

US EPA ARCHIVE DOCUMENT

3. Air Emissions Checklist

Section A - Applicability (§§264/5.1030)

	Yes	No
1. Does the facility have units permitted under Part 270 or is it permitted under Part 270?	_____	_____
a. What is the effective date for this facility? _____		
b. For interim status facilities, have these requirements been incorporated into Part B application submittal?	_____	_____
2. Are there any of the following separation processes at the facility:		
a. Distillation?	_____	_____
b. Fractionation?	_____	_____
c. Thin-film evaporation?	_____	_____
d. Solvent extraction?	_____	_____
e. Air stripping?	_____	_____
f. Steam stripping?	_____	_____

Section B - Waste Streams

3. Are there waste streams associated with any separation processes that contain 10 ppmw or greater organic concentration? (§§264/5.1032(a))	_____	_____
a. If they claim waste streams below 10 ppmw, did they use proper means to determine concentration? (§§264/5.1034(d)(1 or 2))	_____	_____
b. Was date of initial determination before their effective date? (§§264/5.1034(e))	_____	_____
c. Were other analyses performed annually or upon changes in waste streams? (§§264/5.1034(e)(2 or 3))	_____	_____

Section C - Facility Emissions Rates

4. Is the hourly process vent organic emission rate greater than or equal to 3 lb/hr? (§§264/5.1032(a))	_____	_____
Is the yearly process vent organic emission rate greater than or equal to 3.1 tons/yr? (§§264/5.1032(a))	_____	_____

- | | Yes | No |
|--|-----|----|
| a. If performance tests were made, were they done according to §§ 264/5.1034(c)? | — | — |
| b. If engineering calculations were used, were they done according to §§ 264/5.1035(b)(2)(ii)? | — | — |
| c. Has the owner/operator signed a statement that test conditions portray peak capacity operating conditions? (§§264/5.1035(b)(4)(iv)) | — | — |
| d. Were the facility emissions rates determined by the effective date? | — | — |

Section D - Facility Emission Rates After Control Devices or Change in Operations

- | | | |
|--|---|---|
| 5. a. Are the process vent organic emission rates for the facility less than or equal to 3 lb/hr <u>and</u> less than or equal to 3.1 tons/year <u>or</u> are they reduced by 95%? (§§264/5.1032(a)) | — | — |
| b. If performance tests were used, were they done in accordance with §§264/5.1034(c) and was the test plan in accordance with §§264/5.1035(b)(3)? | — | — |
| c. If engineering calculations were used, were they in accordance with §§264/5.1035(b)(4)? | — | — |
| d. For facilities without the control devices installed, do they have an installation plan? ((§§264/5.1033(a)(2) and 264/5.1035(b)(1)) | — | — |
| e. Will the control devices be installed by 18 months after the effective date? (§§264/5.1033) | — | — |

Section E - Reporting (§264.1036)

- | | | |
|--|---|---|
| 6. For facilities with final permits incorporating this rule, have they sent in semi-annual reports of exceedances lasting longer than 24 hours? | — | — |
|--|---|---|

(Use individual control device worksheets to continue inspection)

Summary Sheet for Control Devices (CD)

Vent # Control Device CD # On Unit # For Vents #

Condenser			
Adsorber (Regen)			
Adsorber (Nonreg)			
Process Heater			
Boiler			
Catalytic Vapor Incinerator			
Thermal Vapor Incinerator			
Air Assisted Flare			
Steam Assisted Flare			
Nonassisted Flare			

Checklist
Condenser
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each condenser in the permit, or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(E)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A and either B or C

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	—	—
2. installation point correct	—	—
3. daily inspection (§§264/5.1033(f)(3))	—	—

AND

B. [Organic compound] in condenser exhaust vent stream		
1. continuously record (§§264/5.1033(f)(2)(vi)(A))	—	—
2. daily inspection (§§264/5.1033(f)(3))	—	—

