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Implementation Tool for the Miscellaneous Coating Manufacturing NESHAP

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Air Compliance Branch
Compliance Assessment and Media Programs Division (CAMPD)
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Section 3

Requirements for Storage Tanks

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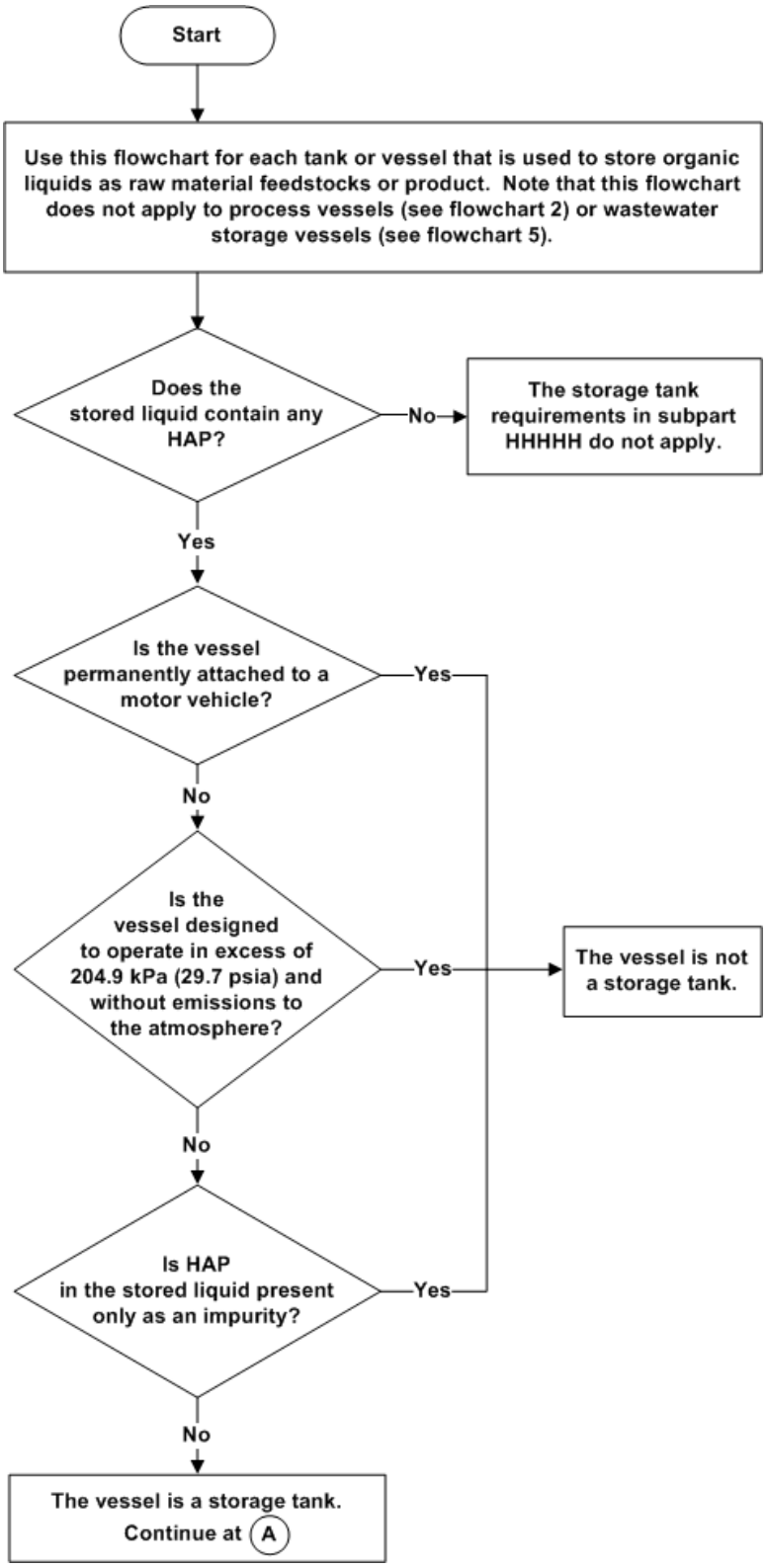

Figure 3-1. Flowchart of applicability and control requirements for storage tanks.

Figure 3-1. (continued)

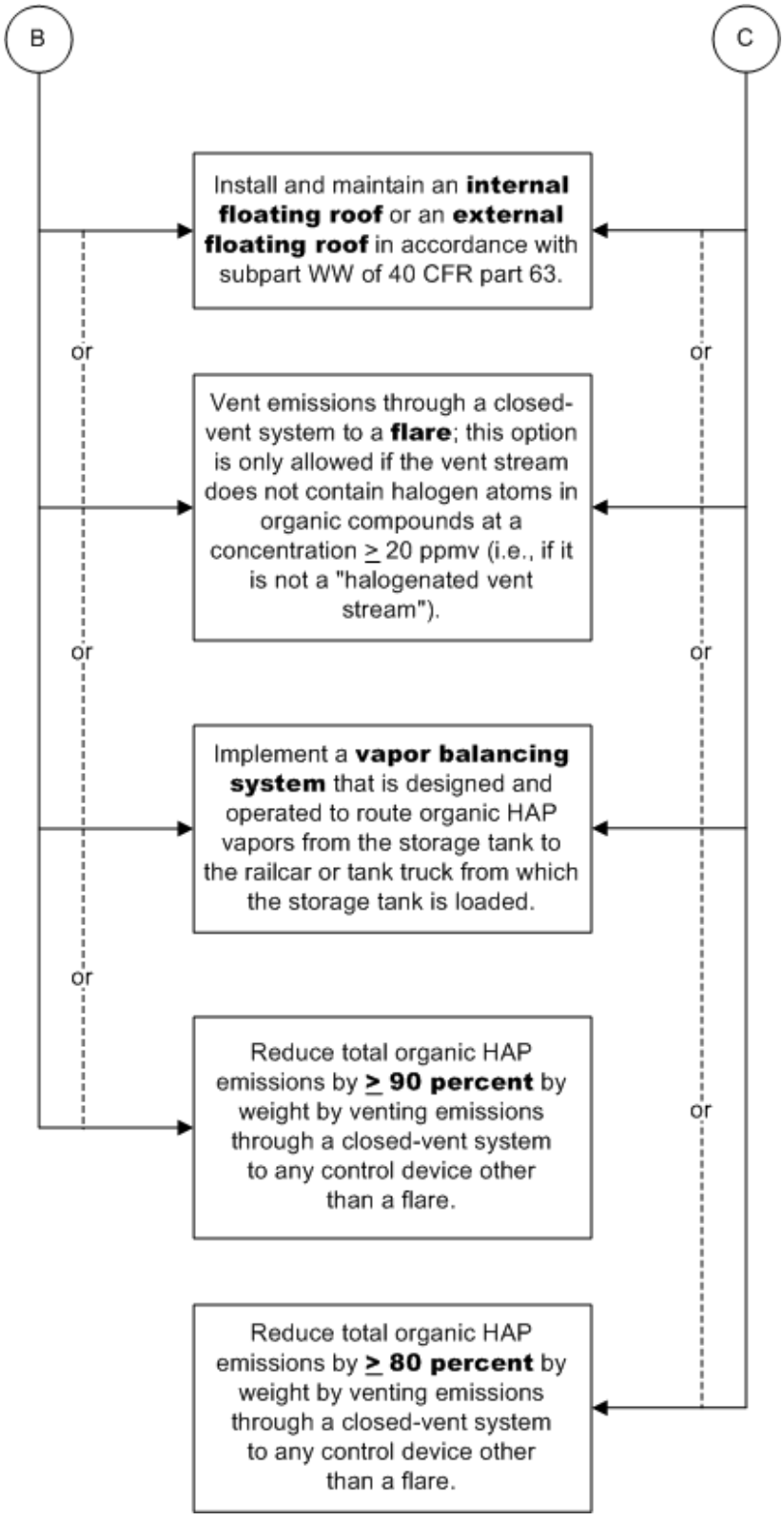

Figure 3-1. (continued)

Table 3-1. Compliance Checklist for Storage Tanks with an External Floating Roof

Note: A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

Identification of Storage Tank(s): _____

I. Review of Records			
1. Are all records kept for at least 5 years? *§§63.1065 and 63.10(b)(1)*		☐ Y	☐ N
2. Do records indicate that seal gap measurements have been made every 5 years for the primary seal? *§63.1063(c)(2)(ii)*	☐ Y	☐ N/A	☐ N
3. Do records indicate that seal gap measurements have been made annually for the secondary seal?[a] *§63.1063(c)(2)(ii)*	☐ Y	☐ N/A	☐ N
4. Do records indicate the floating roof deck, deck fittings, and rim seals are visually inspected each time the tank is completely emptied and degassed or every 10 years? *§63.1063(c)(2)(iii)*	☐ Y	☐ N/A	☐ N
5. Were **both** of the following recorded for all visual inspections and seal gap measurements: *§63.1065(b)(1)(i) and (ii)*			
• Identification of the storage vessel?		☐ Y	☐ N
• Date of the inspection?		☐ Y	☐ N
6. For all seal gap measurements, was **all** of the following information recorded: *§63.1065(b)(2)*			
• All of the raw data that were obtained?		☐ Y	☐ N
• All calculations that were performed (e.g., total gap area)?		☐ Y	☐ N
7. When a failure was detected during a visual inspection or seal gap measurement, was **all** of the following information recorded: *§63.1065(b)(1)(iii) through (v)*			
• A description of all inspection failures?	☐ Y	☐ N/A	☐ N
• A description of all repairs and the dates they were made?	☐ Y	☐ N/A	☐ N
• The date the storage tank was removed from service (if the inspection was performed while the tank was in operation and repairs can not be completed while operating)?	☐ Y	☐ N/A	☐ N
8. Whenever a floating roof was set on its legs or other supports, was **all** of the following information recorded: *§63.1065(c)*			
• The date when the floating roof was set on it legs or other supports?	☐ Y	☐ N/A	☐ N
• The date when the floating roof was refloated?	☐ Y	☐ N/A	☐ N
• An indication of whether the process of refloating was continuous?	☐ Y	☐ N/A	☐ N

Table 3-1. (continued)

I. Review of Records			
9. If a tank was taken out of service to complete repairs, but it could not be emptied within 45 days of detecting a failure, was **all** of the following information kept to document the decision to request up to two 30-day extensions: *§§63.1063(e)(2), 63.1065(d), and 63.1066(b)(4)*			
• A description of the failure?	☐ Y	☐ N/A	☐ N
• Documentation that alternate storage capacity was not available?	☐ Y	☐ N/A	☐ N
• Schedule of actions taken to make repairs or empty the tank as soon as possible?	☐ Y	☐ N/A	☐ N
10. If performing a required seal gap measurement was determined to be unsafe, and the vessel could not be emptied within 45 days, was **all** of the following information kept to document the decision to request up to two 30-day extensions: *§§63.1063(c)(2)(iv)(B), 63.1065(d), and 63.1066(b)(4)*			
• Explanation of why it was unsafe to perform the seal gap measurement?	☐ Y	☐ N/A	☐ N
• Documentation that alternate storage capacity was unavailable?	☐ Y	☐ N/A	☐ N
• Schedule of actions taken to make repairs or empty the tank as soon as possible?	☐ Y	☐ N/A	☐ N
11. Was the Administrator or delegated state or local agency notified at least 30 days before each internal inspection or seal gap measurement (7 days if the inspection was unplanned and could not be foreseen 30 days in advance)? *§63.1066(b)(1)* *Note: a delegated state or local agency may waive this requirement.*	☐ Y	☐ N/A	☐ N
12. When a failure was detected during a visual inspection or seal gap measurement, was a copy of the inspection records submitted in the next compliance report? *§63.1066(b)(2)*	☐ Y	☐ N/A	☐ N

Table 3-1. (continued)

II. Visual Inspection

Note: The inspector should not perform the inspection while on the EFR if the roof is below 4 feet of the top of the tank and if the inspector is not equipped with the proper respiratory protection. Based on the inspector's assessment of the availability of records documenting the design of the control equipment, an adequate inspection without respiratory protection may be performed with a combination of a record inspection and a visual inspection conducted from the platform with the aid of vision-enhancing devices (binoculars). If the inspector feels that it is necessary to be on the EFR when the roof is below 4 feet of the top of the tank, please be aware of the requirements under EPA Order 1440.2 and the safety information in *Guidance on Confined Space Entry in NESHAP Inspections of Benzene Storage Vessels* (EPA 455/R-92-003, September 1992).

