 from the SIP. The replacement of AQR 51 with 40 CFR Part 60, Subparts XX and XXa and 40 CFR Part 63, Subpart BBBB satisfies the anti-backsliding provisions in Sections 110(l) and 193 of the Act because these federal regulations are at least equivalent in stringency. Adopting the federal regulations will improve rule effectiveness by consolidating regulatory compliance obligations under their detailed compliance demonstration requirements.

COMMENTS RECEIVED AND DAQ RESPONSES

DAQ published a notice in the *Las Vegas Review-Journal* and made copies of Sections 50 and 51 available for public notice, both online and at its offices, from October 14, 2024, to November 14, 2024. No comments were received. Staff has scheduled a public hearing before the Clark County Board of County Commissioners for December 3, 2024.

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