

Subpart CCCCCC – Gasoline Dispensing Facilities



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Overview

- What is SBEAP?
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- GDF Area Source Rule
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Small Business Environmental Assistance Program

- ▶ Environmental compliance assistance
- ▶ Multimedia [air (mostly), waste, water, energy, GHG inventory and reporting, and EMS]
- ▶ Free to small- and medium-sized businesses (KDHE funded)
- ▶ Confidential
- ▶ Staff located throughout the state



Contact Information

Web site: www.sbeap.org

Hotline: 1-800-578-8898

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Small Business Environmental Assistance Program

- SBEAP services are provided via
 - Environmental hotline (800-578-8898)
 - On-site visits
 - Targeted regulatory or industry-specific workshops
 - Publications (hard copy or electronic)
 - Fact sheets, manuals
 - E-tips (sign up at www.sbeap.org/newsletters.php)
 - Web-based resources and training
 - www.sbeap.org



SBEAP Webinars and Workshops

- **Webinars**
 - **Gasoline Dispensing Facilities at Area Sources MACT (Subpart CCCCCC)** – Jan. 22, 2009, 10:00 a.m.; repeated Feb. 18, 2009, 2:00 p.m.
 - **Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources MACT (Subpart HHHHHH)** – Jan. 22, 2009, 2:00 p.m.; repeated Feb. 18, 2009, 10:00 a.m.
- **Workshops**
 - **Constructing Clean Air** – Feb. 5, 2009, Olathe
 - **Reducing Solvent Emissions – Green Practices to Improve Air Quality** – March 10, 2009, Wichita

Area Source Rules Background

- December 14, 1994 – EPA promulgated NESHAP for major sources w/in the gasoline distribution source category
- EPA required to identify at least 30 HAPs from area sources that threaten public health in urban areas (“Urban Dirty Thirty”) **actually ID’d 33**
- EPA required to regulate area sources representing 90% of emissions of these 30 HAPs **70 area source categories**
 - 46 Area Standards promulgated
 - About 19 more set for development

Gasoline Dispensing Facility MACT

- Subpart CCCCCC (6C)
- Promulgated January 10, 2008
(<http://www.epa.gov/ttn/atw/area/fr10ja08.pdf>)
- Issued concurrently with Subpart BBBBBB (6B) Gasoline Distribution (Bulk Terminals, Bulk Plants, and Pipeline Facilities)
- November 9, 2006, Proposed rule combined distribution with dispensing
- HAPs of concern - benzene and ethylene dichloride **9 HAPs in gasoline vapor, but only two in the “dirty thirty”**
 - GDFs contribute approximately 36 percent of the national emissions of benzene and 2 percent of EDC

Benzene

- Can cause drowsiness, dizziness and unconsciousness
- Long-term exposure causes bone marrow effects and can cause anemia and leukemia
- <http://www.atsdr.cdc.gov/tfacts3.html>

Applicability

- Each Gasoline Distribution Facility (GDF) at an area source (affected source)
- Includes –
 - Each gasoline cargo tank during the delivery of product to a GDF and
 - Each storage tank
- Does NOT cover the loading of aviation gasoline storage tanks at airports and aviation gasoline is not included in the gasoline throughput criteria

Parts of affected source covered under this rule (63.11112)

- Gasoline storage tanks
- Associated equipment components in vapor or liquid gasoline service in new, reconstructed or existing GDF
- Pressure/vacuum vents on gasoline storage tanks and equipment necessary to unload product from cargo tanks into storage tanks

Note: Equipment used for refueling motor vehicles is NOT covered

Affected Source (63.11112)

- New affected source
 - Commenced construction on affected source after November 9, 2006, and
 - Meet applicability requirements in 63.11111 (GDF located at area source)
- Reconstructed affected source (63.2)
 - the replacement of components of an affected or a previously nonaffected source to such an extent that:
 - The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
 - It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act.
- Existing affected source if not new or reconstructed

Compliance Dates (63.11113)