OR

C. Temperature monitoring device (§§264/5.1033(f)(2)(vi)(B))		
1. continuously record	—	—
2. two locations:		
a. exhaust vent stream from condenser	—	—
b. coolant fluid exiting the condenser	—	—
3. accuracy:		
a. +/- 1% of temperature being monitored in CO	—	—
OR		
b. .5 degrees C (whichever is greater)	—	—
4. inspect daily (§§264/5.1033(f)(3))	—	—

3. Repair:

a. immediately upon daily inspection (§§264/5.1033(f)(3))		
	—	—

4. Exceedances (§§264/5.1035(c)(4)(vi or vii)):	Yes	No
a. If monitoring [organic] in exhaust:		
1. when [organic] greater than 20% above design outlet [organic]	___	___
b. If monitoring T:		
1. either T exhaust greater than 6 deg above design avg exhaust T <u>OR</u>	___	___
2. T coolant out greater than 6 deg above design avg coolant T	___	___
c. Cause of exceedance given	___	___
d. Measure taken to correct cause provided	___	___
5. Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a. Standard: No detectable emissions and no visual emissions	___	___
b. Monitor: At facility effective date	___	___
Annually	___	___
RA requested times	___	___
c. Repair: Start by 5 days/complete by 15	___	___

**Checklist
Thermal Vapor Incinerator
Parts 264/265 Subpart AA**

1. Operating Parameters:

List the operating parameters and the limits set for each thermal vapor incinerator in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(B)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A and B

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	—	—
2. installation point correct	—	—
3. daily inspection (§§264/5.1033(f)(3))	—	—
B. Temperature monitoring device (§§264/5.1033(f)(2)(i))		
1. continuously record	—	—
2. one location:		
a. in combustion chamber downstream of combustion zone	—	—
3. accuracy:		
a. +/- 1% of temperature being monitored in CO	—	—
OR	—	—
b. .5 degrees C (whichever is greater)	—	—
4. inspect daily (§§264/5.1033(f)(3))	—	—

3. Repair:

a. Immediately upon daily inspection (§§264/5.1033(f)(3))		
	—	—

		Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(i or ii)):		
a.	If monitoring RT min:		
	1. when T less than 760 deg. C	—	—
b.	If standard 95% eff:		
	1. when T comb. zone greater than 28 deg. C below given design avg. comb zone T	—	—
c.	Cause of exceedance given	—	—
d.	Measures taken to correct cause provided	—	—
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a.	Standard: No detectable emissions and no visual emissions	—	—
b.	Monitor: At facility effective date	—	—
	Annually	—	—
	RA requested times	—	—
c.	Repair: Start by 5 days/complete by 15	—	—

Checklist
Catalytic Vapor Incinerator
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each catalytic vapor incinerator in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(C)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A and B

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	—	—
2. installation point correct	—	—
3. daily inspection (§§264/5.1033(f)(3))	—	—
B. Temperature monitoring device (§§264/5.1033(f)(2)(ii))		
1. continuously record	—	—
2. two locations:		
a. vent stream at the nearest feasible point to catalyst bed inlet	—	—
b. vent stream at the nearest point feasible to catalyst bed outlet	—	—
3. accuracy:		
a. +/- 1% of temperature being monitored in CO	—	—
OR		
b. +/- .5 degrees C (whichever is greater)	—	—
4. inspect daily (§§264/5.1033(f)(3))	—	—

3. Repair:

a. Immediately upon daily inspection (§§264/5.1033(f)(3))		
	—	—

4. Exceedances (§§264/5.1035(c)(4)(iii)(A or B)):	Yes	No
a. T inlet greater than 28 deg. C below design avg. T inlet or	—	—
b. T diff. across bed less than 80% design avg. T difference	—	—
c. cause of exceedance given	—	—
d. measures taken to correct cause provided	—	—
5. Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a. Standard: No detectable emissions and no visual emissions	—	—
b. Monitor: At facility effective date	—	—
Annually	—	—
RA requested times	—	—
c. Repair: Start by 5 days/complete by 15	—	—

