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**Inspection Tool for
the Hazardous Organic NESHAP
(HON)**

Volume II: Inspection Checklists

**U.S. Environmental Protection Agency
Chemical, Commercial Services, and Municipal Division
Washington, D.C. 20460**

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1.0 HOW TO USE THE CHECKLISTS

The checklists in this inspection tool are flexible, and suitable for several different approaches to examining a facility. These checklists may be used singularly or in combination at a facility where the user is seeking compliance information on a specific emission point or points, or the user may proceed through the entire group of checklists, section by section, if the approach to examining the facility begins with the initial question of whether there is a chemical manufacturing process unit (CMPU) at the facility that must comply with the HON.

Organization of the Checklists - If the users choose to proceed through the checklists sequentially, they may begin by determining which CMPU's are subject to the HON, which can be done with the checklists in [Section 3](#). Once the applicability is established (either through the checklists in [Section 3](#) or by prior information), the user can move on to the checklists in [Section 4](#) to determine which emission points are subject to the HON. This information allows the user to then move to the sections on emission points that are located at the facility. These sections are for process vents, transfer operations, storage vessels, and wastewater, and the checklists for each are found in [Sections 5, 6, 7, and 8](#), respectively. These sections contain the compliance checklists for the provisions that are unique to the specific emission point. These checklists may also refer to checklists in [Sections 9 and 10](#) which contain provisions that apply to multiple types of emission points (process vents, transfer operations, storage vessels, and wastewater). [Section 9](#) has checklists for control equipment requiring leak detection; it covers the provisions on bypass lines and leak inspection requirements for equipment like closed-vent systems. [Section 10](#) has compliance checklists for each of the control and recovery equipment listed in the rule. Thus, if a transfer rack is controlled using a flare, [Section 6](#) would give the general transfer rack compliance checklists, and refer to [Section 9](#) for the closed-vent system checklist and [Section 10](#) for the checklist on flares.

Flexible Use - However, the checklists may also be used in a flexible manner to examine only certain types of emission points at a facility or specific types of control devices. For example, the user may need to know only about the compliance status of process vents at a facility. In this case the user would be able to visit the facility and conduct an inspection by taking only the checklists in [Section 5](#) for process vents, [Checklist 9-1](#), (the only checklist in [Section 9](#) that applies to process vents), and [Section 10](#) for the control and recovery devices used to control process vents. If the inspector knew the specific control and/or recovery devices being used, the inspector could just take those specific checklists. Also, [Section 11](#) includes a series of checklists for specific types of reports. An inspector may want to inspect the most recent periodic report to make sure all the components are included. [Section 11](#) contains a checklist for periodic report.

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Another instance in which the user benefits from the flexibility of these checklists occurs when a specific control device or recovery device must be examined for compliance. For example, if the user has to examine only one device, such as a carbon adsorber at a Group 1 process vent emission point, it is only necessary to take [Checklist 10-6](#) from [Section 10](#).

The utility of these checklists resides in their capacity to function at a variety of inspection sites and to meet the needs of various approaches to inspecting for compliance at the site. Hence, the inspector may have little or no information about a facility and benefit from using all of the checklists together in order to determine compliance, or specific emission points and control devices may need inspection, so that the user can selectively apply those checklists from the sections as necessary.

These checklists provide the flexibility and ease of use so that the inspector may use them at facilities as efficiently as possible, and refer only to the necessary sections to select the checklists which pertain to that facility's emission point or points for their particular inspection needs.

Meaning of Responses - In general a "yes" response in the checklist indicates compliance and a "no" response indicates noncompliance. Exceptions to this are in the roadmap tables, tables that do not apply to the specific situation, and questions that do not apply to the situation being inspected. The roadmap tables are used to inform the inspector which checklists apply to the situation they are inspecting, therefore a "no" response would indicate that the compliance option does not apply and not that there is a compliance issue. Some tables do not apply to the situation being inspected. For instance, if an inspector is inspecting Group 1 process vents, [Table 5-3](#), Group 2 Process Vents, would not apply and should not be used. There are also specific questions in the checklists that might not apply to the situation being inspected. For example, if an inspector is inspecting Group 2 process vents and is using [Table 5-3](#) to perform the inspection, [item 4](#) may or may not be applicable. Item 4 only applies when a process change is made that changes the group status. If the facility has not made a change that affects the group status of the process vent being inspected, this item would not apply and should not be marked "yes" or "no". In all cases where an item in a checklist may not apply it is obvious in the language that the item is conditional. These items should be skipped when they do not apply.

2.0 PREPARING THE INSPECTION

Compliance with the HON can be determined by review of records and reports, review of performance tests, and visual inspections using the methods and procedures specified in the rule. As required by the rule, testing, monitoring, and inspections are to be carried out by the owner or operator, with records kept for 5 years. Therefore, the local, state, or federal inspector can determine compliance by a review of plant records, along with spot inspections to verify the operation, performance, and condition of the control equipment.

Prior to conducting the inspection, the inspector should become familiar with the regulation, search the EPA, state, or local agency files for information on the facility, and review all relevant information. The HON requires that the operating permit application submitted by each facility that is subject to the

regulation specify which emission points are subject to the HON and what type of control is applied to each emission point. The title V permit application is a good place to start the inspection. Much of the material concerning applicability will be addressed in the application. The Title V permit application can be reviewed along with the applicability requirements of the HON in order to identify any applicability concerns or questions the inspector may have. (The applicability checklists are located in [Sections 3 and 4](#) with group status checklists in the emission point-specific [Sections 5, 6 and 7.](#)) In reviewing the determination of group status, it is suggested that the inspector focus on the determination of Group 2 status, because the Group 1 emission points will be controlled (unless the facility is emissions averaging, which is not covered in this document).

Examples of when incorrect applicability determinations may be uncovered through review of the Title V permit application

- The source claims that a benzene units is part of a refinery.
- A process vent from a HON chemical manufacturing unit is routed to a refinery operation and the source claims it is not subject to the HON process vent provisions.

The inspector can also use the Title V permit application to develop a list of control devices to inspect. The most recent periodic report should provide information on the facility's compliance status. A review of files will help the inspector become familiar with the operation of the facility and the most recent compliance history. The compliance history and prior inspections will help the inspector prioritize areas of concern for the upcoming inspection. For example, if a leaking tank roof was identified in the last inspection, the inspector would want to check the facility records to verify that the tank roof was repaired in the allotted amount of time. The inspector may also want to visually inspect the tank to verify that it has been repaired.

The inspector may also need to gather safety and emissions detection equipment prior to the inspection. Some facilities will require inspectors to wear hard hats, safety glasses, and steel-toed shoes during their visual inspection. If the inspector will need to do any climbing to inspect equipment such as a tank roof, additional safety equipment may be necessary. If an inspector feels that it is necessary to enter a storage vessel, 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 1997). The inspector will also need a portable VOC analyzer to conduct Method 21 tests, and uniform probes for measuring gaps in storage tank roofs.

Because the review of records is the primary means of determining compliance, the local, state, or federal inspector should notify the facility management prior to inspection. This gives the facility

personnel enough time to gather relevant records and have them organized and available for review. The facility should also provide a map and/or process flow diagrams to the inspector.

The inspection consists of a review of records and reports kept by the plant, and a visual inspection of plant equipment. Volume II provides inspection checklists for process vents, transfer operations, storage vessels, and wastewater. The checklists will enable the inspector to systematically review the plant records and reports. Each checklist provides a series of yes and no statements. A "yes" response to all of the statements indicates compliance with the standard. However, there are a few statements in the checklists that can be checked "no", and the facility would still be in compliance. These exceptions are noted in the checklists. The inspector should copy the applicable checklists in Volume II prior to each inspection.

Inspectors should conduct visual inspections to verify that the records and reports provided by the facility are accurate. Visual inspections will also enable the inspector to assess the condition of the control equipment. When making visual inspections, the checklists, along with plant drawings and specifications, should be used. Notations should be made on the checklists if there are discrepancies between the plant records and reports and the visual inspections. Control equipment should be checked for obvious leaks and lack of maintenance.

3.0 APPLICABILITY OF THE HON

Section 3 takes the inspector through the determination of what chemical manufacturing process units (CMPU's) are subject to the HON. Tables 3-1 and 3-2 establish which CMPU's are subject to the HON. Table 3-1 refers the inspector to Table 3-2 when a facility has a flexible operation unit. Table 3-2 steps through the determination of the primary product and whether the flexible operation unit is subject to HON. Table 3-3 is used to determine the primary product of other CMPU's. The primary product of a CMPU is key in determining whether the CMPU is subject to the HON. Table 3-4 is a checklist to determine if new or existing requirements pertain to the HON source. Table 3-4 is used once it is determined, using Table 3-1 and/or 3-2, that the CMPU is subject to the HON. Table 3-5 provides a place for the inspector to take notes and identify the CMPU's subject to the HON.

Section 3. Applicability of the HON

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| Table 3-4 Determination of Applicability of Existing and New Source Requirements | II-9 |
| Table 3-5 Identification of CMPU's Subject to the HON | II-10 |

TABLE 3-1. APPLICABILITY OF THE HON

Complete this form to determine if a CMPU is subject to the HON.

1. Do total potential emissions at the plant site exceed 10 tpy of an individual HAP or 25 tpy of a combination of HAP's?

Y G Continue with this checklist.

N G The plant site is not subject to the HON.
2. Is the CMPU a petroleum refining process unit; an ethylene process unit; a solvent reclamation, recovery, or recycling operation at a hazardous waste TSDF^a facility; an R&D^b facility; or a process unit located in a coke by-product recovery plant?

Y G The CMPU is not subject to the HON.

N G Continue with this checklist.
3. Does the CMPU produce different intended products periodically throughout the year?

Y G The CMPU is a flexible operation unit. Skip to [Table 3-2](#) to determine primary product and applicability.

N G Continue with this checklist.
4. Is the primary product of the CMPU, as determined in [Table 3-3](#), a SOCOMI chemical (listed in Table 1 of Subpart F)?

Y G Continue with this checklist.

N G The CMPU is not subject to the HON.
5. Does the CMPU use as a reactant or manufacture as a product, co-product one of the organic HAP's listed in Table 2 of Subpart F?

Y G The CMPU is subject to the HON.^c

N G The CMPU is not subject to the HON.

^a TSDF = Treatment, storage, and disposal facility.

^b R&D = Research and development (see §63.101 of Subpart F for definition).

^c Determination of applicability must be reported as part of the operating permit application or as otherwise specified by the permitting authority.