1. Does the EFR float on the surface of the stored liquid? *§63.1063(b)(1) and (2)*	Y	N/A	N
Note: The EFR is not required to be floating on the liquid when it is supported by its leg supports either because the liquid depth is insufficient to float the EFR or the tank is empty.			
2. Is the floating roof deck free of pools of standing liquid? *§63.1063(d)(1)(i)*		Y	N
3. Inspect the secondary seal.			
• Is the secondary seal free of holes and tears?[b] *§63.1063(d)(1)(ii)*	Y	N/A	N
• Is the secondary seal continuously attached around the circumference of the EFR?	Y	N/A	N
4. Perform seal gap measurement of the secondary seal.[b]			
• Is the accumulated area of gaps between the tank wall and the secondary seal no greater than 21.2 cm^2 meter of tank diameter?	Y	N/A	N
• Is the maximum gap width between the tank wall and the seal no greater than 1.27 cm?	Y	N/A	N
Note: Procedures for performing the seal gap measurements and determining the total gap area and maximum gap width are specified in §63.1063(d)(3).			
5. Inspect the primary seal.			
• Is the primary seal either a mechanical/metallic shoe seal or a liquid-mounted seal?[b] *§63.1063(a)(1)(ii) and see definitions of "mechanical shoe seal" and "liquid-mounted seal" in §63.1061*		Y	N
• Is the primary seal free of holes and tears? *§63.1063(d)(1)(ii)*		Y	N
• Is the primary seal continuously attached around the circumference of the EFR?		Y	N
• If the primary seal is a mechanical/metallic shoe seal:			
– Does the lower end of the mechanical/metallic shoe seal extend into the stored liquid (no specific distance)?	Y	N/A	N
– Does the upper end of the mechanical/metallic shoe seal extend a minimum vertical distance of 61 cm above the stored liquid surface?	Y	N/A	N

Table 3-1. (continued)

II. Visual Inspection			
– Does a flexible coated fabric span the space between the metal shoe and the tank wall?	Y	N/A	N
• If the primary seal is a liquid-mounted seal, is the seal in contact with the liquid between the wall of the storage tank and the EFR?	Y	N/A	N
6. Perform seal gap measurements of the primary seal.			
• Is the accumulated area of gaps between the tank wall and the primary seal no greater than 212 cm^2 per meter of tank diameter?		Y	N
• Is the maximum gap width between the tank wall and the seal no more than 3.81 cm?		Y	N
Note: Procedures for performing the seal gap measurements and determining the total gap area and maximum gap width are specified in §63.1063(d)(3).			
7. Inspect deck openings.			
• Is the lower edge of each opening in the floating roof, except automatic bleeder vents and rim space vents, below the surface of the stored liquid?[c] *§63.1063(a)(2)(i)*	Y	N/A	N
• Except for automatic bleeder vents, rim space vents, deck drains, and leg sleeves, does each opening in the roof have a gasketed cover?[c] *§63.1063(a)(2)(ii)*	Y	N/A	N
• Is each gasketed cover, seal, or lid on any opening in the EFR closed, except when it must be open for access?[c] *§63.1063(b)(3)*	Y	N/A	N
• Is the cover on each access hatch and gauge float well designed to be bolted or fastened when closed?[c] *§63.1063(a)(2)(vi)*	Y	N/A	N
• Does each deck fitting gasket, seal, and wiper fit between the surfaces it is intended to seal without any gaps larger than 0.32 cm (1/8 in)? *§63.1063(d)(1)(v)*	Y	N/A	N
8. Inspect automatic bleeder vents (vacuum breaker vents).			
• Is each automatic bleeder vent closed, except when required to be open to relieve excess pressure or vacuum? *§63.1063(b)(4)*		Y	N
• Does each automatic bleeder vent have a gasketed lid, pallet, flapper, or other closure device?[c] *§63.1063(a)(2)(iii)*	Y	N/A	N
9. Inspect rim space vents.			
• Is each rim space vent closed, except when required to be open to relieve excess pressure or vacuum? *§63.1063(b)(4)*		Y	N
• Does each rim space vent have a gasketed lid, pallet, flapper, or other closure device?[c] *§63.1063(a)(2)(iii)*	Y	N/A	N

Table 3-1. (continued)

II. Visual Inspection			
10. Does each deck drain that empties into the stored liquid have either a gasketed cover or a slit fabric seal or similar device that covers at least 90 percent of the area of the opening?[c] *§63.1063(a)(2)(v)*	Y	N/A	N
11. Does each unslotted guide pole well have a pole wiper?[c] *§63.1063(a)(2)(vii)*	Y	N/A	N
12. Does each unslotted guide pole have a gasketed cap on the end of the pole?[c] *§63.1063(a)(2)(vii)*	Y	N/A	N
13. Is the cap on each unslotted guidepole closed, except when gauging the liquid level or taking liquid samples? *§63.1063(b)(5)*	Y	N/A	N
14. Does each slotted guide pole have either of the following: (1) a pole wiper and pole float, or (2) a pole wiper and pole sleeve?[c] *§63.1063(a)(2)(viii)*	Y	N/A	N
15. Does each sample well have either a gasketed cover or a slit fabric seal or similar device that covers at least 90 percent of the area of the opening?[c] *§63.1063(a)(2)(v)*	Y	N/A	N

III. Note All Deficiencies

EFR = external floating roof.

[a] If an EFR has a liquid-mounted or metallic shoe primary seal as of April 4, 2002, a secondary seal is not required until the next time the tank is emptied and degassed or until December 11, 2013, whichever is earlier. *§63.1063(a)(1)(ii)(C)*

[b] If the EFR is equipped, as of April 4, 2002, with either: (1) a liquid-mounted primary seal and no secondary seal, (2) a metallic shoe primary seal and no secondary seal, or (3) a vapor-mounted primary seal and a secondary seal, then the seal requirement of a liquid-mounted or metallic shoe primary seal and secondary seal does not apply until the earlier of the following dates: (1) the next time the storage tank is emptied and degassed, or (2) December 11, 2013. *§63.1063(a)(1)(ii)(C)*

[c] If these requirements were not met for a floating roof in place as of April 4, 2002, then this requirement does not apply until the earlier of the following dates: (1) the next time the storage tank is emptied and degassed, or (2) no later than December 11, 2013. *§63.1063(a)(2)(ix)*

Table 3-2. Compliance Checklist for Storage Tanks with an Internal Floating Roof

Note: An external floating roof located in a storage tank to which a fixed roof has been added is defined as an internal floating roof. *§63.1061*

A "yes" response to a question in this checklist means compliance with that provision, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

Identification of Storage Tank(s): _____

I. Review of Records			
1. Are all records kept for at least 5 years? *§§63.1065 and 63.10(b)(1)*		☐ Y	☐ N
2. Do records show that visual inspections are conducted on either of the following schedules: *§63.1063(c)(i) and (ii)*			
(a) Internal and tank-top inspections are conducted as follows:			
• Tank-top visual inspections are conducted at least once per year?	☐ Y	☐ N/A	☐ N
• Internal visual inspections are conducted each time the storage tank is emptied and degassed, or every 10 years, whichever occurs first?	☐ Y	☐ N/A	☐ N
(b) Internal inspections are conducted each time the storage tank is emptied and degassed or every 5 years, whichever occurs first? *Note: The second option is allowed only for storage tanks with both primary and secondary seals.*	☐ Y	☐ N/A	☐ N
3. Were **both** of the following recorded for all visual inspections: *§63.1065(b)(1)(i) and (ii)*			
(a) Identification of the storage vessel?		☐ Y	☐ N
(b) Date of the inspection?		☐ Y	☐ N
4. When a failure was detected during a visual inspection, was **all** of the following information recorded: *§63.1065(b)(1)(iii) through (v)*			
(a) A description of all inspection failures?	☐ Y	☐ N/A	☐ N
(b) A description of all repairs and the dates they were made?	☐ Y	☐ N/A	☐ N
(c) The date the storage tank was removed from service (if the inspection was performed while the tank was in operation and repairs can not be completed while operating)?	☐ Y	☐ N/A	☐ N

Table 3-2. (continued)

I. Review of Records			
5. Whenever a floating roof was set on its legs or other supports, was **all** of the following information recorded: *§63.1065(c)*			
(a) The date when the floating roof was set on it legs or other supports?	☐ Y	☐ N/A	☐ N
(b) The date when the floating roof was refloated?	☐ Y	☐ N/A	☐ N
(c) An indication of whether the process of refloating was continuous?	☐ Y	☐ N/A	☐ N
6. If a tank was taken out of service to complete repairs, but it could not be emptied within 45 days of detecting a failure, was **all** of the following information kept to document the decision to request up to two 30-day extensions: *§§63.1063(e)(2), 63.1065(d), and 63.1066(b)(4)*			
(a) A description of the failure?	☐ Y	☐ N/A	☐ N
(b) Documentation that alternate storage capacity was not available?	☐ Y	☐ N/A	☐ N
(c) Schedule of actions taken to make repairs or empty the tank as soon as possible?	☐ Y	☐ N/A	☐ N
7. Was the Administrator or delegated State or local agency notified at least 30 days before each visual inspection (7 days if the inspection was unplanned and could not be foreseen 30 days in advance)? *§63.1066(b)(1)*	☐ Y	☐ N/A	☐ N
Note: a delegated State or local agency may waive this requirement.			
8. When a failure was detected during a visual inspection, was a copy of the inspection records submitted in the next compliance report? *§63.1066(b)(2)*	☐ Y	☐ N/A	☐ N

II. Visual Inspection
Note: The inspector should be advised of the hazards of inspecting an internal floating roof tank that contains a liquid hazardous air pollutant (HAP). An inspector may perform an external (tank-top) visual inspection of a storage tank at any time (i.e., the tank does not need to be taken out of service). However, the inspector will need to have proper respiratory protection before opening the roof hatch to visually inspect, from the fixed roof, the floating deck and seal. An inspector may perform the more thorough internal inspection only when the tank has been taken out of service (i.e., emptied, degassed and cleaned). Unless a tank is taken out of service more frequently than is required by subpart FFFF, this internal inspection can only take place once every 10 years. The inspector should never enter a storage tank to inspect the IFR without first consulting documents that address the safety issues to consider while entering a confined space and while inspecting an IRF that contains HAP – EPA Order 1440.2 and the EPA document *Guidance on Confined Space Entry in NESHAP Inspections of Benzene Storage Vessels* (EPA 455/R-92-003, September 1992).

Table 3-2. (continued)

II. Visual Inspection			
1. Does the IFR float on the surface of the stored liquid? *§63.1063(b)(1) and (2)* *Note: The IFR is not required to be floating on the liquid when it is supported by its leg supports either because the liquid depth is insufficient to float the IFR or the tank is empty.*	☐ Y	☐ N/A	☐ N
2. Is the floating roof deck free of pools of standing liquid? §63.1063(d)(1)(i)		☐ Y	☐ N
3. Inspect the rim seal(s).			
(a) Does the IFR have any one of the following closure devices:[a] *§63.1063(a)(1)* – A liquid-mounted primary seal? *See definition of "liquid-mounted seal" in §63.1061* – A mechanical/metallic shoe primary seal? *See definition of "mechanical shoe seal" in §63.1061* – Both a primary seal and a secondary seal?	☐ Y	☐ N/A	☐ N
(b) Is the primary seal continuously attached around the circumference of the IFR?		☐ Y	☐ N
(c) If the IFR has a secondary seal, is it continuously attached around the circumference of the IFR?	☐ Y	☐ N/A	☐ N
(d) Are there no visible gaps between the seal(s) and the wall of the storage tank?		☐ Y	☐ N
(e) Is the primary seal free of holes and tears? *§63.1063(d)(1)(ii)*		☐ Y	☐ N
(f) If the IFR has a secondary seal, is it free of holes and tears? *§63.1063(d)(1)(ii)*	☐ Y	☐ N/A	☐ N
(g) If the primary seal is a mechanical/metallic shoe seal:			
– Does the lower end of the metallic shoe seal extend into the stored liquid (no specific distance)?	☐ Y	☐ N/A	☐ N
– Does a flexible coated fabric span the space between the metal shoe and the tank wall?	☐ Y	☐ N/A	☐ N
(h) If the primary seal is a liquid-mounted seal, is the seal is in contact with the liquid between the wall of the storage tank and the IFR?	☐ Y	☐ N/A	☐ N
4. Inspect deck openings.			
(a) If the IFR is non-contact, is the lower edge of each opening in the floating roof, except automatic bleeder vents and rim space vents, below the surface of the stored liquid?[b] *§63.1063(a)(2)(i)*	☐ Y	☐ N/A	☐ N