Checklist
Boiler/Process Heater
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each boiler/process heater in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(C)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A and either B or C

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	—	—
2. installation point	—	—
3. daily inspection (§§264/5.1033(f)(3))	—	—

AND

B. If design heat input capacity less than 44 MW:		
1. temperature monitoring device (§§264/5.1033(f)(iv))	—	—
2. continuously record	—	—
3. one location:	—	—
a. in furnace downstream of combustion zone	—	—
4. accuracy:	—	—
a. +/- 1% of temperature being monitored OR	—	—
b. .5 degrees C (whichever is greater)	—	—
5. inspect daily (§§264/5.1033(f)(3))	—	—

OR

C. If design heat input capacity => 44 MW:		
1. continuously record (§§264/5.1033(f)(v))	—	—
2. parameter that indicates good combustion practices	—	—
3. inspect daily (§§264/5.1033(f)(3))	—	—

	Yes	No
3. Repair:		
a. immediately upon daily inspection (§§264/5.1033(f)(3))	—	—
4. Exceedances (§§264/5.1035(c)(4)(iv)):		
a. T flame zone > 28 deg. C below design avg. flame zone T	—	—
b. Position changes where vent stream is introduced	—	—
c. Cause of exceedance given	—	—
d. Measures taken to correct cause provided	—	—
5. Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a. Standard: No detectable emissions and no visual emissions	—	—
b. Monitor: At facility effective date	—	—
Annually	—	—
RA requested times	—	—
c. Repair: Start by 5 days/complete by 15	—	—

Checklist
Flares
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each flare in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	---	---

2. Standard (§§264/5.1033(d))

- | | | |
|--|-----|-----|
| a. No visible emissions, except for period not to exceed 5 minutes/any consecutive 2 hrs | --- | --- |
| b. Flame present at all times | --- | --- |
| c. If steam assisted: | | |
| 1. $V_e < 60 \text{ ft/s}$ and $H_t \geq 300 \text{ BTU/scf}$ or | --- | --- |
| 2. $60 \text{ ft/s} < V_e < 400 \text{ ft/sec}$ and $H_t > 1000 \text{ BTU/scf}$ | --- | --- |
| 3. $V_e < V_{max} < 400$ and $H_t \geq 300 \text{ BTU/scf}$ | --- | --- |
| d. If air-assisted: $V_e < V_{max}$ and $H_t \Rightarrow 300 \text{ BTU/scf}$ | --- | --- |
| e. If non-assisted: | | |
| 1. $V_e < 60 \text{ ft/sec}$ and $H_t \Rightarrow 200 \text{ BTU/scf}$ or | --- | --- |
| 2. $60 \text{ units} < V_e < 400 \text{ ft/sec}$ and $H_t > 1000 \text{ BTU/scf}$ | --- | --- |
| 3. $V_e < V_{max} < 400 \text{ units}$ and $H_t \geq 200 \text{ BTU/scf}$ | --- | --- |

2. Monitoring: A and B

- | | | |
|---|-----|-----|
| A. Flow indicator (§§264/5.1033(f)(1)) | | |
| 1. records hourly | --- | --- |
| 2. installation point | --- | --- |
| 3. daily inspection (§§264/5.1033(f)(3)) | --- | --- |
| B. Heat sensing device for continuous ignition of pilot flame (§§264/5.1033(f)(2)(iii)) | | |
| 1. continuously record | --- | --- |
| 2. inspect daily (§§264/5.1033(f)(3)) | --- | --- |

3. Repair:	Yes	No
a. Immediately upon daily inspection (§§264/5.1033(f)(3))	—	—
4. Exceedances (§§264/5.1035(c)(4)(v)):		
a. Period when pilot flame is not ignited	—	—
b. Cause of exceedance given	—	—
c. Measures taken to correct cause provided	—	—
5. Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a. Standard: No detectable emissions and no visual emissions		
b. Monitor: At facility effective date	—	—
Annually	—	—
RA requested times	—	—
c. Repair: Start by 5 days/complete by 15	—	—