TABLE 3-2. DETERMINATION OF PRIMARY PRODUCT AND APPLICABILITY FOR FLEXIBLE OPERATION UNITS^a

Complete this form to determine the primary product of a flexible operation unit and whether it is subject to the HON.

If the CMPU manufactures different products periodically, determine:

- The product manufactured for the greatest annual operating time.

If all products are manufactured for the same amount of operating time, determine:

- The product with the greatest annual production on a mass basis.

1. Is the product determined in either case above listed in Table 1 of Subpart F?

Y G The primary product of the CMPU is a SOCM I chemical. Continue with this checklist.

N G The primary product of the CMPU is not a SOCM I chemical, and the CMPU is not subject to the HON.

2. Does the flexible operation unit use as a reactant or manufacture as a product, or co-product one or more of the organic HAP's listed in Table 2 of Subpart F?

Y G The CMPU is subject to the HON.^b

N G The CMPU is not subject to the HON.

^a Determination is based on the expected utilization for the five years following April 22, 1994 for existing sources and the five years after initial start-up for new sources.

^b Determination of applicability must be reported as part of the operating permit application or as otherwise specified by the permitting authority.

TABLE 3-3. DETERMINATION OF THE PRIMARY PRODUCT

Complete this form if referred from [Table 3-1](#). It is used to determine the primary product of CMPU's other than flexible operating units.

List the intended products for the CMPU.

1. Does one of the intended products have the greatest annual design capacity on a mass basis (e.g., makes up >50% on a mass basis if two products are made)?

Y G This is the primary product of the CMPU.

N G Continue with this checklist.

 2. If two or more of the intended products have the same annual design capacity on a mass basis, are any or all of the products listed in Table 1 of Subpart F?

Y G Any of the products that are listed in Table 1 of Subpart F may be designated the primary product of the CMPU. Thus, the primary product is a SOCMI chemical. Go to [question 5](#) on [Table 3-1](#).

N G The primary product is not a SOCMI chemical, and the CMPU is not subject to the HON.
-
-

TABLE 3-4. DETERMINATION OF APPLICABILITY OF EXISTING AND NEW SOURCE REQUIREMENTS

Complete this form to determine if a chemical manufacturing process unit (CMPU) subject to the HON, as determined in [Tables 3-1](#) or [3-2](#), is a new or an existing source.

1. Is the CMPU a new construction (on-site fabrication, erection, or installation of an affected source); or is it a reconstruction of an existing CMPU where the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new CMPU.

Y G Continue with this checklist.

N G The CMPU is subject to existing source requirements.
2. Did the reconstruction commence after 12/31/92?

Y G The reconstructed CMPU is subject to new source requirements.

N G The reconstructed CMPU is subject to existing source requirements.
3. Did the construction commence after 12/31/92 and the addition has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combinations of HAPs?

Y G The constructed CMPU is subject to new source requirements.

N G The constructed CMPU is subject to existing source requirements.

4.0 Emission Point Applicability and Assignment of Emission Points to the Chemical Manufacturing Process Units

This section is used after the applicability of the HON to each CMPU has been established by using the previous section, Section 3. In this section, the inspector can determine which emission points associated with each HON CMPU are subject to the HON. There are a series of checklists for each type of emission point: Tables 4-1 through 4-3 for process vents, Tables 4-4 through 4-6 for transfer operations, Tables 4-7 through 4-9 for storage vessels, and Tables 4-10 and 4-12 for wastewater streams. In each series of checklists, the tables

walk through the applicability of the HON to the emission points, stepping through each exemption and cutoff that applies and the assignment procedures for assigning distillation units, storage vessels, and transfer operations to CMPU's. Once the assignment procedures are used to determine if an emission point is assigned to a CMPU subject to the HON, it can be concluded that the emission point is subject to the HON as long as all of the applicability statements are true. In each checklist series a table is provided for the inspector to make notes and identify the emission points subject to the HON. The wastewater checklist series also contains a checklist to determine if equipment handling process water is subject to the provisions of §63.149 of Subpart G.

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TABLE 4-1. APPLICABILITY CHECKLIST FOR PROCESS VENTS

| | | | |
|----|---|-----|-----|
| 1. | The vent stream is discharged from a chemical manufacturing process subject to the HON. (For process vents from distillation units, Table 4-2 is used to determine whether the distillation unit is part of a CMPU that is subject to the HON.) | Y G | N G |
| 2. | The vent is a gas stream containing greater than 0.005 weight percent HAP. | Y G | N G |
| 3. | The vent stream is continuously discharged (the vent is not associated with a batch process). | Y G | N G |
| 4. | The vent stream is from a reactor or air oxidation reactor or distillation unit, ^a and is either: | Y G | N G |
| | (a) Discharged directly to the atmosphere (with or without passing through a control device); or | | |
| | (b) Discharged after passing through a recovery device. | | |
| 5. | The vent is not a pressure relief device. ^b | Y G | N G |
| 6. | The vent is not a gaseous stream routed to a fuel gas system. | Y G | N G |
| 7. | The vent is not from a recovery device installed to control emissions from wastewater treatment operations. ^c | Y G | N G |
| 8. | The vent is not an equipment leak as defined in Subpart H. ^b | Y G | N G |

Is the vent subject to the HON process vent provisions?

G If all of the statements above are marked "Yes", the vent is subject to the process vent provisions in Subpart G of the HON.

G If any of the statements above are marked "No", the vent is not subject to the process vent provisions in Subpart G of the HON. No other checklists for these process vents apply.

^a The terms reactor, air oxidation reactor, distillation unit, are defined in §63.101 of Subpart F.

^b If false, the emission point is not subject to the process vents provisions of Subpart G, but may be subject to the equipment leak provisions in Subpart H of the HON.

^c If false, the emission point is not subject to the process vents provisions, but may be subject to the wastewater provisions in Subpart G of the HON.

TABLE 4-2. ASSIGNMENT OF DISTILLATION UNITS

Complete this form if referred from [Table 4-1](#). It is used to determine if a distillation unit is assigned to a CPMU subject to the HON, and therefore the process vents from the distillation unit are subject to the HON.

1. Aromex units: Is the distillation unit part of the Aromex unit that produces benzene, toluene, and xylene?
 - Y G The vent streams from the distillation unit are part of a CPMU that is subject to the HON.
 - N G Go to question 2.
2. Hexane units: Is the distillation unit part of the unit that produces hexane?
 - Y G The vent streams from the distillation unit are part of a CPMU that is subject to the HON.
 - N G Go to question 3.
3. Cyclohexane units: Is the distillation unit part of the unit that produces cyclohexane?
 - Y G The vent streams from the distillation unit are part of a CPMU that is subject to the HON.
 - N G Go to question 4.
4. Is the distillation unit used by a single CPMU?
 - Y G The distillation unit is assigned to that CPMU. Skip to question 7.
 - N G Continue with this checklist.
5. Is there a predominant use of the distillation unit?^a
 - a. Is the greatest input into the distillation unit from a CPMU located on the same plant site?
 - Y G The distillation unit is assigned to that CPMU. Skip to question 7.
 - N G Continue with this checklist.
 - b. Does a CPMU at the same plant site receive the greatest output from the distillation unit?
 - Y G The distillation unit is assigned to that CPMU. Skip to question 7.
 - N G Continue with this checklist.

TABLE 4-2. ASSIGNMENT OF DISTILLATION UNITS

6. If the distillation unit is shared among CMPU's so that there is no single predominant use, is at least one of the CMPU's subject to the HON?

Y G The distillation unit may be assigned to any one of the CMPU's subject to the HON and therefore the distillation unit is part of a CMPU that is subject to the HON. Go to [checklist 4-1](#), question 2.

N G The distillation unit is not subject to the HON.^b

7. Is the CMPU referred to in questions 4, 5a, or 5b subject to the HON?

Y G The distillation unit is part of a CMPU that is subject to the HON.^b Go to [checklist 4-1](#), question 2.

Y G The distillation unit is not part of a CMPU that is subject to the HON.^b

^a If the predominant use of the distillation unit varies from year to year, applicability of the HON is to be based on utilization between April 22, 1993 and April 22, 1994. This determination must be reported in the operating permit application or as otherwise specified by the permitting agency.

^b If there is a change in the material stored or a distillation unit that was dedicated to a single CMPU begins to serve another CMPU, applicability of the HON must be reevaluated.

TABLE 4-4. APPLICABILITY CHECKLIST FOR TRANSFER OPERATIONS

- | | | | |
|----|---|-----|-----|
| 1. | The transfer rack loads vessels other than marine vessels. | T G | F G |
| 2. | The transfer rack operates at pressures less than or equal to 204.9 kilopascals. | T G | F G |
| 3. | The transfer rack loads liquids that contain HAP's other than impurities. | T G | F G |
| 4. | The transfer rack does not use vapor balancing for all loading of organic HAP-containing liquids. | T G | F G |

G If all of the statements above are marked "Yes", see [Table 4-5](#) to determine if the transfer rack is part of a CMPU unit subject to the HON and is therefore subject to the transfer provisions in Subpart G of the HON.

G If any of the statements above are marked "No", the transfer rack is not subject to the transfer rack provisions in Subpart G of the HON. No other checklists for these transfer racks apply.

TABLE 4-5. ASSIGNMENT OF TRANSFER RACKS

Complete this form if referred from [Table 4-4](#). It is used to determine if any part of the transfer rack is assigned to a CMPU subject to the HON, and, therefore, the transfer rack, arm, or hose is subject to the HON.

1. Is the transfer rack used by a single CMPU?
 - Y G The transfer rack is assigned to that CMPU. Skip to question 5.
 - N G Continue with this checklist for each individual loading arm or loading hose.

2. Is the loading arm or loading hose dedicated to the transfer of liquid organic HAP from a single unit?
 - Y G The loading arm or loading hose is assigned to that CMPU. Skip to question 5.
 - N G Continue with this checklist.

3. Does one CMPU provide the greatest amount of the material that is loaded by a loading arm or loading hose?^a
 - Y G The loading arm or loading hose is assigned to that CMPU. Skip to question 5.
 - N G Continue with this checklist.