Table 3-2. (continued)

II. Visual Inspection			
(b) Except for automatic bleeder vents, rim space vents, deck drains, leg sleeves, and openings for fixed roof support columns, does each opening in the roof have a gasketed cover?[b] §63.1063(a)(2)(ii)	☐ Y	☐ N/A	☐ N
(c) Is each gasketed cover, seal, or lid on any opening in the IFR closed, except when it must be open for access?[b] *§63.1063(b)(3)*	☐ Y	☐ N/A	☐ N
(d) Does each opening for a fixed roof support column have either a flexible fabric sleeve seal or a gasketed cover?[b] *§63.1063(a)(2)(iv)*	☐ Y	☐ N/A	☐ N
(e) Is the cover on each access hatch and gauge float well designed to be bolted or fastened when closed?[b] *§63.1063(a)(2)(vi)*	☐ Y	☐ N/A	☐ N
(f) Does each deck fitting gasket, seal, and wiper fit between the surfaces it is intended to seal without any gaps larger than 0.32 cm (1/8 in)? *§63.1063(d)(1)(v)*		☐ Y	☐ N
5. Inspect automatic bleeder vents (vacuum breaker vents).			
(a) Is each automatic bleeder vent closed, except when required to be open to relieve excess pressure or vacuum? *§63.1063(b)(4)*		☐ Y	☐ N
(b) Does each automatic bleeder vent have a gasketed lid, pallet, flapper, or other closure device?[b] *§63.1063(a)(2)(iii)*	☐ Y	☐ N/A	☐ N
6. Inspect each rim space vent.			
(a) Is each rim space vent closed, except when required to be open to relieve excess pressure or vacuum? *§63.1063(b)(4)*		☐ Y	☐ N
(b) Does each rim space vent have a gasketed lid, pallet, flapper, or other closure device?[b] *§63.1063(a)(2)(iii)*	☐ Y	☐ N/A	☐ N
7. Is each deck drain that empties into the stored liquid have either a gasketed cover or a slit fabric seal or similar device that covers at least 90 percent of the area of the opening?[b] *§63.1063(a)(2)(v)*	☐ Y	☐ N/A	☐ N
8. Does each unslotted guide pole well have a pole wiper?[b] *§63.1063(a)(2)(vii)*	☐ Y	☐ N/A	☐ N
9. Does each unslotted guide pole have a gasketed cap on the end of the pole?[b] *§63.1063(a)(2)(vii)*	☐ Y	☐ N/A	☐ N
10. Is the cap on each unslotted guidepole closed, except when guaging the liquid level or taking liquid samples? *§63.1063(b)(5)*	☐ Y	☐ N/A	☐ N
11. Does each slotted guide pole have either of the following: (1) a pole wiper and pole float, or (2) a pole wiper and pole sleeve?[b] *§63.1063(a)(2)(viii)*	☐ Y	☐ N/A	☐ N
12. Does each sample well have either a gasketed cover or a slit fabric seal or similar device that covers at least 90 percent of the area of the opening?[b] *§63.1063(a)(2)(v)*	☐ Y	☐ N/A	☐ N

Table 3-2. (continued)

III. Note All Deficiencies

IFR = internal floating roof.

[a] If the IFR has a vapor-mounted seal as of April 4, 2002, the requirement for a liquid-mounted seal, mechanical/metallic shoe seal, or a secondary seal is not required until the next time the storage tank is emptied and degassed or December 11, 2013, whichever is earlier. *§63.1063(a)(1)(ii)(D)*

[b] If these requirements were not met for a floating roof in place as of April 4, 2002, then this requirement does not apply until the earlier of the following dates: (1) the next time the storage tank is emptied and degassed, or (2) no later than December 11, 2013. *§63.1063(a)(2)(ix)*

Table 3-3. Compliance Checklist for Storage Tanks Equipped with a Control Device

Note: A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement.

Note: Use this checklist in addition to the checklists in Tables 7-1 and 7-2 for the closed vent system and the applicable checklist from Tables 7-3 through 7-12 for the type of control device that is used to reduce emissions from the storage tank.

Identification of Storage Tank(s): _____

I. Review of Records

1. Does the facility keep all of the following records of periods of planned routine maintenance for the control device: *§63.998(d)(2)(ii)*
   - (a) Time of day and date when each period of planned routine maintenance starts? ☐ Y ☐ N
   - (b) Time of day and date when each period of planned routine maintenance ends? ☐ Y ☐ N
   - (c) Description of the type of maintenance performed? ☐ Y ☐ N
2. Do both of the following occur each time the facility has periods of planned routine maintenance that exceed 240 hr/yr: *§63.8010(c)*
   - (a) The facility submitted an application to the Administrator requesting approval of an extension to no more than 360 hr/yr that contained both of the following:
     - An explanation of why the extension is needed? ☐ Y ☐ N
     - A statement affirming that no material will be added to the storage tank between the time the 240 hr limit is exceeded and the date the control device is returned to service? ☐ Y ☐ N
   - (b) The application was submitted at least 60 days before the 240 hr/yr limit is exceeded? ☐ Y ☐ N
3. Are all records kept for at least 5 years? *§63.10(b)(1)* ☐ Y ☐ N

II. Note All Deficiencies

Table 3-4. Compliance Checklist for Storage Tanks Using Vapor Balancing

Note: Use this checklist when emissions from a storage tank are vapor balanced to the tank truck or railcar that delivered material to the storage tank. A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

Identification of Storage Tank(s): _____

I. Review of Records			
1. Does the facility have records that the tank trucks and/or railcars from which the storage tank is filled meet U.S. DOT pressure requirements in 49 CFR part 180 or 173.31, respectively? *§63.1253(f)(2) as referenced from §63.8010(d)*		☐ Y	☐ N
2. Does the facility have a record of the pressure relief vent setting? *§63.1253(f)(5) as referenced from §63.8010(d)*		☐ Y	☐ N
3. If the setting in "2" is less than 2.5 psig, did the facility provide rationale in the notification of compliance status report explaining why the lower value is sufficient to prevent breathing losses at all times? *§63.8010(d)(2)*	☐ Y	☐ N/A	☐ N
4. Does the facility have written certification from facilities that reload and/or clean the tank trucks and railcars that they will either reduce the HAP content of the displaced vapor by ≥95 percent (and meet the compliance requirements in subpart FFFF) or vapor balance to the tank from which the tank truck or railcar is loaded? *§63.1253(f)(7)(i) as referenced from §63.8010(d)*		☐ Y	☐ N
5. For each leak detected during quarterly monitoring, does the facility have all of the following records: *§§63.1253(f)(5)(iii) and 63.1255(g)(4) as referenced from §63.8010(d)*			
(a) The instrument?	☐ Y	☐ N/A	☐ N
(b) The equipment identification number?	☐ Y	☐ N/A	☐ N
(c) The operator name, initials, or identification number?	☐ Y	☐ N/A	☐ N
(d) Date the leak was detected?	☐ Y	☐ N/A	☐ N
(e) Date of first repair attempt?	☐ Y	☐ N/A	☐ N
(f) Date of successful repair?	☐ Y	☐ N/A	☐ N
(g) Maximum instrument reading measured by Method 21 after the leak is successfully repaired or determined to be nonrepairable?	☐ Y	☐ N/A	☐ N
6. Are all records kept for at least 5 years? *§63.10(b)(1)*		☐ Y	☐ N

Table 3-4. (continued)

II. Visual Inspections		
1. Is there a pressure relief device on the storage tank, and does the pressure relief setting match the value specified in the notification of compliance status report?	☐ Y	☐ N

III. Note All Deficiencies

U.S. DOT = U.S. Department of Transportation.

Section 4

Requirements for Equipment Leaks

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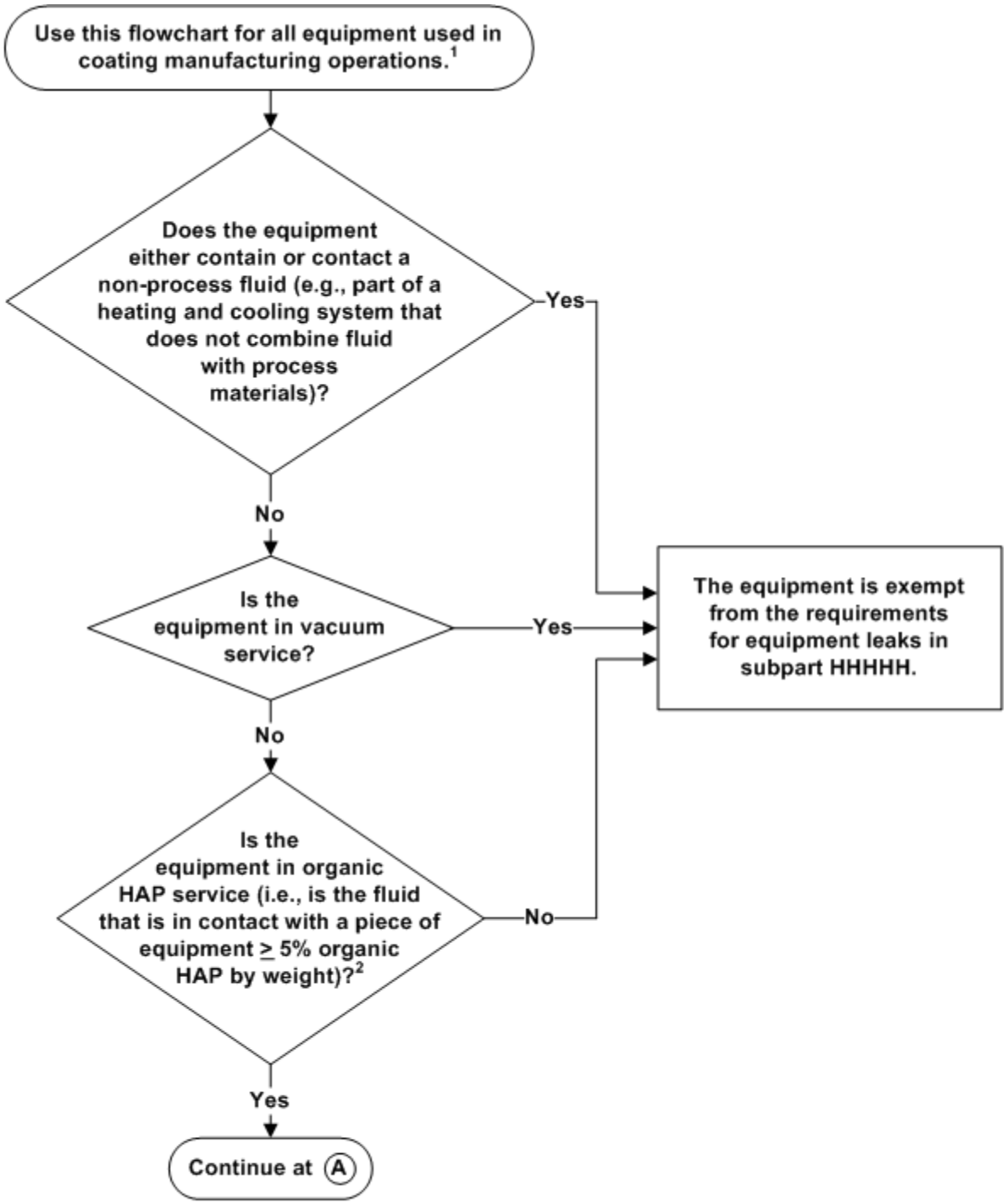

[1] Equipment consists of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended lines, valves, connectors, and instrumentation systems.

[2] Equipment is presumed to be in organic HAP service unless you demonstrate that it is not by following the procedures in §63.180(d).

Figure 4-1. Flowchart of applicability and control requirements for equipment leaks.