- New or reconstructed affected source
 - Startup before January 10, 2008, compliance date is no later than January 10, 2008
 - Startup after January 10, 2008, compliance date is upon startup of your affected source
- Existing affected source, compliance date is January 10, 2011
- Existing affected source that becomes subject to control requirements due to an increase in monthly throughput, compliance date is three years after the affected source becomes subject to control requirements

Requirements: <10,000/month (63.11116)

- Must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time **include, but not limited to:**
 - Minimize gasoline spills
 - Clean up spills as expeditiously as practicable
 - Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use
 - Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators
- No notifications or reports
- Must have records of monthly throughput available within 24 hours of a request
- Must comply with compliance dates (63.11113)

Monthly Throughput $\geq 10,000$ gallons/month (63.11117)

- Comply with basic requirements (63.11116(a))
- Only load gasoline into storage tanks by using submerged filling
 - Submerged fill pipes installed on or before November 9, 2006, must be no more than 12" from the bottom of the storage tank
 - Submerged fill pipes installed after November 9, 2006, must be no more than 6" from the bottom
- Storage tanks <250 gallon do not need to meet submerged fill requirements, but must meet basic requirements on slide 14
- Records of monthly throughput available within 24 hours
- Notification requirements (63.11124(b))
- Must comply with compliance dates (63.11113) – slide 13

Monthly Throughput \geq 100,000 gallons/month (63.11118)

- Comply with above requirements – 63.11116(a) and 63.11117(b)
- Comply with either –
 - Each applicable management practice in Table 1 (slides 23 and 24), OR
 - Meet compliance requirements if, prior to January 10, 2008,
 - You operate a vapor balance system that
 - Achieves emissions reduction of at least 90%, or
 - Operates using management practices at least as stringent as those in Table 1 AND
 - Your GDF is in compliance with an enforceable State, local, or tribal rule, or permit that meets either of the above

Monthly Throughput \geq 100,000 gallons/month (cont)

- Previous control requirements not required for –
 - Gasoline storage tanks <250 gallons, constructed after January 10, 2008
 - Gasoline storage tanks <2,000 gallons, constructed before January 10, 2008
 - Gasoline storage tanks equipped with floating roofs, or equivalent
- Must still comply with other requirements (63.11116)
- Cargo tanks unloading at GDF must comply with management practices in Table 2 (slide 25)
- Comply with applicable testing requirements (63.11120)
- Notification requirements (63.11124)
- Keep records and submit reports (63.11125 and 63.11126)
- Must comply with compliance dates (63.11113)

Testing and Monitoring

- At the time of installation of a vapor balance system and every three years
 - Leak rate and cracking pressure requirements (Item 1(g) of Table 1) for pressure-vacuum vent valves on gasoline storage tanks
 - CARB Vapor Recovery Test Procedure TP-201.1E
 - Alternate test methods and procedures (63.7(f))
 - Static pressure performance requirements (Item 1(h) of Table 1) for vapor balance system
 - CARB Vapor Recovery Test Procedure TP-201.3
 - Alternate test methods and procedures (63.7(f))

Vapor Recovery System Other than Table 1

- Option under 63.6(g)
- Must demonstrate to Administrator or delegated authority equivalency by
 - Conducting an initial performance test to demonstrate it achieves 95% reduction using CARB Vapor Recovery Test Procedure TP-201.1
 - During initial performance test, determine and document alternative acceptable values for leak rate and cracking pressure requirements (Item 1(g), Table 1) and static pressure requirements (Item 1(h), Table 1)
 - Comply with testing requirements (63.11120(a))

Notification ($\geq 10,000$ gallons)

- Initial notification to EPA **AND delegated State authority** (KDHE*) by May 9, 2008, or at time you become subject to the control requirements
 - Name and address of owner and operator
 - Address of the GDF
 - Statement that notification is submitted in response to this subpart and identifying applicable requirements
- Notification of Compliance Status to EPA **AND delegated State authority** (KDHE*) by compliance date (January 10, 2011, for existing sources)
 - If in compliance at time Initial Notification is due, Notification of Compliance Status can be submitted in lieu of Initial Notification
- No Initial Notification or Notification of Compliance Status required if, prior to January 10, 2008, the GDF is operating in compliance with an enforceable State, local or Tribal rule or permit that requires submerged filling as specified in 63.11117(b)