4. If the transfer rack is shared among CMPU's so that there is no single predominant use, is at least one of the CMPU's providing material to the loading arm or loading hose subject to the HON?
 - Y G The loading arm or loading hose may be assigned to any of the CMPU's subject to the HON and therefore the loading arm or loading hose is subject to the HON.^b
 - N G The loading arm or loading hose is not subject to the HON.^b

5. Is the CMPU referred to in questions 1, 2, or 3 subject to the HON?
 - Y G The transfer rack, loading arm, or loading hose is subject to the HON.^b
 - N G The transfer rack, loading arm, or loading hose is not subject to the HON.^b

^a If the predominant use of the transfer rack varies from year to year, applicability of the HON is to be based on utilization between April 22, 1993 and April 22, 1994. This determination must be reported in the operating permit application or as otherwise specified by the permitting authority.

^b If there is a change in the material loaded, applicability of the HON must be reevaluated.

**TABLE 4-6. IDENTIFICATION OF TRANSFER RACKS, LOADING ARMS, OR LOADING HOSES
SUBJECT TO THE HON**

Identify the transfer racks, loading arms, or loading hoses subject to the HON:

Use the checklists in Section 6 to determine which of these transfer operations are Group 1 and Group 2 and the requirements of the various control options.

TABLE 4-7. APPLICABILITY CHECKLIST FOR STORAGE VESSELS

| | | | |
|----|---|-----|-----|
| 1. | The storage vessel stores organic liquid containing organic HAP. | Y G | N G |
| 2. | The capacity of the storage vessel is greater than or equal to 38 m ³ . | Y G | N G |
| 3. | The storage vessel is not a pressure vessel designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. | Y G | N G |
| 4. | The organic HAP's stored in the vessel are not considered impurities. | Y G | N G |
| 5. | The storage vessel is not a surge control vessel, or bottoms receiver tank. ^a | Y G | N G |
| 6. | The storage vessel is not permanently attached to a motor vehicle. | Y G | N G |
| 7. | The storage vessel is not a wastewater storage tank. ^b | Y G | N G |

G Yes: If all of the statements above are marked "Yes", see [Table 4-8](#) to determine if the storage vessel is part of a CMPU subject to the HON and is therefore subject to the storage vessel provisions in Subpart G of the HON.

G No: If any of the statements above are marked "No", the storage vessel is not subject to the storage vessel provisions in Subpart G of the HON. No other checklists for these storage vessels apply.

^a If false, the emission point may be subject to the equipment leak provisions in Subpart H of the HON.

^b If false, the emission point may be subject to the wastewater provisions in Subpart G of the HON.

TABLE 4-8. ASSIGNMENT OF STORAGE VESSELS

Complete this form if referred from [Table 4-7](#). It is used to determine if any part of a storage vessel is assigned to a CPMU subject to the HON, and, therefore, the storage vessel is subject to the HON.

1. Is the storage vessel located in a tank farm (including a marine tank farm)?
 - Y G Continue with this checklist.
 - N G Skip to question 3.

2. Is there an intervening storage vessel used by a CPMU before the product or raw material is transferred to the storage vessel in the tank farm?
 - Y G The storage vessel in the tank farm is not subject to the HON.
 - N G Continue with this checklist.

3. Is the storage vessel used by a single CPMU?
 - Y G The storage vessel is assigned to that CPMU. Skip to question 6.
 - N G Continue with this checklist.

4. Is there a predominant use of the storage vessel?^a
 - a. Is the greatest input into the storage vessel from a CPMU located on the same plant site?
 - Y G The storage vessel is assigned to that CPMU. Skip to question 6.
 - N G Continue with this checklist.

 - b. Does a CPMU at the same plant site receive the greatest output from the storage vessel?
 - Y G The storage vessel is assigned to that CPMU. Skip to question 6.
 - N G Continue with this checklist.

5. If the storage vessel is shared among CPMU's so that there is no single predominant use, is at least one of the CPMU's subject to the HON?
 - Y G The storage vessel may be assigned to any one of the CPMU's subject to the HON and therefore the storage vessel is subject to the HON.^b
 - N G The storage vessel is not subject to the HON.^b

6. Is the CPMU referred to in questions 3, 4a, or 4b subject to the HON?
 - Y G The storage vessel is subject to the HON.^b

TABLE 4-8. ASSIGNMENT OF STORAGE VESSELS

N G The storage vessel is not subject to the HON.^b

^a If the predominant use of the storage vessel varies from year to year, applicability of the HON is to be based on utilization between April 22, 1993 and April 22, 1994. This determination must be reported in the operating permit application or as otherwise specified by the permitting authority.

^b If there is a change in the material stored, applicability of the HON must be reevaluated.

TABLE 4-10. APPLICABILITY CHECKLIST FOR PROCESS AND MAINTENANCE WASTEWATER

| | | | |
|----|--|-----|-----|
| 1. | The stream is water other than stormwater in a separate sewer. | Y G | N G |
| 2. | The stream is water other than a spill or water from a safety shower. | Y G | N G |
| 3. | The stream is water other than from fire fighting or deluge systems segregated in a separate sewer. | Y G | N G |
| 4. | The stream is water other than from testing or deluge system or testing of firefighting systems. | Y G | N G |
| 5. | The stream is discharged from a chemical manufacturing unit subject to the HON. | Y G | N G |
| 6. | The annual average concentration of Table 9 compounds of the wastewater ≥ 5 ppmw and the flowrate is ≥ 0.02 lpm, or the concentration of Table 9 compounds of the wastewater is $\geq 10,000$ ppmw at any flow rate. The concentration and flow are to be evaluated at the streams point of determination. | Y G | N G |

- | | |
|---|--|
| G | If all of the statements above are marked "Yes", the wastewater stream is subject to the wastewater provisions. ^a |
| G | If any of the statements above are marked "No", the wastewater stream is not subject to the wastewater provisions in Subpart G of the HON. No other checklists for these wastewater streams apply. |

^a The wastewater stream subject to the HON is either a process wastewater stream or a maintenance wastewater stream depending on if it was created from a process or a maintenance activity.

**TABLE 4-11. APPLICABILITY CHECKLIST FOR EQUIPMENT HANDLING
IN-PROCESS LIQUID STREAMS**

Complete this checklist to determine what equipment handling in-process liquid streams are subject to the § 63.149 of subpart G.

- | | | | |
|----|--|-----|-----|
| 1. | The equipment is a drain, drain hub, manhole, lift station, trench, pipe, oil-water separator and/or tank. | Y G | N G |
| 2. | The equipment handles water other than stormwater. | Y G | N G |
| 3. | The equipment handles water other than spill water and/or water from safety showers. | Y G | N G |
| 4. | The equipment handles water other than firefighting and/or deluge systems. | Y G | N G |
| 5. | The equipment handles water other than testing firefighting and/or deluge systems. | Y G | N G |
| 6. | The equipment handles water other than a combination of stormwater, spillwater, water from safety showers, water from firefighting, deluge systems, and/or water from the testing of firefighting and/or deluge systems. | Y G | N G |
| 7. | The equipment is part of a chemical manufacturing processing unit (CMPU) subject to the HON. | Y G | N G |
| 8. | The equipment is located at a CMPU subject to new or existing source requirements and contains water with an annual average concentration of Table 9 compounds $\geq 1,000$ ppmw at an average flow rate ≥ 10 lpm; or an annual average concentration of Table 9 compounds, $\geq 10,000$ ppmw at any flow rate; or the equipment is located at a CMPU subject to new source requirements and contains water with an annual average concentration of Table 8 compounds ≥ 10 ppmw at an average flowrate ≥ 10 lpm. | Y G | N G |

G If all of the statements above are marked "Yes", the equipment is subject to the provisions of § 63.149 of Subpart G.

G If any of the statements above are marked "No", the equipment is not subject to the provisions of § 63.149 of Subpart G.

5.0 PROCESS VENTS

This section of the inspection tool is used after determining that a facility has a process vent that is subject to the HON -- after working through the applicability checklists in [Sections 3](#) and [4](#). It contains a checklist to walk through the process vent group determination ([Table 5-1](#)), a list of the control options that the site may have chosen for the Group 1 process vents with pointers to the appropriate checklists for the chosen control techniques ([Table 5-2](#)), and a checklist for the requirements for Group 2 process vents ([Table 5-3](#)). Once it is determined that a facility has a Group 1 process vent, then [Table 5-2](#) is used to determine the control options. [Table 5-2](#) acts as a roadmap to determine which of the checklists in this document apply to Group 1 process vents. It refers to the checklist for bypass line provisions in [Section 9](#) and the appropriate control or recovery device checklists in [Section 10](#). [Table 5-3](#) is used once it is determined that the facility has a Group 2 process vent.

Section 5. Process Vents

| | | |
|----------------------------|---|-----------------------|
| Table 5-1. | Group Determination Checklist for Process Vents | II-27 |
| Table 5-2. | Roadmap to the Checklists for Group 1 Process Vents . . . | II-28 |
| Table 5-3. | Group 2 Process Vents | II-30 |

TABLE 5-1. GROUP DETERMINATION CHECKLIST FOR PROCESS VENTS

Complete this form for all process vents subject to the HON as determined in [Section 4](#).

Process Vents Group Determination^{a,b}

- | | | | |
|----|--|-----|----|
| 1. | The flow rate of the vent stream is ≥ 0.005 scmm. | Y G | NG |
| 2. | The HAP concentration of the vent stream is ≥ 50 ppmv. | Y G | NG |
| 3. | The TRE index value of the vent is ≤ 1.0 . ^c | Y G | NG |

Is the process vent Group 1?

- G** The process vent is Group 1 if all of the above statements are marked "Yes".
- G** The process vent is Group 2 if any of the above statements are marked "No".

^a Group 1 vents must meet the control requirements in §63.113 of Subpart G, unless they are included in an emissions average. Group 2 vents are not required to apply additional controls.

^b If an owner/operator complies with the 98 percent reduction, 20 ppmv, or flare control provisions in §63.113, group determination is not required.

^c The coefficients used in the equation to calculate the TRE index value are different for process vents at new and existing sources. See [Appendix C](#).

TABLE 5-2. ROADMAP TO THE CHECKLISTS FOR GROUP 1 PROCESS VENTS

This table is a roadmap to the checklists used to assess compliance with the Group 1 process vent provisions.

I. HALOGENATED AND NONHALOGENATED PROCESS VENTS.

1. Are emissions routed to a flare to control emissions (halogenated vents may not be flared unless a halogen reduction device is present prior to flaring—Option II.2 below)?