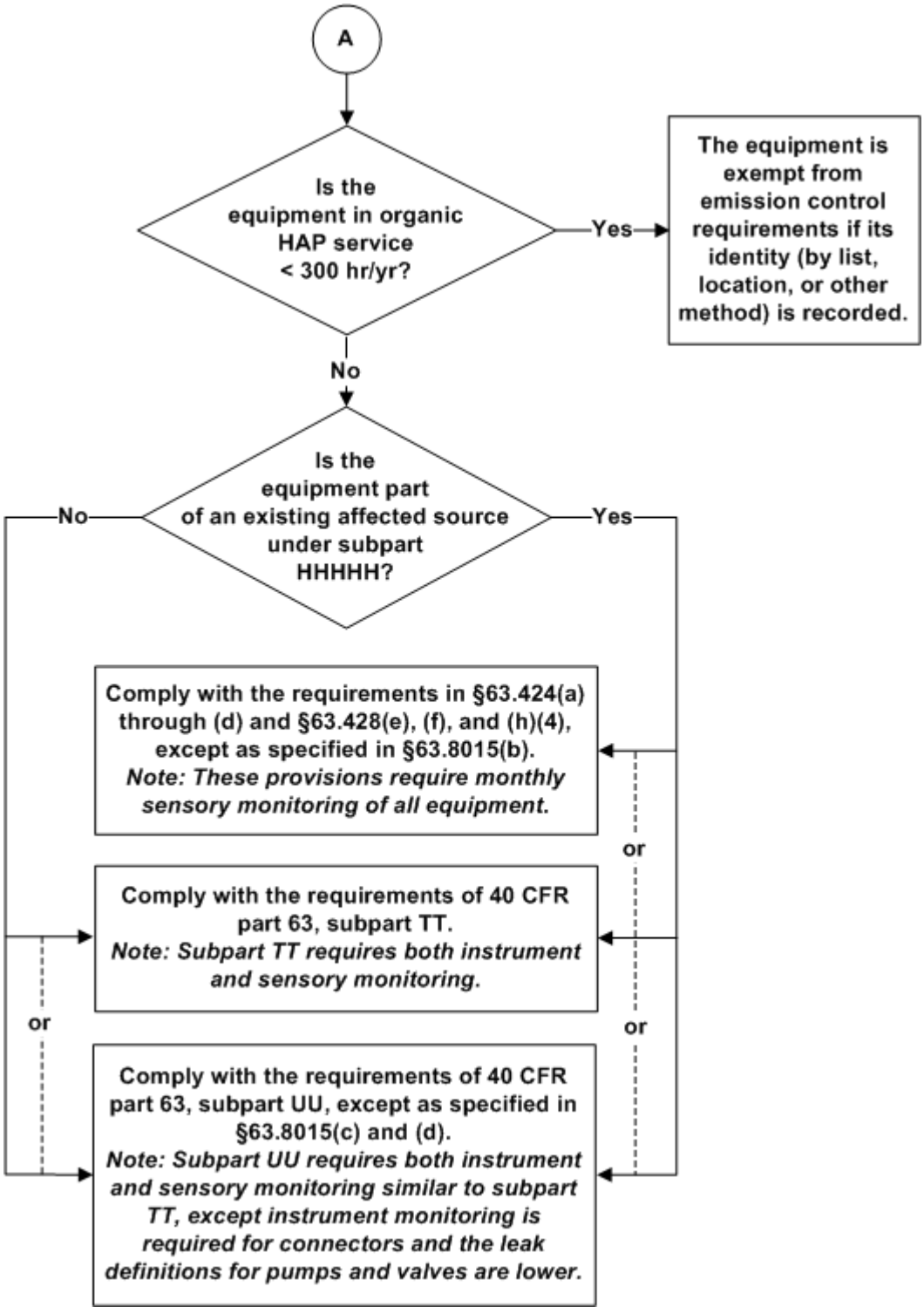

Figure 4-1. (continued)

Table 4-1. Compliance Checklist for Equipment Leaks Monitored by Monthly Sensory Observations

Note: A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records			
1. Does the facility have a log book that contains a list, summary description, or diagram showing the location of all equipment in organic HAP service? *§63.424(b)*		☐ Y	☐ N
2. Do records indicate that all equipment in organic HAP service is inspected monthly? *§63.424(a) as referenced from Table 3 to subpart HHHHH* *Note: Inspections are not required for equipment in service < 300 hr/yr in vacuum service, or contacting nonprocess fluids. §63.8015(b)(4).*		☐ Y	☐ N
3. Is all of the following information recorded in the log book for each liquid or vapor leak that is detected? *§63.428(e) as referenced from Table 3 to subpart HHHHH*			
(a) Equipment type and identification number?		☐ Y	☐ N
(b) Indication of whether the leak is liquid or vapor?		☐ Y	☐ N
(c) Detection method (i.e., sight, sound, or smell)?		☐ Y	☐ N
(d) Date leak was detected?		☐ Y	☐ N
(e) Date of each attempt to repair the leak?		☐ Y	☐ N
(f) Repair methods applied in each repair attempt?		☐ Y	☐ N
(g) All of the following information if the leak was not repaired within 15 calendar days after it was detected:			
• Reason for the delay?	☐ Y ☐ N/A		☐ N
• Expected date of successful repair?	☐ Y ☐ N/A		☐ N
(h) Date of successful repair?		☐ Y	☐ N
4. Are all records kept for at least 5 years?		☐ Y	☐ N

II. Note All Deficiencies

Table 4-1. (continued)

I. Review of Records

Table 4-2. Compliance Checklist for the LDAR Program in Subpart TT for Equipment Leaks

Note: Use this checklist to demonstrate compliance with the basic LDAR program requirements for each type of equipment as specified in 40 CFR part 63, subpart TT. See the checklist in Table 4-5 for enclosed process units with equipment leak emissions routed through a closed-vent system to a control device in accordance with §63.1016. A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records			
1. Does the facility have the following equipment identification records as an alternative to physically tagging each piece of equipment:			
(a) General identification of equipment that is subject to subpart HHHHH (e.g., on a plant site plan, in log entries, designation of process unit or affected source boundaries, etc.)? *§§63.1003(a) and 63.1017(b)(1)*	☐ Y	☐ N/A	☐ N
(b) Specific identification of connectors (either individually or the total number of connectors as a group in a designated area)? *§§63.1003(b)(1) and 63.1017(b)(1)* *Note: Inaccessible, ceramic, or ceramic-lined connectors are exempt from this recordkeeping requirement.*	☐ Y	☐ N/A	☐ N
(c) Specific identification of pumps in light liquid service, agitators, pressure relief devices in gas and vapor service, and compressors from which leaks are routed to a process, a fuel gas system, or through a closed-vent system to a control device? *§§63.1003(b)(2) and 63.1017(b)(1)* *Note: Questions 13 and 14 are the only other questions in this checklist (Table 4-2) that apply to this equipment if emissions are routed to a control device. Only question 14 applies if emissions are routed to a process or fuel gas system.*	☐ Y	☐ N/A	☐ N
(d) Specific identification of pressure relief devices that are equipped with rupture disks? *§§63.1003(b)(3) and 63.1017(b)(1)*	☐ Y	☐ N/A	☐ N
(e) Specific identification of instrumentation systems? *§§63.1003(b)(4) and 63.1017(b)(1)*	☐ Y	☐ N/A	☐ N
(f) Specific identification (either by list, location, or other method) of equipment in organic HAP service less than 300 hours per calendar year within the affected source? *§§63.1003(b)(5) and 63.1017(b)(1)*	☐ Y	☐ N/A	☐ N
(g) Identification of equipment designated as unsafe-to-monitor or difficult-to-monitor? *§63.1003(c)(3)*	☐ Y	☐ N/A	☐ N

Table 4-2. (continued)

I. Review of Records			
2. If the facility has designated any valves, pumps, connectors, and/or agitators as unsafe to monitor, do they have a written plan describing the actual monitoring frequency that will be used (but not more frequently than would otherwise be required) and stating that any such equipment that is found to be leaking will be repaired following the same procedures as for any other leaking equipment? *§§63.1003(c)(5)(i) and 63.1017(b)(2)* *Note: No other records described in this checklist (i.e., Table 4-2) apply to equipment that is designated as unsafe to monitor.*	☐ Y	☐ N/A	☐ N
3. If the facility has designated any valves and/or agitators as difficult to monitor, do they have a written plan describing the actual monitoring frequency that will be used (at least once per year) and stating that any such equipment that is found to be leaking will be repaired following the same procedures as for any other leaking equipment? *§§63.1003(c)(5)(ii) and 63.1017(b)(2)* *Note: No other records described in this checklist (i.e., Table 4-2) apply to equipment that is designated as difficult to monitor.*	☐ Y	☐ N/A	☐ N
4. If the facility has designated any connectors as unsafe to repair, do records identify such connectors and explain why the connectors are unsafe to repair? *§§63.1003(d)(2) and 63.1017(b)(3)*	☐ Y	☐ N/A	☐ N
5. If the facility has designated any compressors as operating with an instrument reading of less than 500 ppm above background, do records identify such compressors? *§§63.1003(e)(3) and 63.1017(b)(4)*	☐ Y	☐ N/A	☐ N
6. If the facility has designated any valves as operating with no detectable emissions (i.e., they have no external actuating mechanism and operate with emissions less than 500 ppm above background), do they have all of the following records: *§§63.1006(e)(4)(i) and 63.1017(c)(1)*	☐ Y	☐ N/A	☐ N
(a) All of the following compliance tests:			
• Initial compliance test (upon designation emissions are <500 ppm above background?	☐ Y	☐ N/A	☐ N
• Annual compliance tests?	☐ Y	☐ N/A	☐ N
• Any other tests requested by the Administrator?	☐ Y	☐ N/A	☐ N
(b) All of the following information for each compliance test:			
• Records of the test dates?	☐ Y	☐ N/A	☐ N
• The background level measured during each test?	☐ Y	☐ N/A	☐ N
• Maximum instrument reading measured during each test?	☐ Y	☐ N/A	☐ N

Table 4-2. (continued)

I. Review of Records			
7. When leaks are detected by instrument monitoring (for valves, pumps, connectors, agitators, pressure relief devices, and compressors) or by sensory monitoring (for pumps and agitators), does the facility maintain all of the following records: *§§63.1004(e)(2), 63.1005(e), and 63.1017(b)(5) and (6)* *Note: Although the rule does not explicitly require identification of leaking equipment, the records must be sufficiently specific to allow an inspector to determine compliance with the equipment leak repair requirements.*			
(a) The date of the first attempt to repair the leak?	☐ Y	☐ N/A	☐ N
(b) The date of successful repair of the leak?	☐ Y	☐ N/A	☐ N
(c) The maximum instrument reading measured by Method 21 at the time the leak was repaired or determined to be nonrepairable	☐ Y	☐ N/A	☐ N
(d) The reason for the delay if the leak was not repaired within 15 calendar days after the leak was detected? *Note: Section 63.1005(c) specifies conditions under which delay of repair is allowed.* *Note: If delay of repair was caused by depletion of stocked parts, the records must also document that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.*	☐ Y	☐ N/A	☐ N
(e) The dates of process unit (or affected source) shutdowns that occurred while the equipment was unrepaired?	☐ Y	☐ N/A	☐ N
8. If complying with the skip period alternative for valves in gas and vapor service or in light liquid service, does the facility keep records of both of the following: *§§63.1006(b)(6)(iv) and 63.1017(c)(1)*			
(a) The monitoring schedule?	☐ Y	☐ N/A	☐ N
(b) Percent of valves found leaking during each monitoring period?	☐ Y	☐ N/A	☐ N
9. For pumps in light liquid service, does the facility keep all of the following records:			
(a) The occurrence and dates of weekly visual inspections for leaks? *§§63.1007(b)(3) and (e)(1)(v) and 63.1017(c)(2)(i) and (ii)* *Note: These inspections are not required for pumps with no external shaft. §63.1007(e)(2)*	☐ Y	☐ N/A	☐ N

Table 4-2. (continued)

I. Review of Records			
(b) All of the following records for pumps equipped with a dual mechanical seal system that includes a barrier fluid system: *§§63.1007(e)(1)(i) and 63.1017(c)(2)(iii)*			
• The design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both?	☐ Y	☐ N/A	☐ N
• An explanation of the design criteria; any changes to these design criteria; and the reasons for any changes?	☐ Y	☐ N/A	☐ N
10. For agitators in gas and vapor service or in light liquid service, does the facility maintain all of the following records:			
(a) The occurrence and dates of weekly visual inspections for leaks? *§§63.1009(b)(3) and 63.1017(c)(4)(i)* *Note: According to §63.1009(e)(2), these inspections are not required for agitators with no external shaft.* *Note: Although §63.1009(e)(1)(iv) does not explicitly require records documenting the inspection for agitators with dual mechanical seals, a record would be required in order to demonstrate compliance (similar to the requirement in §63.1007(e)(1)(v).*	☐ Y	☐ N/A	☐ N
(b) For each agitator equipped with a dual mechanical seal system that includes a barrier fluid system, the design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both; an explanation of the design criteria; any changes to the design criteria; and the reasons for any changes? *§§63.1009(e)(1)(vi)(B) and 63.1017(c)(4)(ii)*	☐ Y	☐ N/A	☐ N
11. For pressure relief devices in gas and vapor service, does the facility maintain records of the following information for monitoring within 5 days after a pressure release? *§§63.1011 (c)(3) and 63.1017(c)(5)* *Note: These requirements do not apply to pressure relief devices that are equipped with a rupture disk upstream of the pressure relief device.*			
(a) Date the monitoring was conducted?	☐ Y	☐ N/A	☐ N
(b) Background level measured, if the instrument reading was adjusted for background?	☐ Y	☐ N/A	☐ N
(c) Maximum instrument reading measured?	☐ Y	☐ N/A	☐ N