Checklist
Carbon Adsorbers - Regenerative
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §§264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A, B, C and D

- | | | |
|---|---|---|
| A. Flow indicator (§§264/5.1033(f)(1)) | | |
| 1. records hourly | — | — |
| 2. installation point | — | — |
| 3. daily inspection (§§264/5.1033(f)(3)) | — | — |
| | | |
| B. [Organic compound] in carbon bed exhaust vent stream | | |
| 1. continuously record (§§264/5.1033(f)(2)(vii)) | — | — |
| 2. daily inspection | — | — |
| | | |
| C. Device to measure a parameter that indicates regeneration on a regular, predetermined time cycle | | |
| 1. continuously record | — | — |
| 2. inspect daily | — | — |
| | | |
| D. Replace carbon at regular, predetermined time interval that is < carbon service life (§§264/5.1033(g)) | — | — |

3. Repair:

- | | | |
|---|---|---|
| a. Immediately upon daily inspection (§§264/5.1033(f)(3)) | | |
| | — | — |

	Yes	No
4. Exceedances (§§264/5.1035(c)(4)(viii and ix)):		
a. If [organic compound]:		
(i) [org] exhaust >20% above design exhaust vent	—	—
(ii) stream [org]	—	—
b. If parameter for regen. on regular cycle		
(i) flow continuous past predetermined reg. time?	—	—
c. Cause of exceedance given?	—	—
d. Measures taken to correct cause for exceedance?	—	—
5. Have §§264/5.1035(c)(6) or (7) been met?	—	—
6. Closed-vent systems associated with the control device (§§264/5.1033(j)):		
a. Standard: No detectable emissions and no visual emissions	—	—
b. Monitor: At facility effective date	—	—
Annually	—	—
RA requested times	—	—
c. Repair: Start by 5 days/complete by 15	—	—

Checklist
Carbon Adsorbers - Non-Regenerative
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §§264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?	

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	Yes	No
	—	—

2. Monitoring: A and either B or C

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	—	—
2. installation point	—	—
3. daily inspection (§§264/5.1033(f)(3))	—	—

AND

B. Organic compound in exhaust vent stream (§§264/5.1033(g))		
1. monitor on regular basis	—	—
2. inspect daily or at time < 20% time carbon life (which is longer)	—	—
3. replace carbon when carbon breakthrough indicated	—	—

OR

D. Replace carbon at regular predetermined time interval less than design carbon replacement interval	—	—
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3. Repair:

a. Immediately upon daily inspection (§§264/5.1033(f)(3))	—	—
---	---	---

		Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(viii and ix)) for non-regenerators (see §§1035(c)(6), (7))		
	a. If monitoring [organic] in exhaust:		
	(i) date and time when monitored for breakthrough and reading	---	---
	(ii) date when carbon is replaced with fresh carbon	---	---
	b. Cause of exceedance given	---	---
	c. Measures taken to correct cause provided	---	---
6.	Closed-vent system:		
	a. Standard: No detectable emissions and no visual emissions	---	---
	b. Monitor: At facility effective date	---	---
	Annually	---	---
	RA requested times	---	---
	c. Repair: Start by 5 days/complete by 15	---	---

Checklist
Equipment Leak Applications
Parts 264/265 Subpart BB

<u>Section A - Applicability (§§264/5.1050)</u>	Yes	No
1. Is the facility permitted under Part 270 or does it have units permitted under Part 270?	_____	_____
a. Facility status: interim status or permitted?		
b. What is the effective date for this facility? _____		
2. Are any of these units exempt?	_____	_____
 <u>Section B - Waste Streams (§§264/5.1063(d))</u>		
3. Are there waste streams that contain at least 10% organics by weight?	_____	_____
a. Method of determination? Knowledge, ASTM Methods D2267-88, E169-87, E168-88, E260-85 or Method 9060 or 8240		
b. If knowledge, is it documented?	_____	_____
c. Date of initial determination _____		
d. Dates of other analysis? Change, batch _____		