Y G Go to Checklists 9-1 and 10-1
 N G Continue with this checklist

2. Are emissions routed to a control device that reduces emissions by 98% or to an outlet concentration of 20 ppmv?

Y G Go to checklist 9-1, and select from below the checklist corresponding to the appropriate control device:
 G thermal incinerator, checklist 10-2;
 G catalytic incinerator, checklist 10-3;
 G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, checklist 10-4;
 G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, checklist 10-5;
 G carbon adsorber used as a recapture device, checklist 10-6;
 G absorber used as a recapture device, checklist 10-7;
 G condenser used as a recapture device, checklist 10-8; or
 G other control device used as a recapture device, checklist 10-9.

N G Continue with this checklist.

3. Does the process vent maintain a TRE index value greater than 1.0 using a recovery device?

Y G Select the checklist corresponding to the appropriate recovery device:
 G Carbon adsorber used as a recovery device, checklist 10-6;
 G Absorber used as a recovery device, checklist 10-7;
 G Condenser used as a recovery device, checklist 10-8;
 G Another recovery device not listed above, checklist 10-9.

All compliance options are listed in this checklist. The facility will be using one of the options in this checklist to be in compliance with the HON process vent provisions.

II. HALOGENATED VENTS THAT ARE COMBUSTED

1. Is the vent stream exiting the combustion device routed to a halogen reduction device?

Y G Go to checklist 10-10 when a scrubber is used.

N G Continue with this checklist.

TABLE 5-2. ROADMAP TO THE CHECKLISTS FOR GROUP 1 PROCESS VENTS

2. Is the vent stream routed to a halogen reduction device prior to combustion?

Go to checklist 10-10 when a scrubber is used.

The compliance options for halogenated vents are halogen reduction device prior to combustion or after. The facility will be using one of these options to be in compliance with the HON.

TABLE 5-3. GROUP 2 PROCESS VENTS

A "yes response to all questions in Part I will indicate compliance, and "no" responses will indicate noncompliance. Part II of this checklist is a roadmap to checklists that apply to Group 2 process vents using a recovery device to maintain the TRE index value greater than 1.0 and less than or equal to 4.0.

I. REVIEW OF RECORDS

- | | | | |
|----|--|-----|-----|
| 1. | Records of process changes and the recalculation of TRE index values are kept when the TRE index value of the vent stream is greater than 1.0. ^a | Y G | N G |
| 2. | Records of process changes and the recalculation of flow rate are kept when the flow rate of the vent stream is less than 0.005 standard cubic meter per minute. | Y G | N G |
| 3. | Records of process changes and the recalculation or remeasurement of concentration are kept if the concentration in the vent stream is less than 50 ppmv. | Y G | N G |
| 4. | Whenever process changes are made which cause a change in the status of the process vent stream, records are kept and a report was submitted within 180 days of the process modification or in the next PR describing the process modification and showing the results of the recalculation of flow rate, organic HAP concentration, and/or TRE index value. | Y G | N G |

II. ADDITIONALLY, FOR GROUP 2 PROCESS VENTS WITH A TRE INDEX VALUE GREATER THAN 1.0 AND LESS THAN OR EQUAL TO 4.0 USING A RECOVERY DEVICE TO MAINTAIN THE TRE

Is the process vent using:

- G Carbon adsorber used as a recovery device, [checklist 10-6](#);
- G Absorber used as a recovery device, [checklist 10-7](#);
- G Condenser used as a recovery device, [checklist 10-8](#);
- G Another recovery device not listed above, [checklist 10-9](#).

^a Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. Process changes do not include process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

6.0 TRANSFER OPERATIONS

Once the transfer operations subject to the HON are determined in [Section 4](#), this section can be used to determine which transfer racks require control (i.e., which racks are Group 1 and Group 2). This section also lists the control options for Group 1 transfer racks and the requirements of Group 2

transfer racks. [Table 6-1](#) provides a checklist to determine the group status of the transfer racks. [Table 6-2](#) lists the control options for Group 1 transfer racks. This table acts as a roadmap sending the inspector to the appropriate checklist depending on the method of compliance being used. [Table 6-2](#) refers to the closed-vent system checklists in [Section 9](#) and to the appropriate control device checklists in [Section 10](#). [Table 6-3](#) provides a checklist for a general recordkeeping requirement for both Group 1 and Group 2 transfer racks. [Table 6-4](#) provides a checklist for transfer racks where routing to a fuel gas system or process is used to control emissions.

Section 6. Transfer Operations

| | | |
|----------------------------|--|-----------------------|
| Table 6-1. | Group Determination Checklist for Transfer Operations . . . | II-32 |
| Table 6-2. | Roadmap to the Checklists for Group 1 Transfer Racks . . . | II-33 |
| Table 6-3. | Group 1 and Group 2 Transfer Racks | II-35 |
| Table 6-4. | Routing the Emissions from a Group 1 Transfer Rack to a Process or Fuel Gas System | II-36 |

TABLE 6-1. GROUP DETERMINATION CHECKLIST FOR TRANSFER OPERATIONS

Complete this form for all transfer operations subject to the HON as determined in [Section 4](#).

Transfer Rack Group Determination^a

- | | | | |
|----|--|-----|-----|
| 1. | The transfer rack loads more than 650,000 liters per year of liquid products containing organic HAP's. | Y G | N G |
| 2. | The transfer rack weighted average partial pressure is greater than or equal to 10.3 kilopascals. | Y G | N G |

Is the transfer rack Group 1?

- G The transfer rack is Group 1 if all of the above statements are marked "Yes".
- G The transfer rack is Group 2 if any of the above statements are marked "No".

^a Group 1 transfer racks must meet the control requirements in Section 63.126 of Subpart G during transfer operations when the operating pressures are less than or equal to 204.9 kilopascals, unless the rack is included in an emissions average. Group 2 transfer racks are not required to apply additional controls.

TABLE 6-2. ROADMAP TO THE CHECKLISTS FOR GROUP 1 TRANSFER RACKS

This table is a roadmap to the checklists used to assess compliance with the Group 1 transfer rack provisions.

I. HALOGENATED AND NONHALOGENATED VENT STREAMS

1. Are emissions routed to a flare to control emissions (halogenated vents may not be flared unless a halogen reduction device is present prior to flaring—Option II.2)?

Y G Go to [Checklists 9-1, 9-2, and 10-1](#).

N G Continue with this checklist.

2. Are the emissions routed to a control device that reduces emissions by 98% or to an outlet concentration of 20 ppmv?

Y G Go to [checklists 9-1 and 9-2](#), and select from below the checklist corresponding to the appropriate control device:

G thermal incinerator, [checklist 10-2](#);

G catalytic incinerator, [checklist 10-3](#);

G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);

G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);

G carbon adsorber, [checklist 10-6](#);

G adsorber, [checklist 10-7](#);

G condenser, [checklist 10-8](#); or

G other control device, [checklist 10-9](#).

N G Continue with this checklist.

3. Is vapor balancing used to control emissions?

Y G Go to [Checklists 9-1 and 9-2](#).

N G Continue with this checklist.

4. Are emissions routed to a fuel gas system or to a process?

Go to [Checklist 6-4](#).

All compliance options are listed in this checklist. The facility will be using one of the options in this checklist to be in compliance with the HON transfer provisions.

TABLE 6-2. ROADMAP TO THE CHECKLISTS FOR GROUP 1 TRANSFER RACKS

II. HALOGENATED VENTS THAT ARE COMBUSTED

1. Is the vent stream exiting the combustion device routed to a halogen reduction device?

Y G Go to [checklist 10-10](#) when a scrubber is used.

N G Continue with this checklist.

2. Is the vent stream routed to a halogen reduction device prior to combustion?

Go to [checklist 10-10](#) when a scrubber is used.

The compliance options for halogenated vent streams are halogen reduction prior to combustion or after. The facility will be using one of these options to be in compliance with the HON.

**TABLE 6-4. ROUTING THE EMISSIONS FROM A GROUP 1 TRANSFER RACK TO
A PROCESS OR FUEL GAS SYSTEM**

Complete this form when the emissions from a Group 1 transfer rack is routed to a process or fuel gas system. A "yes" response to the question will indicate compliance, and a "no" response will indicate noncompliance.

REVIEW OF RECORDS

- | | | | |
|----|--|-----|-----|
| 1. | The report was submitted that the emission stream is being routed to a fuel gas system or to a process was submitted in the NCS. | Y G | N G |
|----|--|-----|-----|
-
-

NCS = Notification of Compliance Status.

7.0 STORAGE VESSELS

After [Section 3](#) and [4](#) are used to determine which storage vessels are subject to the HON, [Section 7](#) is used to determine the group status of each storage vessel subject to the HON, the compliance options for Group 1 storage vessels, the requirements for Group 2 storage vessels, and the inspection checklists for floating roofs and control devices used to control emissions from storage vessels. [Table 7-1](#) is used to check the group status of each storage vessel. [Table 7-2](#) lists the control options for Group 1 storage vessels. The table is a roadmap directing the inspector to the applicable checklists depending on the compliance option that the owner or operator has chosen. [Table 7-3](#) is a checklist for general recordkeeping and reporting requirements for Group 1 and Group 2 storage vessels. [Table 7-4](#) provides a checklist for external floating roofs, [Table 7-5](#) covers internal floating roofs, and [Table 7-6](#) lists the requirements for an external floating roof converted to an internal floating roof. [Table 7-7](#) is a checklist for nonflare control devices used to control storage vessel emissions. [Table 7-8](#) is a checklist for storage vessel emissions routed to a process or fuel gas system.

Section 7. Storage Vessels

| | | |
|----------------------------|--|-----------------------|
| Table 7-1. | Group Determination Checklist for Storage Vessels | II-38 |
| Table 7-2. | Roadmap to the Checklists for Group 1 Storage Vessels | II-40 |
| Table 7-3. | Group 1 and Group 2 Storage Vessels | II-41 |
| Table 7-4. | Compliance Checklist for Group 1 Storage Vessels with External Floating Roofs | II-42 |
| Table 7-5. | Compliance Checklist for Group 1 Storage Vessels with Internal Floating Roofs | II-48 |
| Table 7-6. | Compliance Checklist for Group 1 Storage Vessels with an External Floating Roof Converted To an Internal Floating Roof | II-53 |
| Table 7-7. | Compliance Checklist for Group 1 Storage Vessels Equipped with a Closed-vent System and Control Device | II-58 |
| Table 7-8. | Compliance Checklist for Group 1 Storage Vessel Emissions Routed to a Process or Fuel Gas System | II-60 |

TABLE 7-1. GROUP DETERMINATION CHECKLIST FOR STORAGE VESSELS

Complete this form for all storage vessels subject to the HON as determined in [Section 4](#).