Table 4-2. (continued)

I. Review of Records			
12. For each compressor that is equipped with a seal system that includes a barrier fluid system, does the facility maintain records of either of the following:			
(a) the design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both; an explanation of the design criteria; any changes to the design criteria; and the reasons for any changes, or *§§63.1012(d)(2) and 63.1017(c)(6)(i)*	☐ Y	☐ N/A	☐ N
(b) If the facility complies with the alternative compressor standard (i.e., the compressor is designated as operating with an instrument reading of less than 500 parts per million above background), all of the following information for each compliance test: *§§63.1012(f)(2) and 63.1017(c)(6)(ii)*			
• Date of each compliance test?	☐ Y	☐ N/A	☐ N
• Background level measured?	☐ Y	☐ N/A	☐ N
• Maximum instrument reading?	☐ Y	☐ N/A	☐ N
13. If emissions from pumps, agitators, pressure relief devices, or compressors are routed through a closed-vent system to a control device, are records maintained of all of the following information: *§63.998(d)(4) as referenced from §§63.1015(b), 63.982(b) and (c)(3), and 63.986(c)*			
(a) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams?	☐ Y	☐ N/A	☐ N
(b) The dates and descriptions of any changes in the design specifications?	☐ Y	☐ N/A	☐ N
(c) A description of the parameter or parameters monitored to ensure that the control device is operated and maintained as designed, and a description of why each parameter was selected for monitoring?	☐ Y	☐ N/A	☐ N
(d) Dates and durations when the monitored parameter values indicate the closed-vent system and control device(s) were not being operated as designed?	☐ Y	☐ N/A	☐ N
(e) Dates and durations when the monitoring device was inoperative?	☐ Y	☐ N/A	☐ N
(f) Dates and durations of startup and shutdown of the control device?	☐ Y	☐ N/A	☐ N
14. Are all records kept for at least 5 years? *§63.10(b)(1)*		☐ Y	☐ N

Table 4-2. (continued)

II. Visual Inspections			
1. Are visible, weatherproof identifications attached to all equipment that has been determined to be leaking and has not yet been repaired, including equipment determined to be nonrepairable? *§63.1004(e)(1)*	☐ Y	☐ N/A	☐ N
2. Are visible, weatherproof identifications attached to all valves that were repaired less than 3 months ago? *§63.1005(c)(1)*	☐ Y	☐ N/A	☐ N
3. Is a rupture disk in place upstream of each pressure relief device for which the facility claims exemption from the otherwise required monitoring? *§63.1011(e)*	☐ Y	☐ N/A	☐ N
4. Are sampling connection systems equipped with a closed-purge, closed-loop, or closed-vent system? *§63.1013(b)* *Note: In-situ sampling systems are exempt from this requirement. §63.1013(d)*	☐ Y	☐ N/A	☐ N
5. Are open-ended valves and lines equipped with caps, blind flanges, plugs, or a second valve? *§63.1014(b)(1)* *Note: Open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from this requirement. Open-ended lines and valves containing materials that would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard are also exempt.*	☐ Y	☐ N/A	☐ N
6. If the facility indicates equipment is vented to a control device, is a closed-vent system in place?	☐ Y	☐ N/A	☐ N

III. Note All Deficiencies

Table 4-3. Compliance Checklist for the LDAR Program in Subpart UU for Equipment Leaks

Note: Use this checklist to demonstrate compliance with the basic LDAR program requirements for each type of equipment as specified in 40 CFR part 63, subpart UU. See checklists in Tables 4-4 and 4-5 for equipment that is pressure tested in accordance with §63.1036(b) or process units are enclosed with emissions routed to a control device in accordance with §63.1037, respectively. A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records			
1. Does the facility have the following equipment identification records as an alternative to physically tagging each piece of equipment:			
(a) General identification of equipment that is subject to subpart HHHHH (e.g., on a plant site plan, in log entries, designation of process unit or affected source boundaries, etc.)? *§§63.1022(a) and 63.1038(b)(1)*	☐ Y	☐ N/A	☐ N
(b) Specific identification of connectors (either individually or the total number of connectors as a group in a designated area)? *§§63.1022(b)(1) and 63.1038(b)(1)* *Note: Inaccessible, ceramic, or ceramic-lined connectors are exempt from this recordkeeping requirement.*	☐ Y	☐ N/A	☐ N
(c) Specific identification of pumps in light liquid service, agitators, pressure relief devices in gas and vapor service, and compressors from which leaks are routed to a process, a fuel gas system, or through a closed-vent system to a control device? *§§63.1022(b)(2) and 63.1038(b)(1)* *Note: Questions 15 and 17 are the only other questions in this checklist (i.e., Table 4-3) that apply to this equipment if emissions are routed through a closed-vent system to a control device. Only question 17 applies if emissions are routed to a process or fuel gas system.*	☐ Y	☐ N/A	☐ N
(d) Specific identification of pressure relief devices that are equipped with rupture disks? *§§63.1022(b)(3) and 63.1038(b)(1)*	☐ Y	☐ N/A	☐ N
(e) Specific identification of instrumentation systems? *§§63.1022(b)(4) and 63.1038(b)(1)*	☐ Y	☐ N/A	☐ N
(f) Specific identification (either by list, location, or other method) of equipment in organic HAP service less than 300 hours per calendar year within the affected source? *§§63.1022(b)(5) and 63.1038(b)(1)*	☐ Y	☐ N/A	☐ N
(g) Identification of equipment designated as unsafe-to-monitor or difficult-to-monitor? *§63.1022(c)(3)*	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
2. If the facility has designated any valves, pumps, connectors, and/or agitators as unsafe to monitor, do they have a written plan describing the actual monitoring frequency that will be used (but not more frequently than would otherwise be required) and stating that any such equipment that is found to be leaking will be repaired following the same procedures as for any other leaking equipment? *§§63.1022(c)(4)(i) and 63.1038(b)(2)* *Note: No other records described in this checklist (i.e., Table 4-3) apply to equipment that is designated as unsafe to monitor.*	☐ Y	☐ N/A	☐ N
3. If the facility has designated any valves and/or agitators as difficult to monitor, do they have a written plan describing the actual monitoring frequency that will be used (at least once per year) and stating that any such equipment that is found to be leaking will be repaired following the same procedures as for any other leaking equipment? *§§63.1022(c)(4)(ii) and 63.1038(b)(2)* *Note: No other records described in this checklist (i.e., Table 4-3) apply to equipment that is designated as difficult to monitor.*	☐ Y	☐ N/A	☐ N
4. If the facility has designated any connectors as unsafe to repair, do records identify such connectors and explain why the connectors are unsafe to repair? *§§63.1022(d)(2) and 63.1038(b)(3)*	☐ Y	☐ N/A	☐ N
5. If the facility has designated any compressors as operating with an instrument reading of less than 500 ppm above background, do records identify such compressors? *§§63.1022(e) and 63.1038(b)(4)*	☐ Y	☐ N/A	☐ N
6. If the facility has determined that any equipment is in heavy liquid service, do they have records of the information, data, and analyses used to make such determinations? *§§63.1022(f)(1) and 63.1038(b)(5)*	☐ Y	☐ N/A	☐ N
7. When leaks are detected by instrument monitoring (for valves, pumps, connectors, agitators, pressure relief devices, and compressors) or by sensory monitoring (for pumps and agitators), does the facility maintain all of the following records: *§§63.1023(e)(2), 63.1024(f), and 63.1038(b)(6) and (7)* *Note: Although the rule does not explicitly require identification of leaking equipment, the records must be sufficiently specific to allow an inspector to determine compliance with the equipment leak repair requirements.*			
(a) The date of the first attempt to repair the leak?	☐ Y	☐ N/A	☐ N
(b) The date of successful repair of the leak?	☐ Y	☐ N/A	☐ N
(c) The maximum instrument reading measured by Method 21 at the time the leak was repaired or determined to be nonrepairable	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
(d) The reason for the delay if the leak was not repaired within 15 calendar days after the leak was detected? *Note: Section 63.1024(d) specifies conditions under which delay of repair is allowed.* *Note: If delay of repair was caused by depletion of stocked parts, the records must also document that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.*	☐ Y	☐ N/A	☐ N
(e) The dates of process unit (or affected source) shutdowns that occurred while the equipment was unrepaired?	☐ Y	☐ N/A	☐ N
8. For valves in gas and vapor service or in light liquid service, does the facility keep records of both of the following, as applicable:			
(a) The monitoring schedule? *§§63.1025(b)(3)(vi) and 63.1038(c)(1)(i)*	☐ Y	☐ N/A	☐ N
(b) All of the following information for valve subgroups: *§63.1025(b)(4)(iv) and 63.1038(c)(1)(ii)* *Note: Subgroups for a process unit or affected source are allowed only if less than 2 percent of the total number of valves in all subgroups are determined to be leaking.*			
• Which valves are assigned to each subgroup?	☐ Y	☐ N/A	☐ N
• Monitoring results and calculations made for each subgroup in each monitoring period (i.e., the total number of valves monitored, the number found leaking, the number of nonrepairable valves, the percent leaking in the subgroup, and the percent leaking for determining the subsequent monitoring frequency for the subgroup as specified in §63.1025(c)(1)(ii) and (2))?	☐ Y	☐ N/A	☐ N
• Which, if any, valves have been reassigned from one subgroup to another, the last monitoring result prior to a reassignment, and the date when the reassignment was made?	☐ Y	☐ N/A	☐ N
• The results of the semiannual overall performance calculations?	☐ Y	☐ N/A	☐ N
9. For pumps in light liquid service, does the facility keep all of the following records:			
(a) The occurrence and dates of weekly visual inspections for leaks? *§§63.1026(b)(4) and (e)(1)(v) and 63.1038(c)(2)(i) and (ii)* *Note: These inspections are not required for pumps with no external shaft.*	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
(b) All of the following records for pumps equipped with a dual mechanical seal system that includes a barrier fluid system: *§§63.1026(e)(1)(i) and 63.1038(c)(2)(iii)*			
• The design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both?	☐ Y	☐ N/A	☐ N
• An explanation of the design criteria; any changes to these design criteria; and the reasons for any changes?	☐ Y	☐ N/A	☐ N
10. For connectors in gas and vapor service or in light liquid service, does the facility maintain a record of the monitoring schedule (i.e., the start date and end date of each monitoring period)? *§§63.1027(b)(3)(v) and 63.1038(c)(3)* *Note: The monitoring and recordkeeping requirements do not apply to inaccessible, ceramic, or ceramic-lined connectors.*	☐ Y	☐ N/A	☐ N
11. For agitators in gas and vapor service or in light liquid service, does the facility maintain all of the following records:			
(a) The occurrence and dates of weekly visual inspections for leaks? *§§63.1028(c)(3) and 63.1038(c)(4)(i)* *Note: According to §63.1028(e)(2), these inspections are not required for agitators with no external shaft.* *Note: Although §63.1028(e)(1)(iv) does not explicitly require records documenting the inspection for agitators with dual mechanical seals, a record would be required in order to demonstrate compliance (similar to the requirement in §63.1026(e)(1)(v).*	☐ Y	☐ N/A	☐ N
(b) For each agitator equipped with a dual mechanical seal system that includes a barrier fluid system, the design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both; an explanation of the design criteria; any changes to the design criteria; and the reasons for any changes? *§§63.1028(e)(1)(vi)(B) and 63.1038(c)(4)(ii)*	☐ Y	☐ N/A	☐ N
12. For pressure relief devices in gas and vapor service, does the facility maintain records of the following information for monitoring within 5 days after a pressure release? *§§63.1030 (c)(3) and 63.1038(c)(5)* *Note: These requirements do not apply to pressure relief devices that are equipped with a rupture disk upstream of the pressure relief device.*			
(a) Date the monitoring was conducted?	☐ Y	☐ N/A	☐ N
(b) Background level measured?	☐ Y	☐ N/A	☐ N
(c) Maximum instrument reading measured?	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
13. For each compressor that is equipped with a seal system that includes a barrier fluid system, does the facility maintain records of either of the following:			
(a) the design criteria related to the presence and frequency of drips that indicates failure of the seal system, the barrier fluid system, or both; an explanation of the design criteria; any changes to the design criteria; and the reasons for any changes, or *§§63.1031(d)(2) and 63.1038(c)(6)(i)*	☐ Y	☐ N/A	☐ N
(b) If the facility complies with the alternative compressor standard (i.e., the compressor is designated as operating with an instrument reading of less than 500 parts per million above background), all of the following information for each compliance test: *§§63.1031(f)(2) and 63.1038(c)(6)(ii)*			
• Date of each compliance test?	☐ Y	☐ N/A	☐ N
• Background level measured?	☐ Y	☐ N/A	☐ N
• Maximum instrument reading?	☐ Y	☐ N/A	☐ N
14. If the facility has implemented a quality improvement program for pumps, are all of the following records maintained:			
(a) All of the following data for each pump: *§§63.1035(d)(2) and 63.1038(c)(7)(i)*			
• Pump type?	☐ Y	☐ N/A	☐ N
• Pump manufacturer?	☐ Y	☐ N/A	☐ N
• Seal type?	☐ Y	☐ N/A	☐ N
• Seal manufacturer?	☐ Y	☐ N/A	☐ N
• Pump design?	☐ Y	☐ N/A	☐ N
• Materials of construction?	☐ Y	☐ N/A	☐ N
• Barrier fluid or packing material, if applicable?	☐ Y	☐ N/A	☐ N
• Year installed?	☐ Y	☐ N/A	☐ N
• Service characteristics of the pumped stream?	☐ Y	☐ N/A	☐ N
• Maximum instrument readings observed in each monitoring observation before repair, response factor for the stream (if appropriate), instrument model number, and date of observation?	☐ Y	☐ N/A	☐ N
• If a leak was detected, the repair methods used and the instrument readings after repair?	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
• If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units or affected sources, a description of any maintenance or quality assurance programs used in the process unit or affected source that are intended to improve emission performance?	☐ Y	☐ N/A	☐ N
(b) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices? *§§63.1035(e)(3)(i) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
(c) All of the following information for each trial evaluation program: *§§63.1035(d)(6)(i), (d)(6)(iii), (d)(6)(vi), (e)(3)(ii), and (e)(3)(iii); and 63.1038(c)(7)(ii) and (iii)* *Note: Section 63.1035(d)(6) describes the situations under which a trial evaluation program must be conducted.*			
• A list of the candidate superior performing pump seal designs or technologies to be evaluated?	☐ Y	☐ N/A	☐ N
• The reasons for rejecting any specific candidate superior emission performing pump technologies from performance trials?	☐ Y	☐ N/A	☐ N
• The stages for evaluating the candidate pump designs or pump seal technologies?	☐ Y	☐ N/A	☐ N
• The anticipated time period necessary to test the applicability of candidate designs or technologies?	☐ Y	☐ N/A	☐ N
• The frequency of monitoring or inspection of the equipment?	☐ Y	☐ N/A	☐ N
• The range of operating conditions over which the component will be evaluated?	☐ Y	☐ N/A	☐ N
• The beginning date and actual duration of performance trials for each candidate superior emission performing technology?	☐ Y	☐ N/A	☐ N
• Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps?	☐ Y	☐ N/A	☐ N
• If all alternatives are judged to be technically infeasible or incapable of reducing emissions, an engineering evaluation of each alternative documenting the physical, chemical, or engineering basis for the judgment?	☐ Y	☐ N/A	☐ N
(d) All of the following records of ongoing activities during the QIP:			
• The rolling average percent leaking pumps? *§§63.1035(e)(1)(i) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records			
• Documentation of all inspections of pumps or pump seals that exhibited frequent seal failures and were removed from the process unit or affected source due to leaks? *§§63.1035(d)(4) and (e)(1)(ii) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
• The beginning and end dates for the QIP? *§§63.1035(e)(1)(iii) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
• If a leak is not repaired within 15 calendar days after its discovery, the reason for the delay and the expected date of successful repair? *§§63.1035(e)(2) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
(e) Quality assurance program documentation, including records indicating that all pumps replaced or modified during the period of the QIP are in compliance with the quality assurance program? *§§63.1035(d)(7) and (e)(4) and 63.1038(c)(7)(iv) and (v)*	☐ Y	☐ N/A	☐ N
(f) The following records related to the pump or pump seal replacement requirements: *Note: The number of years after starting the QIP when replacements must begin is specified in §63.1035(d)(8).*			
• Records documenting compliance with the 20 percent or greater annual replacement rate? *§§63.1035(e)(5) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
• If complying with the schedule for corporations with fewer than 100 employees, information documenting the number of employees, including employees providing professional and technical contracted services? *§§63.1035(e)(6) and 63.1038(c)(7)(v)*	☐ Y	☐ N/A	☐ N
15. If emissions from pumps, agitators, pressure relief devices, or compressors are routed through a closed-vent system to a control device, are records maintained of all of the following information: *§63.998(d)(4) as referenced from §§63.1034(b), 63.982(b) and (c)(3), and 63.986(c)*			
(a) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams?	☐ Y	☐ N/A	☐ N
(b) The dates and descriptions of any changes in the design specifications?	☐ Y	☐ N/A	☐ N
(c) A description of the parameter or parameters monitored to ensure that the control device is operated and maintained as designed, and a description of why each parameter was selected for monitoring?	☐ Y	☐ N/A	☐ N
(d) Dates and durations when the monitored parameter values indicate the closed-vent system and control device(s) were not being operated as designed?	☐ Y	☐ N/A	☐ N
(e) Dates and durations when the monitoring device was inoperative?	☐ Y	☐ N/A	☐ N
(f) Dates and durations of startup and shutdown of the control device?	☐ Y	☐ N/A	☐ N