4. For each waste stream that does qualify, determine fluid type (gas/vapor service, light-liquid service, heavy liquid service)		
a. Method for determining light liquid service		
1. vapor pressures of constituents from standard texts, or		
2. ASTM D-2879-86		
 <u>Section C - Facility Operating Record (§§264/5.1064(g))</u>		
5. Does the facility have a list of the equipment and identification numbers that are affected by this rule?	_____	_____

	Yes	No
6. Is there a list of the ID numbers of NDE pumps, valves, and compressors with signature of owner/operator?	_____	_____
7. Is there a list of all affected equipment by designation?	_____	_____
8. Is there a list of pressure relief devices in gas/vapor service?	_____	_____
9. Dates of test for no detection emission equipment? Background level _____ Maximum instrument reading _____		
10. Is there a list of ID numbers for equipment in vacuum service?	_____	_____
11. List of ID numbers of "unsafe-to-monitor" and "difficult-to-monitor" valves, with explanation for each and plan for monitoring or schedule.		
12. Is there a list of valves using the skip period alternative monitoring schedule, with schedule for monitoring and % leaking determined?	_____	_____
13. For dual mechanical seal pumps or compressors with barrier fluid systems with sensors, is the criteria and explanation of the criteria for determining sensor failure given?	_____	_____
14. Is there an analysis of design capacity, influent/effluent for each unit subject to these requirements, and an up-to-date analysis either by testing or knowledge to determine if the equipment is covered or not?	_____	_____

(continued)

Identification of Equipment Covered by Rule

<u>Equipment</u>	<u>Equipment ID #</u>	<u>Waste Stream #</u>	<u>Fluid</u>
<u>Pumps</u>			
general			
dual mechanical			
NDE (sealless)			
closed vent/control devices			
<u>Compressors</u>			
general			
NDE Sealless			
CV/Control Devices			
<u>Pressure Relief Devices</u>			
general			
CV/Control Devices			
<u>Sampling Connecting Systems</u>			
general			
insitu			
<u>Valves</u>			
general			
leakless (NDE)			
unsafe to monitor			
difficult to monitor			
alter allowable %			
alter skip period LDRP			
<u>Open-ended valves or lines</u>			
<u>Flanges and other connectors</u>			

Date of Inspection _____
Facility _____
Inspector _____

RECORDKEEPING REQUIREMENTS (§§264/5 (b)(1) and (g))

Unit Number Listed _____
Equipment Identification Number Listed _____
Location at Facility _____
Type of Equipment _____
% by weight of TOC at equipment _____
Fluid State at Equipment _____
Equipment Designation _____
If Closed-Vent/Control Device Used (264/5.1064(b)
(2-4)
- Implementation Plan _____
- If testing, performance test plan _____
- Design Documentation or Perf. Test Results _____
If Control Device; monitoring, operating, inspection
data (264/5.1064(e)) _____

LEAK DETECTION AND REPAIR RECORDKEEPING (§§264/5.1064 (c and d))

Monitoring Equipment Number _____
Monitoring Operators Identification _____
Date of Visual, Audible, Olfactory Indication of
Leak _____
Date of Leak Detection _____
Date of Repair Attempt _____
Repair Methods at each attempt _____
Leak "Above 10,000" or Above 500 above background
"Repair Delayed" if after 15 days _____
If valve, documentation for repair delay _____
Signature of Person approving delay _____
Expected Date of Repair _____
Date of Successful Repair _____

PHYSICAL INSPECTION

Visual, Audible, or Olfactory Indication of Leak _____
Monitoring Equipment Number _____
Correct Calibration Method _____
Correct Monitoring Techniques Used _____
Method 21 Results _____
Tag on Leaking Equipment _____
If Equipment already had tag on it:
- Date Leak Detected _____
- Date of Expected Repair or Actual Repair _____
Equipment Marked as Being in this Program _____