Storage Vessel Identification: _____

I. Group Determination For Storage Vessels at New Sources^{a,b}

- | | | | |
|----|--|-----|-----|
| a. | The storage vessel capacity is greater than or equal to 151 m ³ , and the vapor pressure of the stored organic HAP is greater than or equal to 0.7 kPa. ^c | Y G | N G |
| b. | The storage vessel capacity is greater than or equal to 38 m ³ and less than 151 m ³ , and the vapor pressure of the stored organic HAP is greater than or equal to 13.1 kPa. ^c | Y G | N G |

Is the storage vessel Group 1?

- | | |
|---|--|
| G | The storage vessel is Group 1 if either of the above statements is marked "Yes". |
| G | The storage vessel is Group 2 if both of the above statements are marked "No". |

II. Group Determination For Storage Vessels at Existing Sources^{a,d}

- | | | | |
|----|--|-----|-----|
| a. | The storage vessel capacity is greater than or equal to 151 m ³ and the vapor pressure of the stored organic HAP is greater than or equal to 5.2 kPa. ^c | Y G | N G |
| b. | The storage vessel capacity is greater than or equal to 75 m ³ and less than 151 m ³ , and the vapor pressure of the stored organic HAP is greater than or equal to 13.1 kPa. ^c | Y G | N G |

Is the storage vessel Group 1?

- | | |
|---|--|
| G | The storage vessel is Group 1 if either of the above statements is marked "Yes". |
| G | The storage vessel is Group 2 if both of the above statements are marked "No". |

TABLE 7-1. GROUP DETERMINATION CHECKLIST FOR STORAGE VESSELS

- a Group 1 storage vessels must meet the control requirements in § 63.119 of Subpart G of the HON, unless they are included in an emissions average. Group 2 storage vessels are not required to apply additional controls.
- b A "new" source refers to a source (not a storage vessel) that commenced construction or reconstruction after December 31, 1992.
- c "Vapor pressure" refers to the maximum true vapor pressure of total organic HAP at storage temperature.
- d An "existing" source refers to a source (not a storage vessel) that commenced construction or reconstruction before December 31, 1992.

TABLE 7-2. ROADMAP TO THE CHECKLISTS FOR GROUP 1 STORAGE VESSELS

This table is a roadmap to the checklists used to assess compliance with the Group 1 storage vessel provisions.

Storage Vessel Identification: _____

1. Is an external floating roof used to control emissions?
Y G Go to [checklist 7-4](#).
N G Continue with this checklist.
2. Is an internal floating roof used to control emissions?
Y G Go to [checklist 7-5](#).
N G Continue with this checklist.
3. Is an external floating roof converted to an internal floating roof used to control emissions?
Y G Go to [checklist 7-6](#).
N G Continue with this checklist.
4. Is a flare used to control emissions?
Y G Go to [checklists 9-1, 9-2, and 10-1](#).
N G Continue with this checklist.
5. Is a closed-vent system and a non-flare control device used to control emissions?
Y G Go to [checklists 7-7, 9-1, and 9-2](#).
N G Continue with this checklist.
6. Are the emissions routed to a fuel gas system or to a process?
Y G Go to [checklist 7-8](#).
N G If the facility is using another means to comply with the HON for Group 1 storage vessels, review records for compliance with the approved alternative means of emission limitation.

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

A "yes" response to all questions will indicate compliance, and a "no" response will indicate noncompliance with the standard.

Storage Vessel Identification: _____

REVIEW OF RECORDS

- | | | | |
|-----|---|-----|-----|
| 1. | Review records of Seal Gap Measurements. | | |
| (a) | Records indicate that seal gap measurements were made annually for the secondary seal and every five years for the primary seal. ^a | Y G | N G |
| (b) | When a failure is detected, the date and results of seal gap measurements are submitted in PR, annually for the secondary seal and every five years for the primary seal. | Y G | N G |
| (c) | When a failure is detected in the seal(s), the date and results of the visual inspection of the seals (which is performed together with the seal gap measurement) are included in the PR. | Y G | N G |
| (d) | The date of the seal gap measurement, the raw data obtained during the measurement, and the calculations made are recorded. | Y G | N G |
| (e) | The raw data and calculations recorded for seal gap measurements is consistent with the information reported in the PR. | Y G | N G |
| (f) | For each seal gap measurement in a PR, there is a report notifying the Administrator of the measurement in advance. If the measurement had been planned, then the report was submitted 30 days in advance of the measurement. If the measurement was not planned, then the report was submitted at least 7 days in advance of the measurement and included an explanation of why the measurement was unplanned. | Y G | N G |
| (g) | If a failure was detected during a seal gap measurement and visual seal inspection, the PR indicated the date and the nature of the repair or the date the vessel was emptied. | Y G | N G |

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

| | | | |
|---|--|-----|-----|
| (h) | If the report described in (g) documents that the repair was made more than 45 days after the failure was detected, then the next PR includes documentation of the use of up to two 30-day extensions for completing the repair, including identification of the storage vessel, a description of the failure, documentation that alternate storage capacity was unavailable, a schedule of actions to be taken to repair the control equipment or empty the vessel as soon as possible, and the date the storage vessel was emptied and the nature of and date the repair was made. | Y G | N G |
| 2. Review records of internal visual inspections. | | | |
| (a) | The occurrence of each internal visual inspection is recorded. | Y G | N G |
| (b) | For each internal visual inspection in which a failure was detected, the following information is submitted in the PR: (1) the date of the inspection, (2) identification of all storage vessels for which failures were detected, (3) a description of those failures, and (4) either the date and nature of the repair or the date the vessel was emptied. | Y G | N G |
| (c) | Any repairs performed as described in (b) were completed before the repaired storage vessel was refilled. | Y G | N G |
| (d) | For each internal visual inspection documented in a PR, there is a report notifying the Administrator in advance of the date the inspected vessel would be refilled after the inspection. If the inspection had been planned, the report was submitted 30 days in advance of refilling the vessel. If the inspection was not planned, then the report was submitted at least 7 days in advance of refilling the vessel and included an explanation of why the inspection was unplanned. | Y G | N G |

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

VISUAL INSPECTION

Note: The inspector should not perform the inspection while on the EFR if the roof is below four 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 four 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. | The EFR is resting on the liquid surface of the stored material, unless the EFR is resting on the roof leg supports because the vessel has just been emptied and degassed or the vessel is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| 2. | The external floating roof is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |
| 3. | There is a secondary seal installed above the primary seal. ^b | Y G | N G |
| 4. | Inspect the secondary seal. ^b | | |
| (a) | The secondary seal is continuous and completely covers the annular space between the EFR and the vessel wall. | Y G | N G |
| (b) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (c) | There are no visible gaps between the seal and the wall of the storage vessel, except as specified in (e)(1) and (e)(2). | Y G | N G |
| (d) | The seal is not detached from the floating deck. | Y G | N G |
| (e) | Perform seal gap measurement of the secondary seal as specified in §63.120(b)(1) through (b)(4) of the HON storage provisions. | | |
| (1) | The accumulated area of gaps between the vessel wall and the secondary seal does not exceed 21.2 cm ² per meter of vessel diameter. | Y G | N G |
| (2) | The maximum gap width between the vessel wall and the seal does not exceed 1.27 cm. | Y G | N G |

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

| | | | |
|-----|--|-----|-----|
| 5. | Inspect the primary seal. ^b | | |
| (a) | The primary seal is either a metallic shoe seal or a liquid-mounted seal. ^b | Y G | N G |
| (b) | The primary seal forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the EFR, except as described in (f)(1) and (f)(2). | Y G | N G |
| (c) | There are no holes, tears, or other openings in the seal fabric, seal envelope, or shoe (if a metallic shoe seal is used). | Y G | N G |
| (d) | If the primary seal is a metallic shoe seal: | | |
| (1) | The lower end of the metallic shoe seal extends into the stored liquid (no specific distance); | Y G | N G |
| (2) | The upper end of the metallic shoe seal extends a minimum vertical distance of 61 cm above the stored liquid surface; and | Y G | N G |
| (3) | There is a flexible coated fabric that spans the space between the metal shoe and the vessel wall. | Y G | N G |
| (e) | If the primary seal is a liquid-mounted seal, the seal is in contact with the liquid between the wall of the storage vessel and the EFR. | Y G | N G |
| (f) | Perform seal gap measurements of the primary seal as specified in §63.120(b)(1) through (b)(4) of the HON storage provisions. | | |
| (1) | The accumulated area of gaps between the vessel wall and the primary seal does not exceed 212 cm ² per meter of vessel diameter. | Y G | N G |
| (2) | The maximum gap width between the vessel wall and the seal does not exceed 3.81 cm. | Y G | N G |
| 6. | Inspect deck openings. | | |
| (a) | If the EFR is non-contact, then each opening in the floating roof, except automatic bleeder vents and rim space vents, provides a projection below the stored liquid's surface. ^c | Y G | N G |
| (b) | Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is equipped with a gasketed cover, seal, or lid which forms a vapor-tight seal. | Y G | N G |
| (c) | Each gasketed cover, seal, or lid on any opening in the EFR is closed, unless the cover or lid must be open for access. | Y G | N G |

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

| | | | |
|-----|---|-----|-----|
| (d) | Covers on each access hatch and gauge float well are bolted or fastened so as to be air-tight when closed. | Y G | N G |
| (e) | The gasket on each cover, seal, or lid described in (b) closes off the liquid surface from the atmosphere. | Y G | N G |
| 7. | Inspect automatic bleeder vents. | | |
| (a) | Automatic bleeder vents are closed, unless the roof is being floated off or is being landed on the roof leg supports. | Y G | N G |
| (b) | Automatic bleeder vents are gasketed. | Y G | N G |
| (c) | The gasket on the automatic bleeder vents close off the liquid surface from the atmosphere. | Y G | N G |
| 8. | Inspect rim space vents. | | |
| (a) | Rim space vents are closed, except when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. | Y G | N G |
| (b) | Rim space vents are gasketed. | Y G | N G |
| (c) | The gaskets on the rim space vents close off the liquid surface from the atmosphere. | Y G | N G |
| 9. | Each roof drain is covered with a slotted membrane fabric that covers at least 90 percent of the area of the opening. | Y G | N G |
| 10. | Each unslotted guide pole well has either a gasketed sliding cover or a flexible fabric sleeve seal. | Y G | N G |
| 11. | Each unslotted guide pole shall have on the end of the pole a gasketed cap which is closed at all times except when gauging the liquid level or taking liquid samples. | Y G | N G |
| 12. | Each slotted guide pole well is equipped with the following equipment: (1) a gasketed sliding cover or a flexible fabric sleeve seal, and (2) a gasketed float inside the guide pole or other control device which closes off the liquid surface from the atmosphere. | Y G | N G |
| 13. | Each gauge hatch/sample well has a gasketed cover which is closed (except when the hatch or well must be open for access). | Y G | N G |
| 14. | All of the gaskets described in 10 through 13 close off the liquid surface from the atmosphere. | Y G | N G |

PR = Periodic Report. EFR = External Floating Roof.