Table 4-3. (continued)

I. Review of Records

16. If the facility complies with the alternative equipment monitoring schedule for batch processes as specified in §63.1036(c), are records maintained of all of the following information: *§§63.1036(d) and 63.1038(c)(8)(ii)*

    Note: All other items in this checklist also apply when the facility complies with this alternative.

    (a) A list of equipment added to the batch product process since the last monitoring? ☐ Y ☐ N/A ☐ N

    (b) For any components for which the facility adjusts the monitoring frequency in accordance with this alternative, documentation demonstrating the proportion of time during the calendar year that the equipment is in use? ☐ Y ☐ N/A ☐ N

    (c) The following information related to monitoring any new equipment added to a reconfigured batch process:

    - Date of the monitoring? ☐ Y ☐ N/A ☐ N

      Note: The monitoring must be conducted within 30 days of startup of the process.

    - Either the actual monitoring results if leaks were found or a statement that the monitoring was conducted if no leaks were found? ☐ Y ☐ N/A ☐ N

17. Are all records kept for at least 5 years? *§63.10(b)(1)* ☐ Y ☐ N

    Note: Some records must be kept longer. For example, if connectors are monitored once every 8 years, leak repair records must be kept 5 years beyond the date of their last use. §63.1023(e)(2)

II. Visual Inspections

1. Are visible, weatherproof identifications attached to all equipment that has been determined to be leaking and has not yet been repaired, including equipment determined to be nonrepairable? *§63.1023(e)(1)* ☐ Y ☐ N/A ☐ N
2. Are visible, weatherproof identifications attached to all valves and connectors that were repaired less than 3 months ago? *§63.1024(c)(1)* ☐ Y ☐ N/A ☐ N
3. Is a rupture disk in place upstream of each pressure relief device for which the facility claims exemption from the otherwise required monitoring? *§63.1030(e)* ☐ Y ☐ N/A ☐ N
4. Are sampling connection systems equipped with a closed-purge, closed-loop, or closed-vent system? *§63.1032(b)* ☐ Y ☐ N/A ☐ N

   Note: In-situ sampling systems are exempt from this requirement. §63.1032(d)

Table 4-3. (continued)

II. Visual Inspections

5. Are open-ended valves and lines equipped with caps, blind flanges, plugs, or a second valve? *§63.1033(b)* *Note: Open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from this requirement. Open-ended lines and valves containing materials that would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard are also exempt.*	☐ Y	☐ N/A	☐ N
6. If the facility indicates equipment is vented to a control device, is a closed-vent system in place?	☐ Y	☐ N/A	☐ N

III. Note All Deficiencies

Table 4-4. Compliance Checklist for Pressure Testing to Identify Equipment Leaks

Note: Use this checklist for each process that is pressure tested as specified in §63.1036(b). A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records *§§63.1036(b)(7) and 63.1038(c)(8)(i)*

1. Do records identify each product produced during the calendar year (or codes for those products)?	☐ Y	☐ N/A	☐ N
2. Is the process equipment either physically tagged, or is it identified on a plant site plan, in log entries, or by some other method?	☐ Y	☐ N/A	☐ N
3. Is all of the following information recorded for each pressure test:			
(a) Date of the test?	☐ Y	☐ N/A	☐ N
(b) The test pressure?	☐ Y	☐ N/A	☐ N
(c) The observed pressure drop, for a gas pressure/vacuum test?	☐ Y	☐ N/A	☐ N
(d) Documentation of any visible, audible, or olfactory evidence of fluid loss, for a liquid pressure test?	☐ Y	☐ N/A	☐ N
4. Is all of the following information recorded anytime the process equipment train does not pass two consecutive pressure tests: *Note: Section 63.1036(b)(7)(v) specifies that these records must be maintained for only 2 years.*			
(a) The date of each pressure test?	☐ Y	☐ N/A	☐ N
(b) Repair methods applied in each attempt to repair the leak(s)?	☐ Y	☐ N/A	☐ N
(c) All of the following information if repair is not completed within 30 calendar days after the second pressure test:			
• Reason for the delay?	☐ Y	☐ N/A	☐ N
• Expected date for delivery of the replacement equipment?	☐ Y	☐ N/A	☐ N
• Actual date of delivery of the replacement equipment?	☐ Y	☐ N/A	☐ N
(d) Date of successful repair?	☐ Y	☐ N/A	☐ N
5. Are all records kept for at least 5 years, except as noted above? *§63.10(b)(1)*	☐ Y	☐ N/A	☐ N

Table 4-4. (continued)

II. Note All Deficiencies

Table 4-5. Checklist for Determining Compliance with the Enclosed Process Alternative for Equipment Leaks

Note: Use this checklist for each process or portion of a process that is enclosed and emissions from equipment leaks are routed through a closed-vent system to a control device in accordance with §63.1016 or §63.1037. A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means noncompliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records			
1. Does the facility have specific identification of equipment in enclosed process units from which equipment leaks are routed to a process, fuel gas system, or through a closed-vent system to a control device? *§63.1003(b)(2) or §63.1022(b)(2)* *Note: No other records in this checklist (Table 4-5) apply if emissions are routed to a process or fuel gas system.*	☐ Y	☐ N/A	☐ N
2. Do records document all of the following information about the process unit and the enclosure: *§§63.1037(b) and 63.1038(c)(9), or §§63.1016(b) and 63.1017(c)(7)*			
(a) Identification of the process unit and the organic HAP that it handles?	☐ Y	☐ N/A	☐ N
(b) A schematic of the process unit, enclosure, and closed-vent system?	☐ Y	☐ N/A	☐ N
(c) A description of the system used to create a negative pressure in the enclosure?	☐ Y	☐ N/A	☐ N
3. Do records document all of the following information, if emissions are routed through a closed-vent system to a control device: *§63.998(d)(4), as referenced from §§63.1037(a) or 63.1016(a), 63.1034(b)(2) or 63.1015(b), 63.982(b) and (c)(3), and 63.986(c)*			
(a) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams?	☐ Y	☐ N/A	☐ N
(b) The dates and descriptions of any changes in the design specifications?	☐ Y	☐ N/A	☐ N
(c) A description of the parameter or parameters monitored to ensure that the control device is operated and maintained as designed, and a description of why each parameter was selected for monitoring?	☐ Y	☐ N/A	☐ N
(d) Dates and durations when the monitored parameter values indicate the closed-vent system and control device(s) were not being operated as designed?	☐ Y	☐ N/A	☐ N
(e) Dates and durations when the monitoring device was inoperative?	☐ Y	☐ N/A	☐ N
(f) Dates and durations of startup and shutdowns of the control devices?	☐ Y	☐ N/A	☐ N
4. Are all records kept for at least 5 years? *§63.10(b)(1)*	☐ Y	☐ N/A	☐ N

Table 4-5. (continued)