*For the State of Kansas only

Notification ($\geq 100,000$ gallons)

- Initial notification – same as above
- Notification of Compliance Status – same as above
- No Initial Notification or Notification of Compliance Status required if, prior to January 10, 2008, the GDF
 - Operates a vapor balance system that
 - Achieves emissions reduction of at least 90% or
 - Operates using management practices at least as stringent as those in Table 1 AND
 - Is in compliance with an enforceable State, local or Tribal rule or permit that meets either of the above
- Notification of Performance Test 60 calendar days prior to initiating testing (63.9(e))
- Additional notifications as applicable (63.9)

Recordkeeping/Reporting (63.11125/63.11126)

Recordkeeping

- Keep records of all tests
- Keep for five years
- Available for inspection during a site visit

Reporting

- Report results of all volumetric efficiency (alternate vapor balance) tests **Slide 19**
- Reports submitted within 180 days of completion of performance testing

Table 1: Applicability Criteria and Management Practices for GDF

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to 63.11118	Install and operate a vapor balance system on gasoline storage tanks that meet the following requirements:
	a) equip all vapor connections and lines with closures that seal upon disconnect
	b) vapor-tight lines from gasoline storage tank to gasoline cargo tank
	c) tank truck pressure does not exceed 18" water pressure or 5.9" water vacuum during product transfer
	d) designed to prevent over-tightening or loosening of fittings during normal delivery operations
	e) gauge well provided with submerged drop tube extending the same distance from bottom of storage tank as specified in 63.11117(b)
	f) vapor-tight caps on liquid fill connections

Table 1: Applicability Criteria and Management Practices for GDF

If you own or operate	Then you must
	g) install pressure/vacuum vent valves on tank vent pipes at specified setting
	h) vapor balance system must meet the static pressure performance of the following equation: $P_f = 2e^{-500.887/v}$, where
	P_f = minimum allowable final pressure, inches of water
	v = total ullage affected by the test, gallons
	e = dimensionless constant equal to approximately 2.718
	2 = the initial pressure, inches water
2. For new or reconstructed GDF, or new storage tank(s) at an existing affected facility subject to 63.11118	Equip gasoline storage tanks with a dual-point vapor balance system (63.11132), and comply with requirements of Item 1 in this Table.

Table 2: Applicability Criteria and Management Practices for Gasoline Cargo Tanks

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF unless:
	i) all hoses in vapor balance system are properly connected
	ii) the adapters or couplers that attach to the vapor line has closures that seal upon disconnect
	iii) all vapor return hoses, couplers, and adapters are vapor-tight
	iv) tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with vapor balance equipment on the GDF storage tank
	v) tank truck hatches are closed and securely fastened
	vi) filling of GDF storage tanks limited to unloading by vapor-tight gasoline cargo tanks. Documentation that cargo tank meets EPA Method 27 shall be carried on the cargo tank.

P2 Measures/Resources

- Estimated results of MACT rule*
 - 100,000 tons VOCs
 - 5,000 tons HAPs (175 tons benzene)
- Example Notification Form
 - http://www.epa.gov/ttn/atw/area/gdf_example.doc
- Example Notification and Notification of Compliance Form
 - http://www.epa.gov/ttn/atw/area/gasdist_example.doc
- Informational Brochure
 - <http://www.epa.gov/ttn/atw/area/gdfb.pdf>
- GDF Brief summaries (Spanish, Hindi, and Urdu)
 - <http://www.epa.gov/ttn/atw/area/arearules.html#imp>

*http://www.epa.gov/ttn/atw/area/gasdisp_fs061908.pdf

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- Ryan Hamel/Joyce McDiffett
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- EPA Region 7
- Kansas Chamber of Commerce
- Petroleum Marketers and Convenience Store Association
- Kansas State Research and Extension *Tuesday Letter*
- Kansas Golf Course Superintendents Association
- Kansas Chapter of American Public Works Association
- College Safety, Health, and Environmental Management Listserve
- Kansas Agribusiness Retailers Association
- P2Tech Listserve
- P2R7 Listserve
- SBO-SBAP Listserve

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