- a If an external floating roof has a liquid-mounted or metallic shoe primary seal as of December 31, 1992, a secondary seal is not required until the next emptying and degassing or April 22, 2004, whichever is later. For such storage vessels, measurement of gaps in the primary seal must be conducted once per year until a secondary seal is installed.

**TABLE 7-4. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH EXTERNAL FLOATING ROOFS**

- b If the external floating roof is equipped, as of December 31, 1992, 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 vessel is emptied and degassed, or (2) April 22, 2004.
- c If these openings (excluding automatic bleeder vents and rim space vents) did not provide projections below the liquid service as of December 31, 1992, this requirement does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) no later than April 22, 2004.

**TABLE 7-5. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH INTERNAL FLOATING ROOFS**

A "yes" response to all questions will indicate compliance, and a "no" response will indicate noncompliance with the standard.

Storage Vessel Identification: _____

REVIEW OF RECORDS

- | | | | |
|----|--|-----|-----|
| 1. | Review records of external visual inspections | | |
| | (a) The occurrence of each annual external visual inspection is recorded. If the floating roof is equipped with double seals, the source will not have performed this inspection if it chose to perform internal visual inspections once every 5 years instead of performing both annual external visual inspections and internal visual inspections at least once every 10 years. See Item 2 below. | Y G | N G |
| | (b) For each annual external visual inspection in which a failure was detected, the following information is submitted in the PR: (1) the date of the inspection, (2) identification of all storage vessels for which failures were detected, (3) a description of those failures, and (4) either the date and the nature of the repair or the date the vessel was emptied. | Y G | N G |
| | (c) If the report described in (a) and (b) documents that the repair was made more than 45 days after the failure was detected, then the next PR includes documentation of the use of up to two 30-day extensions for completing the repair and the following information: identification of the storage vessel, a description of the failure, documentation that alternate storage capacity was unavailable, a schedule of actions to be taken to repair the control equipment or empty the vessel as soon as possible, and the date the storage vessel was emptied and the nature of and date the repair was made. | Y G | N G |
| 2. | Review records of internal visual inspections. | | |
| | (a) The occurrence of each internal visual inspection is recorded. If the floating roof is equipped with double seals and the source chose not to perform annual external inspections [described in item 1(b)], this inspection will be performed, recorded, and reported at least every 5 years. | Y G | N G |

**TABLE 7-5. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH INTERNAL FLOATING ROOFS**

| | | | |
|-----|---|-----|-----|
| (b) | For each internal visual inspection in which a failure was detected, the following information is submitted in the PR: (1) the date of the inspection, (2) identification of all storage vessels for which failures were detected, (3) a description of those failures, and (4) the date and nature of the repair. | Y G | N G |
| (c) | Any repairs performed as described in (b) were completed before the repaired storage vessel was refilled. | Y G | N G |
| (d) | For each internal visual inspection documented in a PR, there is a report notifying the Administrator in advance of the date the inspected vessel would be refilled after the inspection. If the inspection had been planned, the report was submitted 30 days in advance of refilling the vessel. If the inspection was not planned, then the report was submitted at least 7 days in advance of refilling the vessel and included an explanation of why the inspection was unplanned. | Y G | N G |

VISUAL INSPECTIONS

Note: The inspector should be advised of the hazards of inspecting an internal floating roof vessel that contains a liquid hazardous air pollutant (HAP). An inspector may perform an external visual inspection of a storage vessel at any time (i.e., the vessel 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 vessel has been taken out of service (i.e., emptied, degassed and cleaned). Unless a vessel is taken out of service more frequently than is required by the HON, this internal inspection can only take place once every ten years, during those 30 days after which the State Agency has received notice that the vessel has been emptied and degassed and will subsequently be refilled. The inspector should never enter a storage vessel to inspect the IFR without first consulting documents that address the safety issues to consider while entering a confined space and while inspecting an IFR 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).

1. External Visual Inspection

| | | | |
|-----|---|-----|-----|
| (a) | The IFR is resting on the liquid surface of the stored material, unless the IFR is resting on the leg supports because the vessel has just been emptied and degassed or the vessel is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| (b) | The IFR is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |
| (c) | Inspect the seal (i.e., if a single-seal system is used, inspect the single seal, and if a double-seal system is used, inspect both the primary and secondary seals). | | |

**TABLE 7-5. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH INTERNAL FLOATING ROOFS**

| | | | |
|-----|---|-----|-----|
| (1) | The seal is not detached from the IFR. | Y G | N G |
| (2) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (3) | There are no visible gaps between the seal and the wall of the storage vessel. | Y G | N G |
| 2. | Internal Visual Inspection | | |
| (a) | The IFR is resting on the liquid surface of the stored material, unless the IFR is resting on the leg supports because the vessel has just been emptied and degassed or the vessel is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| (b) | The IFR is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |
| (c) | The IFR is equipped with one of the following closure devices, between the wall of the storage vessel and the edge of the IFR: (1) a liquid-mounted seal, (2) a metallic shoe seal, or (3) two seals (i.e., a primary and secondary seal), each of which forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the IFR. ^a | Y G | N G |
| (d) | Inspect the seal (i.e., if a single-seal system is used, inspect the single seal, and if a double-seal system is used, inspect both the primary and secondary seals). | | |
| (1) | The seal is not detached from the IFR. | Y G | N G |
| (2) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (3) | There are no visible gaps between the seal and the wall of the storage vessel. | Y G | N G |
| (e) | Inspect deck openings. | | |
| (1) | If the IFR is non-contact, then each opening in the floating roof, except for automatic bleeder vents and rim space vents, provides a projection below the stored liquid's surface. ^b | Y G | N G |
| (2) | Except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains, each opening in the IFR is equipped with a gasketed cover or lid. ^c | Y G | N G |
| (3) | Each cover or lid on any opening in the IFR is closed, unless the cover or lid is open for access. | Y G | N G |

**TABLE 7-5. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH INTERNAL FLOATING ROOFS**

| | | | |
|-----|---|-----|-----|
| (4) | Covers on each access hatch and automatic gauge float well are bolted or fastened so as to be air-tight when closed. | Y G | N G |
| (5) | The gasket on each cover or lid described in (3) closes off the liquid surface from the atmosphere. | Y G | N G |
| (f) | Inspect automatic bleeder vents. | | |
| (1) | Automatic bleeder vents are closed, unless the roof is being floated off or is being landed on the roof leg supports. | Y G | N G |
| (2) | Each automatic bleeder vent is gasketed. ^C | Y G | N G |
| (3) | The gasket on each automatic bleeder vent closes off the liquid surface from the atmosphere. | Y G | N G |
| (g) | Inspect rim space vents. | | |
| (1) | Rim space vents are closed, except when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. | Y G | N G |
| (2) | Rim space vents are gasketed. ^C | Y G | N G |
| (3) | The gaskets on the rim space vents close off the liquid surface from the atmosphere. | Y G | N G |
| (h) | Each, sample well (i.e., each penetration of the IFR for the purpose of sampling), has a slit fabric cover that covers at least 90 percent of the opening. ^C | Y G | N G |
| (i) | Each penetration of the IFR that allows for passage of a ladder has a gasketed sliding cover. ^C | Y G | N G |
| (j) | Each penetration of the IFR that allows for passage of a column supporting the fixed roof has either a flexible fabric sleeve seal or a gasketed sliding cover. ^C | Y G | N G |
| (k) | The gaskets described in (i) and (j) close off the liquid surface to the atmosphere. | Y G | N G |
| (l) | If a flexible fabric sleeve seal is used as described in (j), the fabric sleeve is free of defects (i.e., free of holes, tears, or gaps). | Y G | N G |

PR = Periodic Report. IFR = Internal Floating Roof.

- ^a If the internal floating roof is equipped, as of December 31, 1992, with a single vapor-mounted seal, then the requirement for a liquid-mounted seal or metallic shoe seal or two seals does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) April 22, 2004.

**TABLE 7-5. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH INTERNAL FLOATING ROOFS**

- b If these openings (excluding automatic bleeder vents and rim space vents) did not provide projections below the liquid service as of December 31, 1992, this requirement does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) no later than April 22, 2004.
- c If the internal floating roof did not meet these specifications as of December 15, 1992, the requirement to meet these specifications does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) no later than April 22, 2004.

**TABLE 7-6. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH AN EXTERNAL FLOATING ROOF CONVERTED TO
AN INTERNAL FLOATING ROOF**

A "yes" response to all questions will indicate compliance, and a "no" response will indicate noncompliance with the standard.