II. Visual Inspections	
1. Is the equipment enclosed, and is a closed-vent system in place?	☐ Y ☐ N

III. Note All Deficiencies

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Section 5

Requirements for Wastewater and Heat Exchange Systems

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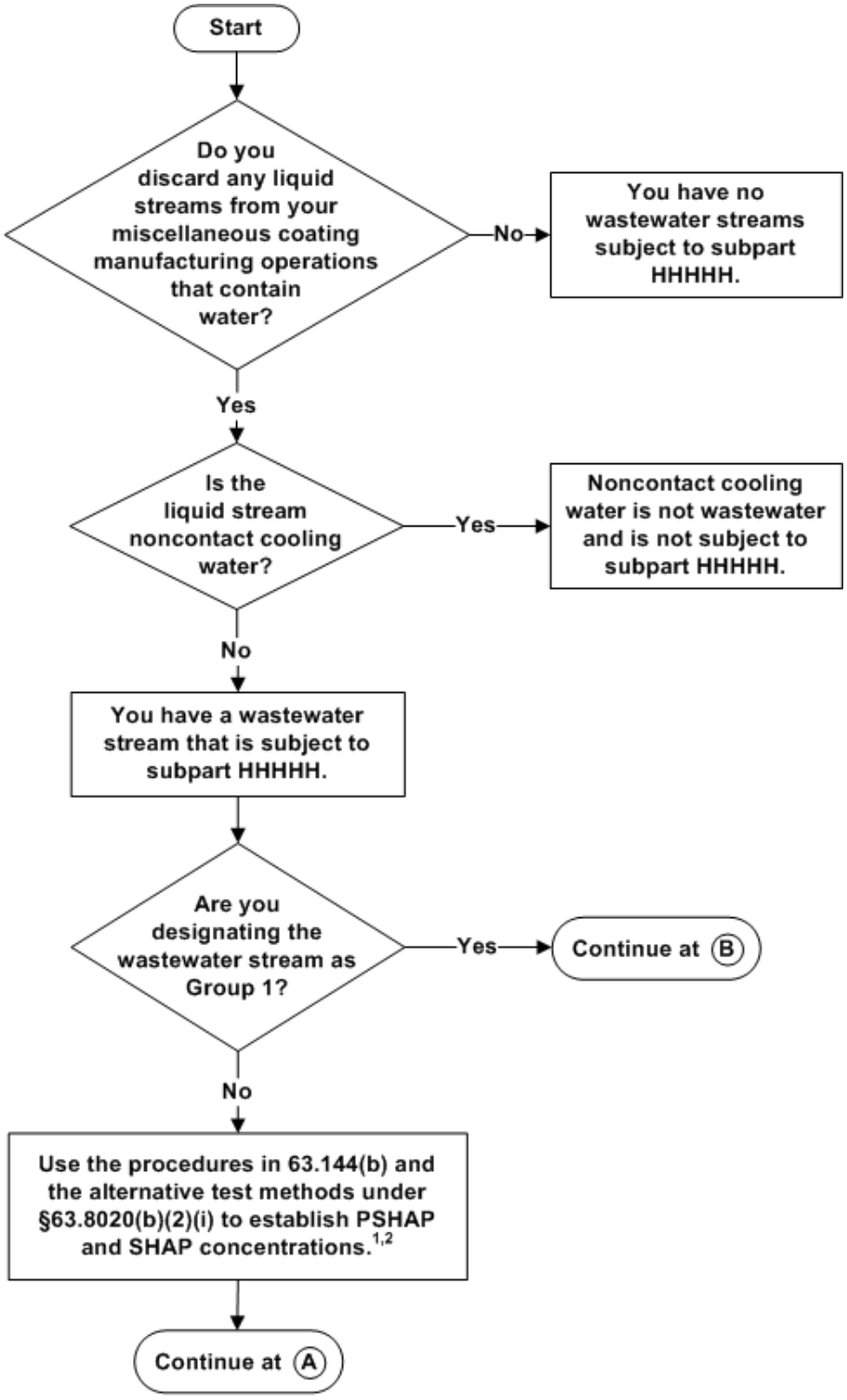

[1] PSHAP means partially soluble HAP that are listed in Table 7 to subpart HHHHH.
[2] SHAP means soluble HAP that are listed in Table 8 to subpart HHHHH.

Figure 5-1. Flowchart of applicability and control requirements for wastewater streams.

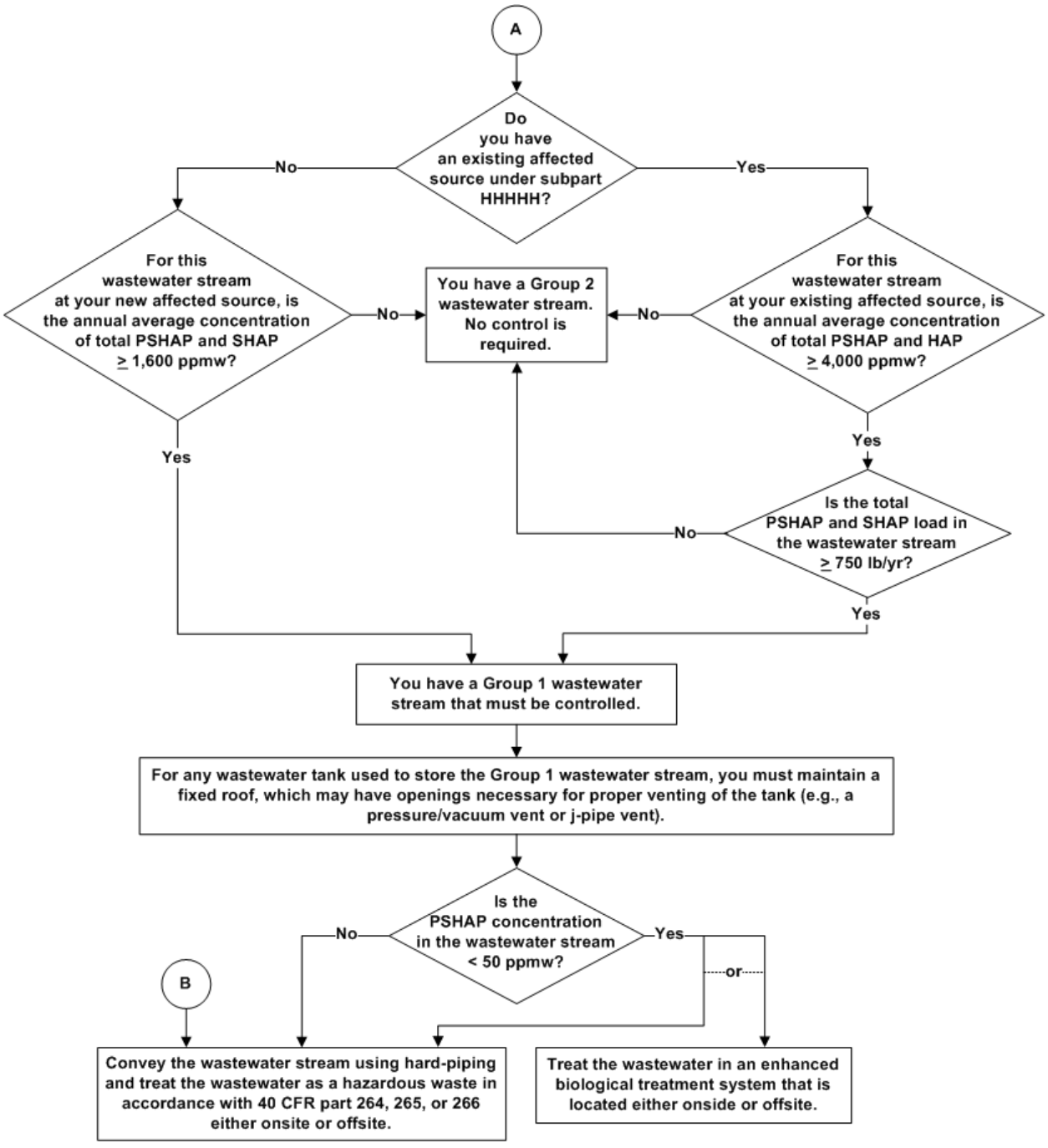

Figure 5-1. (continued)

Table 5-1. Compliance Checklist for Wastewater

Note: A "yes" response to a question in this checklist means compliance with that requirement, and a "no" response means non-compliance with the requirement. If a question is not applicable, check the "N/A" box.

I. Review of Records *(only applicable for treatment in an enhanced biological unit)*			
1. Do records indicate that the partially soluble HAP content of wastewater entering the enhanced biological treatment unit is < 50 ppmw? *Table 4 to subpart HHHHH*			☐ Y ☐ N
2. If the enhanced biological treatment unit is onsite, do records show that the facility provided either of the following in their precompliance report? *§63.8020(c)*			
(a) Proposed operating limits, monitoring frequencies, and methods for monitoring all of the following:			
• Total suspended solids?	☐ Y	☐ N/A	☐ N
• Biological oxygen demand?	☐ Y	☐ N/A	☐ N
• Biomass concentration?	☐ Y	☐ N/A	☐ N
(b) A request to monitor other parameters along with a description of planned recordkeeping and reporting procedures?	☐ Y	☐ N/A	☐ N
3. If the enhanced biological treatment unit is onsite, does the facility keep records of the monitored parameters? *§63.8020(c)*	☐ Y	☐ N/A	☐ N
4. If Group 1 wastewater is shipped offsite for enhanced biological treatment, does the facility have written certification from the offsite facility that they will comply with the requirements of subpart HHHHH? *§63.8080(d)*	☐ Y	☐ N/A	☐ N
5. Are records of monitored data, or certifications from offsite treatment facilities, kept for at least 5 years? *§63.10(b)(1)*	☐ Y	☐ N/A	☐ N

II. Visual Inspections			
1. For an onsite enhanced biological treatment unit, are monitoring devices in place and operating?	☐ Y	☐ N/A	☐ N
2. Are any wastewater tanks (prior to treatment or shipping offsite) equipped with a fixed roof? *Table 4 to subpart HHHHH*	☐ Y	☐ N/A	☐ N
3. If wastewater is treated as hazardous waste, is the wastewater conveyed onsite using only hard-piping? *Table 4 to subpart HHHHH*	☐ Y	☐ N/A	☐ N

Table 5-1. (continued)

III. Note All Deficiencies

Table 5-2. Compliance Checklist for Heat Exchange Systems Requiring Leak Detection

Note: A "yes" response to a question in this checklist means compliance with that requirement, and "no" responses means noncompliance with that requirement. If the requirement is not applicable, check the "N/A" box.

I. Review of Records			
1. Do records indicate that heat exchange systems are monitored for leaks by either of the following (provided they are not exempt from monitoring): *§63.104(b) and (c)*	☐ Y	☐ N	☐ N/A
(a) Monitoring for the presence of one or more HAP or other representative substances, or			
(b) Monitoring using a surrogate indicator of leaks?			
2. When monitoring of a surrogate indicator of heat exchange system leaks is used, is a monitoring plan available that contains all of the following: *§63.104(c)(1)*			
(a) The procedures that will be used to detect leaks of process fluids into cooling water?	☐ Y	☐ N	☐ N/A
(b) A description of the parameter(s) or condition(s) to be monitored?	☐ Y	☐ N	☐ N/A
(c) An explanation of how the selected parameter(s) or condition(s) will reliably indicate the presence of a leak?	☐ Y	☐ N	☐ N/A
(d) The parameter level(s) or condition(s) that constitute a leak, including supporting data and calculations?	☐ Y	☐ N	☐ N/A
(e) The monitoring frequency (which must be no less frequent than monthly for the first 6 months and quarterly thereafter?	☐ Y	☐ N	☐ N/A
(f) The records that will be maintained?	☐ Y	☐ N	☐ N/A
3. If monitoring results indicate a leak is detected, are records of all of the following available: *§63.104(d)(1), (f)(1)(i), and (f)(1)(ii)*			
(a) Monitoring records identifying the leak?	☐ Y	☐ N	☐ N/A
(b) Date the leak was detected?	☐ Y	☐ N	☐ N/A
(c) If the results were determined to be due to a condition other than a leak, the basis for that determination?	☐ Y	☐ N	☐ N/A
4. If the results are confirmed to be a leak, are records of all of the following available: *§63.104(f)(1)(iii) and (iv)*			
(a) Date(s) of efforts to repair the leak?	☐ Y	☐ N	☐ N/A
(b) The method or procedure used to confirm repair of the leak?	☐ Y	☐ N	☐ N/A
(c) Date the repair was confirmed?	☐ Y	☐ N	☐ N/A

Table 5-2. (continued)