Storage Vessel Identification: _____

REVIEW OF RECORDS

1. Review records of external visual inspections
 - (a) The occurrence of each annual external visual inspection is recorded. If the floating roof is equipped with double seals, the source will not have performed this inspection if it chose to perform internal visual inspections once every 5 years instead of performing both annual external visual inspections and internal visual inspections at least once every 10 years. See Item 2 below. Y G N G
 - (b) For each annual external visual inspection in which a failure was detected, the following information is submitted in the PR: (1) the date of the inspection, (2) identification of all storage vessels for which failures were detected, (3) a description of those failures, and (4) either the date and the nature of the repair or the date the vessel was emptied. Y G N G
 - (c) If the report described in (a) and (b) documents that the repair was made more than 45 days after the failure was detected, then the next PR includes documentation of the use of up to two 30-day extensions for completing the repair and the following information: identification of the storage vessel, a description of the failure, documentation that alternate storage capacity was unavailable, a schedule of actions to be taken to repair the control equipment or empty the vessel as soon as possible, and the date the storage vessel was emptied and the nature of and date the repair was made. Y G N G
2. Review records of internal visual inspections.
 - (a) The occurrence of each internal visual inspection is recorded. If the floating roof is equipped with double seals and the source chose not to perform annual external inspections [described in item 1(b)], this inspection will be performed, recorded, and reported at least every 5 years. Y G N G

**TABLE 7-6. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH AN EXTERNAL FLOATING ROOF CONVERTED TO
AN INTERNAL FLOATING ROOF**

| | | | |
|-----|---|-----|-----|
| (b) | For each internal visual inspection in which a failure was detected, the following information is submitted in the PR: (1) the date of the inspection, (2) identification of all storage vessels for which failures were detected, (3) a description of those failures, and (4) the date and nature of the repair. | Y G | N G |
| (c) | Any repairs performed as described in (b) were completed before the repaired storage vessel was refilled. | Y G | N G |
| (d) | For each internal visual inspection documented in a PR, there is a report notifying the Administrator in advance of the date the inspected vessel would be refilled after the inspection. If the inspection had been planned, the report was submitted 30 days in advance of refilling the vessel. If the inspection was not planned, then the report was submitted at least 7 days in advance of refilling the vessel and included an explanation of why the inspection was unplanned. | Y G | N G |

VISUAL INSPECTIONS

Note: The inspector should be advised of the hazards of inspecting an external floating roof vessel converted to an internal floating roof vessel that contains a liquid hazardous air pollutant (HAP). An inspector may perform an external visual inspection of a storage vessel at any time (i.e., the vessel 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 vessel has been taken out of service (i.e., emptied, degassed and cleaned). Unless a vessel is taken out of service more frequently than is required by the HON, this internal inspection can only take place once every ten years, during those 30 days after which the State Agency has received notice that the vessel has been emptied and degassed and will subsequently be refilled. The inspector should never enter a storage vessel to inspect the floating roof without first consulting documents that address the safety issues to consider while entering a confined space and while inspecting an external floating roof vessel converted to an internal floating roof vessel that contains HAP-- EPA Order 1440.2 and the EPA document Guidance on Confined Space Entry in NESHAP Inspections of Benzene Storage Vessels (EPA-450/R-92-003, September 1992).

1. External Visual Inspection

| | | | |
|-----|---|-----|-----|
| (a) | The floating roof is resting on the liquid surface of the stored material, unless the floating roof is resting on the leg supports because the vessel has just been emptied and degassed or the vessel is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| (b) | The floating roof is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |

**TABLE 7-6. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH AN EXTERNAL FLOATING ROOF CONVERTED TO
AN INTERNAL FLOATING ROOF**

| | | | |
|-----|---|-----|-----|
| (c) | Inspect the seal (i.e., if a single-seal system is used, inspect the single seal, and if a double-seal system is used, inspect both the primary and secondary seals). | | |
| (1) | The seal is not detached from the floating roof. | Y G | N G |
| (2) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (3) | There are no visible gaps between the seal and the wall of the storage vessel. | Y G | N G |
| 2. | Internal Visual Inspection | | |
| (a) | The floating deck is resting on the liquid surface of the stored material, unless the floating deck is resting on the leg supports because the vessel has just been emptied and degassed or the vessel is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| (b) | The floating deck is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |
| (c) | The floating deck is equipped with one of the following closure devices, between the wall of the storage vessel and the edge of the floating deck: (1) a liquid-mounted seal, (2) a metallic shoe seal, or (3) two seals (i.e., a primary and secondary seal), each of which forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the floating deck. ^a | Y G | N G |
| (d) | Inspect the seal (i.e., if a single-seal system is used, inspect the single seal, and if a double-seal system is used, inspect both the primary and secondary seals). | | |
| (1) | The seal is not detached from the floating deck. | Y G | N G |
| (2) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (3) | There are no visible gaps between the seal and the wall of the storage vessel. | Y G | N G |
| (e) | Inspect deck openings | | |
| (1) | If the floating deck is non-contact, then each opening in the floating roof, except automatic bleeder vents and rim space vents, provides a projection below the stored liquid's surface. ^b | Y G | N G |

**TABLE 7-6. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH AN EXTERNAL FLOATING ROOF CONVERTED TO
AN INTERNAL FLOATING ROOF**

| | | | |
|-----|---|-----|-----|
| (2) | Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is equipped with a gasketed cover, seal, or lid which forms a vapor-tight seal. | Y G | N G |
| (3) | Each gasketed cover, seal, or lid on any opening in the floating deck is closed, unless the cover or lid must be open for access. | Y G | N G |
| (4) | Covers on each access hatch and gauge float well are bolted or fastened so as to be air-tight when closed. | Y G | N G |
| (5) | The gasket on each cover, seal, or lid described in (2) closes off the liquid surface from the atmosphere. | Y G | N G |
| (f) | Inspect automatic bleeder vents | | |
| (1) | Automatic bleeder vents are closed, unless the roof is being floated off or is being landed on the roof leg supports. | Y G | N G |
| (2) | Automatic bleeder vents are gasketed. | Y G | N G |
| (3) | The gaskets on the automatic bleeder vents close off the liquid surface from the atmosphere. | Y G | N G |
| (g) | Inspect rim space vents | | |
| (1) | Rim space vents are closed, except when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. | Y G | N G |
| (2) | Rim space vents are gasketed. | Y G | N G |
| (3) | The gaskets on the rim space vents close off the liquid surface from the atmosphere. | Y G | N G |
| (h) | Each roof drain is covered with a slotted membrane fabric that covers at least 90 percent of the area of the opening. | Y G | N G |
| (i) | Each unslotted guide pole well has either a gasketed sliding cover or a flexible fabric sleeve seal. | Y G | N G |
| (j) | Each unslotted guide pole shall have on the end of the pole a gasketed cap which is closed at all times except when gauging the liquid level or taking liquid samples. | Y G | N G |
| (k) | Each slotted guide pole well is equipped with the following equipment: (1) a gasketed sliding cover or a flexible fabric sleeve seal, and (2) a gasketed float inside the guide pole or other control device which closes off the liquid surface from the atmosphere. | Y G | N G |

**TABLE 7-6. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
WITH AN EXTERNAL FLOATING ROOF CONVERTED TO
AN INTERNAL FLOATING ROOF**

| | | | |
|-----|--|-----|-----|
| (l) | Each gauge hatch/sample well has a gasketed cover which is closed (except when the hatch or well must be open for access). | Y G | N G |
| (m) | All of the gaskets described in (i), (j), (k), and (l) close off the liquid surface from the atmosphere. | Y G | N G |

^a If the internal floating roof is equipped, as of December 31, 1992, with a single vapor-mounted seal, then the requirement for a liquid-mounted seal or metallic shoe seal or two seals does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) April 22, 2004.

^b If these openings (excluding automatic bleeder vents and rim space vents) did not provide projections below the liquid service as of December 31, 1992, this requirement does not apply until the earlier of the following dates: (1) the next time the storage vessel is emptied and degassed, or (2) no later than April 22, 2004.

**TABLE 7-7. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
EQUIPPED WITH A CONTROL DEVICE**

Complete this form for Group 1 storage vessels equipped with a closed-vent system and control device. If the control device is shared with a Group 1 process vent or Group 1 transfer rack, the provisions for control devices used for process vents and transfer racks can be followed instead of the provisions for storage vessels -- see process vent or transfer rack checklists. A "yes" response to all questions will indicate compliance and a "no" response will indicate noncompliance with this standard.

Storage Vessel Identification: _____

REVIEW OF RECORDS

- | | | | |
|-----|--|-----|-----|
| 1. | A design evaluation of the control device and a description of the gas stream entering the control device are recorded and reported in the NCS. ^{a,b,c} | | |
| (a) | If the control device is a thermal incinerator, the design evaluation includes the autoignition temperature of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature. ^{a,b} | Y G | N G |
| (b) | If the control device is a carbon adsorber, the design evaluation includes the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop is included. | Y G | N G |
| (c) | If the control device is a condenser, the design evaluation includes the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream. | Y G | N G |
| 2. | The documentation described in (a) demonstrates that the control device achieves 95-percent control efficiency during reasonably expected maximum loading conditions (or 90-percent efficiency if the control device was installed prior to December 31, 1992). | Y G | N G |
| 3. | Recorded and reported in the NCS are: (1) a description of the parameter (or parameters) to be monitored to ensure that the control device is operated and maintained in conformance with its design, (2) an explanation of the criteria used for selection of the parameter (or parameters), and (3) the frequency with which monitoring will be performed. | Y G | N G |
| 4. | For each monitoring parameter identified in the NCS, the operating range is recorded and reported in the NCS. | Y G | N G |
| 5. | Records of the monitored parameter (or parameters), as described in (c) and (d), are kept at the required frequency. | Y G | N G |

**TABLE 7-7. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSELS
EQUIPPED WITH A CONTROL DEVICE**

| | | | |
|----|---|-----|-----|
| 6. | Each occurrence when the monitored parameter (or parameters) was outside its parameter range (documented in the NCS) is recorded and reported in the PR. | Y G | N G |
| 7. | Each record and report described in (6) includes an explanation of why the measured parameter (or parameters) was outside of its established range. | Y G | N G |
| 8. | The total number of hours of routine maintenance of the control device during which the control device does not achieve a 95-percent control efficiency (or 90-percent control efficiency if the control device was installed prior to December 31, 1992) is recorded and reported in the PR. | Y G | N G |

VISUAL INSPECTION

| | | | |
|----|---|-----|-----|
| 1. | There are no visible gaps, holes, or corrosion spots seen in the ductwork of the vapor collection system. | Y G | N G |
| 2. | A device to monitor the parameter (or parameters) specified in the NCS is present. | Y G | N G |

NCS = Notification of Compliance Status

^a A design evaluation is not required for a boiler or process heater with a capacity of 44 MW or greater; a boiler or process heater burning hazardous waste with a final permit under 40 CFR Part 270 meeting the requirements of 40 CFR Part 266 Subpart H, or has certified compliance that it meets the requirements of 40 CFR Part 266 Subpart H; a hazardous waste incinerator with a final permit under 40 CFR Part 270 meeting the requirements of 40 CFR Part 264 Subpart O, or has certified compliance that it meets the requirements of 40 CFR Part 265 Subpart O; or a boiler or process heater into which the vent stream is introduced with the primary fuel.

^b If an enclosed combustion device is documented to have a minimum residence time of 0.5 seconds and a minimum temperature of 760°C, then additional documentation is not required.

^c If the control device used to comply with the storage vessel provisions is also used to comply with the process vent, transfer, or wastewater provisions, the performance test required by those provisions is an acceptable substitute for the design evaluation for determining compliance.

**TABLE 7-8. COMPLIANCE CHECKLIST FOR GROUP 1 STORAGE VESSEL
EMISSIONS ROUTED TO A PROCESS OR FUEL GAS SYSTEM**

Complete this form when the emissions from a Group 1 storage vessel is routed to a process or fuel gas system. A "yes" response to all questions will indicate compliance and a "no" response will indicate noncompliance with the standard.