I. Review of Records

5. If repair of a leak has been delayed, do records indicate either of the following, along with a schedule for completing the repair as soon as practical: *§63.104(e)(2)(i) and (ii)* (a) The basis of a determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair, or (b) Evidence that the necessary parts or personnel were not available to make the repair? *Note: Documentation is not necessary if the leaking equipment is isolated from the coating manufacturing operations, or if a shutdown is scheduled within the next 2 months after determination that a delay of repair is necessary. §63.104(e) introductory text and (e)(1)*	☐ Y	☐ N	☐ N/A
6. Are all records kept for at least 5 years? *§63.10(b)(1)*	☐ Y	☐ N	☐ N/A

II. Note All Deficiencies

Section 6

Requirements for Transfer Operations

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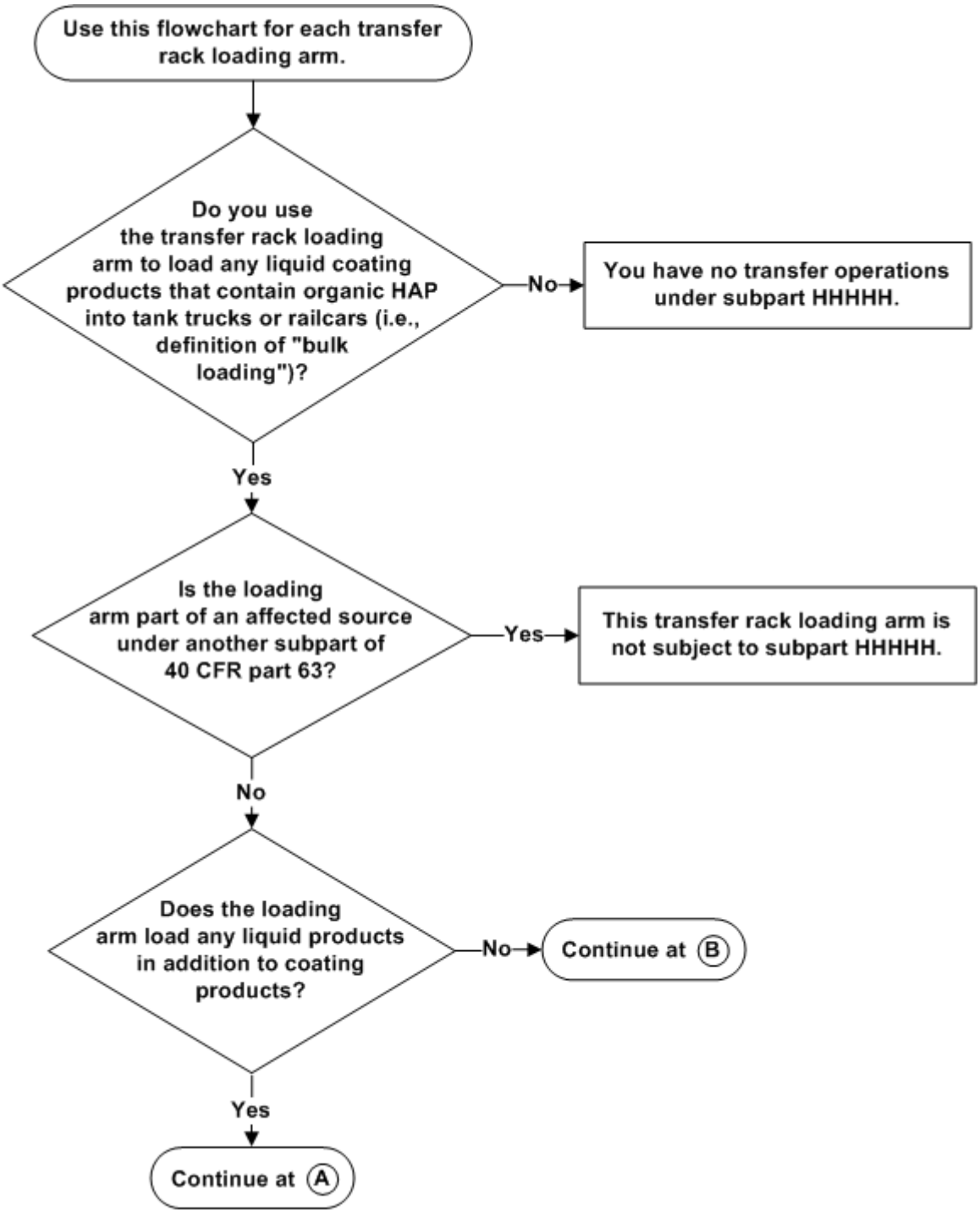
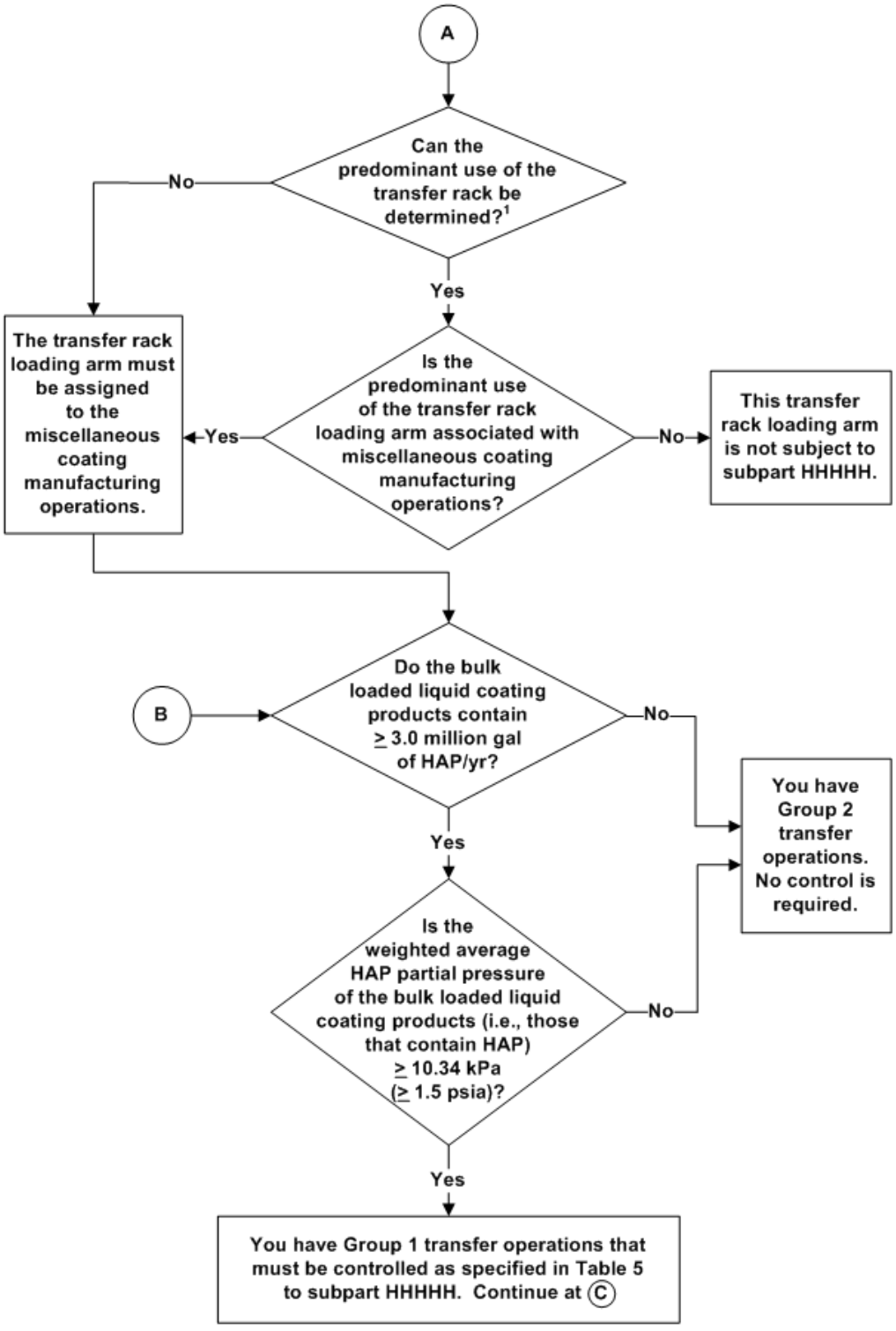
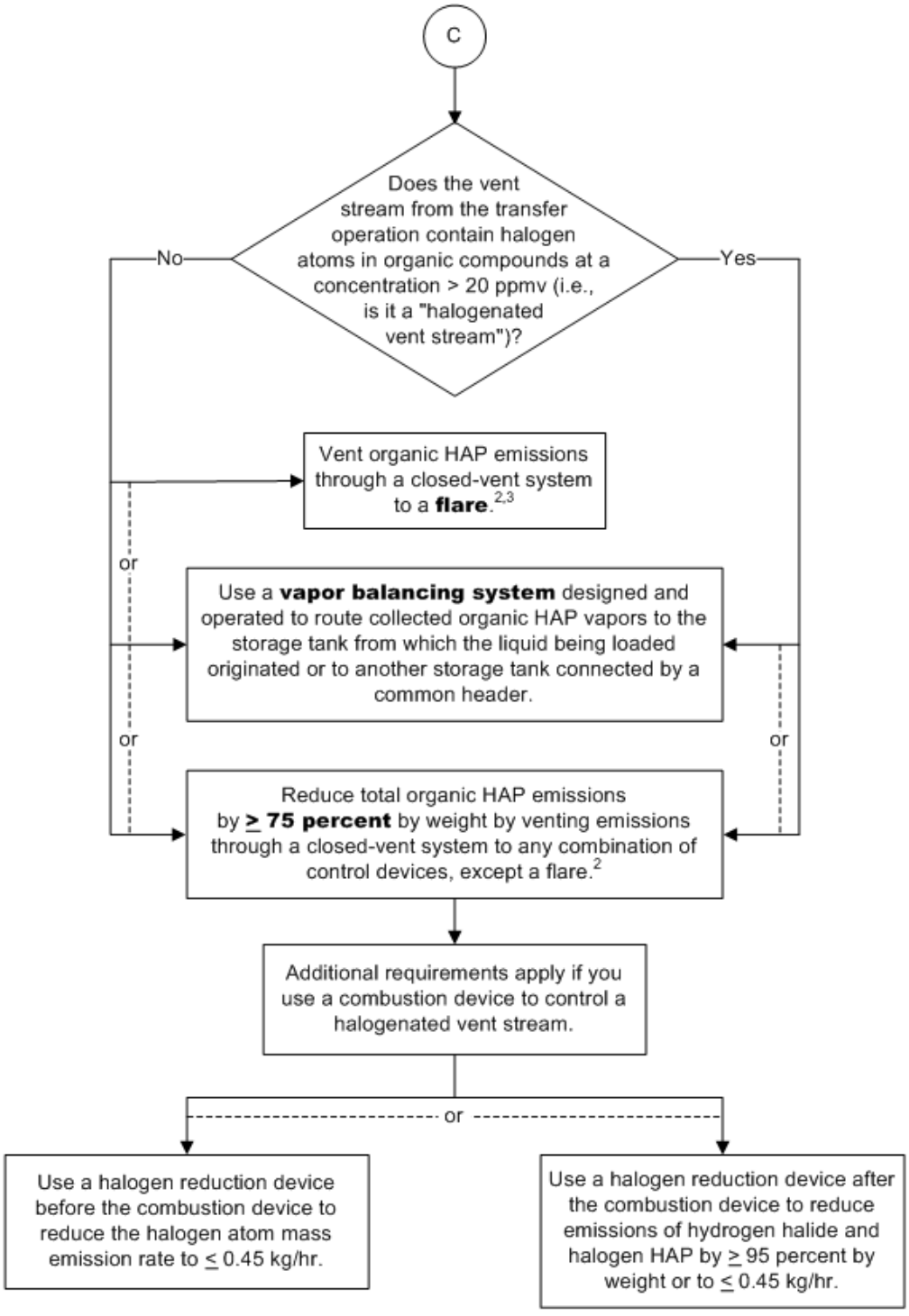


Figure 6-1. Flowchart of applicability and control requirements for transfer operations.



[1] Results of the initial determination of predominant use must be included in the notification of compliance status report. You must redetermine the predominant use at least once every 5 years after the compliance date.

Figure 6-1. (continued)



[2] **A closed-vent system is subject to the compliance requirements in §63.983 of subpart SS.**
[3] **A flare is subject to the compliance requirements in §63.11(b) of subpart A (General Provisions).**

Figure 6-1. (continued)