Storage Vessel Identification: _____

REVIEW OF RECORDS

- | | | | |
|----|---|-----|-----|
| 1. | For emissions routed to a process, a design evaluation or engineering assessment demonstrating the extent to which the emissions are recycled, consumed, transformed by chemical reaction into materials that are not HAP's, incorporated into a product and/or recovered were submitted in the NCS. | Y G | N G |
| 2. | Records are kept for any by-pass of the fuel gas system or process. The records include the reason for the by-pass, duration of the by-pass, and documentation that the owner or operator either did not increase the liquid level in the storage vessel during the by-pass, routed the emissions through a closed-vent system to a control device during the by-pass, or the total aggregate time of by-pass without routing to a control device during the year has not exceeded 240 hours. | Y G | N G |
| 3. | If emissions are routed to a fuel gas system, the report was submitted as part of the NCS that the emission stream is routed to a fuel gas system. | Y G | N G |

8.0 WASTEWATER

Once it is determined that a wastewater stream is subject to the HON or there are items of equipment that meet the criteria of §63.149 of Subpart G, Section 8 can be used to carry out the inspection. **Table 8-1** is used to determine the group status of process wastewater streams.

Table 8-2 outlines the provisions for waste management units that receive, manage or treat Group 1 process wastewater streams. It

refers to other checklists in **Sections 7, 9, and 10** where the requirements are common to provisions for other emission points. **Table 8-3** is a compliance checklist for waste management units. **Table 8-4** is a compliance checklist for wastewater treatment. **Table 8-5** is a checklist for heat exchange systems requiring leak detection. **Table 8-6** is a roadmap for items of equipment handling in-process liquid streams and meeting the criteria of §63.149 of Subpart G (Table 4-11 steps through the determination of whether equipment meets the criteria of §63.149 of Subpart G). The table refers to checklists with requirements that are common to other types of emission points, **Sections 9 and 10**. **Table 8-6** is a compliance checklist for items of equipment handling in-process liquid streams.

Section 8. Wastewater

| | | |
|-------------------|---|--------------|
| Table 8-1. | Group Determination Check for Process Wastewater Streams | II-62 |
| Table 8-2. | Roadmap for the Checklists for Waste Management Units .. | II-63 |
| Table 8-3. | Compliance Checklist for Waste Management Units | II-67 |
| Table 8-4. | Compliance Checklist for Treatment Processes | II-74 |
| Table 8-5. | Compliance Checklist for Heat Exchange Systems Requiring Leak Detection | II-78 |
| Table 8-6. | Roadmap to the Checklist for Items of Equipment Handling In-Process Liquid Streams | II-81 |
| Table 8-7. | Compliance Checklist for Items of Equipment Handling In-Process Liquid Streams | II-85 |

TABLE 8-1. GROUP DETERMINATION CHECK FOR PROCESS WASTEWATER STREAMS

Complete this form for all wastewater streams subject to the HON as determined in [Section 4](#).

I. New Sources -- Group 1/Group 2 Determination for Streams Containing HAP's Listed on Table 8 of Subpart G of the HON

1. Is the flow rate ≥ 0.02 lpm and the concentration of Table 8 compounds ≥ 10 ppmw?
- Y G The wastewater stream is Group 1 for HAP's listed on Table 8 of Subpart G of the HON.
- N G The wastewater stream is Group 2 for HAP's listed on Table 8 of Subpart G of the HON. Continue to Section II of this table to determine if the wastewater stream is Group 1 for HAP's listed on Table 9 of Subpart G of the HON.

II. New and Existing Sources -- Group 1/Group 2 Determination for Streams Containing HAP's Listed on Table 9 of Subpart G of the HON

1. Is the total concentration of Table 9 compounds $\geq 10,000$ ppmw at any flow rate or is the total concentration of Table 9 compounds $\geq 1,000$ ppmw and the flow rate ≥ 10 lpm?
- Y G The wastewater stream is Group 1 for HAP's listed on Table 9 of Subpart G of the HON.
- N G The wastewater stream is Group 2 for HAP's listed on Table 9 of Subpart G of the HON.

TABLE 8-2. ROADMAP FOR THE CHECKLISTS FOR WASTE MANAGEMENT UNITS

Complete this form for waste management units receiving, managing, or treating Group 1 wastewater streams or a residual removed from a Group 1 wastewater stream. There is a specific Section of this form for each type of waste management unit. This table is a roadmap to the checklists used to assess compliance with the provisions for waste management.

Note: In addition to the checklists referred to below, complete [checklist 8-3](#) for all waste management units receiving, managing, or treating Group 1 wastewater streams or a residual removed from a Group 1 wastewater stream.

I. WASTEWATER TANKS

1. Are wastewater tanks controlled using a fixed roof^a?
 - Y G Go to [checklist 9-2](#).
 - N G Continue with this checklist.

2. Are wastewater tanks being controlled using a fixed roof and a closed-vent system routed to a control device?
 - Y G Go to checklists [9-1](#) and [9-2](#), and select from below the checklist corresponding to the appropriate control device:
 - G flare, [checklist 10-1](#);
 - G thermal incinerator, [checklist 10-2](#);
 - G catalytic incinerator, [checklist 10-3](#);
 - G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);
 - G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);
 - G carbon adsorber, [checklist 10-6](#);
 - G condenser, [checklist 10-8](#); or
 - G other control device, [checklist 10-9](#).
 - N G Continue with this checklist.

3. Are wastewater tanks controlled using an external floating roof?
 - Y G Go to [checklist 7-4](#).
 - N G Continue with this checklist.

TABLE 8-2. ROADMAP FOR THE CHECKLISTS FOR WASTE MANAGEMENT UNITS

4. Are wastewater tanks controlled using a fixed roof with an internal floating roof?

Y G Go to [checklist 7-5](#).

N G Continue with this checklist.

5. Are wastewater tanks controlled using an equivalent means of emission limitation?

If an owner or operator is using another method for achieving compliance other than one listed in 1 through 4, above, review the FEDERAL REGISTER notice permitting the use of the alternative and any monitoring records required.

II. SURFACE IMPOUNDMENTS

1. Are surface impoundments controlled using a cover with a closed-vent system that routes to a control device?

Y G Go to [checklists 9-1](#) and [9-2](#), and select from below the checklist corresponding to the appropriate control device:

- G flare, [checklist 10-1](#);
- G thermal incinerator, [checklist 10-2](#);
- G catalytic incinerator, [checklist 10-3](#);
- G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);
- G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);
- G carbon adsorber, [checklist 10-6](#);
- G condenser, [checklist 10-8](#); or
- G other control device, [checklist 10-9](#).

N G Continue with this checklist.

2. Are surface impoundments controlled using a floating flexible membrane cover?

Only checklist 8-3 applies to surface impoundments with floating flexible membrane covers.

Surface impoundments must have either a cover with closed-vent system routed to a control device or a floating flexible membrane cover; no other options apply.

TABLE 8-2. ROADMAP FOR THE CHECKLISTS FOR WASTE MANAGEMENT UNITS

III. CONTAINERS

Containers must have a cover.

Go to checklist 9-2 for containers $> 0.42\text{m}^3$ and for containers $\leq 0.42\text{m}^3$ that do not meet the existing DOT specifications and testing requirements.

IV. INDIVIDUAL DRAINS

1. Are individual drains controlled using a cover and, if vented, routed to a process or through a closed-vent system to a control device?

Y G Go to [checklist 8-3](#) and [9-2](#) for the covers; go to [checklists 9-1](#) and [9-2](#) if a closed-vent systems is being used; and select from below the checklist corresponding to the appropriate control device:

- G flare, [checklist 10-1](#);
- G thermal incinerator, [checklist 10-2](#);
- G catalytic incinerator, [checklist 10-3](#);
- G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);
- G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);
- G carbon adsorber, [checklist 10-6](#);
- G condenser, [checklist 10-8](#); or
- G other control device, [checklist 10-9](#).

N G Continue with this checklist.

2. Are individual drains controlled using water seal controls or a tightly fitting cap or plug for drains, tightly fitting solid covers for junction boxes, and covers or enclosures for sewer lines?

Only [checklist 8-3](#) applies to drains, junction boxes and sewer lines controlled in this way.

Individual drains must have either a cover and a closed-vent system routed to a control device or drains, junction boxes and sewer lines covered; no other options apply.

V. OIL-WATER SEPARATORS

1. Are oil-water separators controlled using a fixed roof and a closed-vent system routed to a control device?

Y G Go to [checklists 9-1](#) and [9-2](#), and select from below the checklist corresponding to the appropriate control device:

- G flare, [checklist 10-1](#);
- G thermal incinerator, [checklist 10-2](#);
- G catalytic incinerator, [checklist 10-3](#);
- G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);
- G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);
- G carbon adsorber, [checklist 10-6](#);

TABLE 8-2. ROADMAP FOR THE CHECKLISTS FOR WASTE MANAGEMENT UNITS

G condenser, [checklist 10-8](#); or
 G other control device, [checklist 10-9](#).

N G Continue with this checklist.

2. Are oil-water separators controlled using a floating roof?

Y G Only [checklist 8-3](#) applies to floating roofs used on oil-water separators.

N G Continue with this checklist.

3. Are oil-water separators controlled using an equivalent means of emissions limitation?

If an owner or operator is using another method for achieving compliance other than one listed in 1 through 2, above, review the FEDERAL REGISTER notice permitting the use of the alternative and any monitoring records required.

^a A fixed roof only cannot be used on wastewater tanks if the tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank are sparged. Also, this option cannot be used on tanks having a capacity greater than 75 m³ and less than 151 m³ storing liquid with a vapor pressure greater than or equal to 13.1 kPa, or for tanks with a capacity of 151 m³ or greater storing liquids with a vapor pressure greater than or equal to 5.2 kPa. For these tanks, one of the compliance options listed in 1b, 1c, 1d, or 1e must be used.

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

Complete this form for waste management units. See also [table 8-2](#) to determine if other checklists apply to waste management units. A “yes” response to all questions will indicate compliance and “no” responses will indicate noncompliance except where noted.

I. REVIEW OF RECORDS**A. FOR WASTEWATER TANKS, SURFACE IMPOUNDMENTS, CONTAINERS, INDIVIDUAL DRAIN SYSTEMS, AND OIL-WATER SEPARATORS**

- | | | | |
|-----|---|-----|-----|
| 1. | The occurrence of each semiannual visual inspection for improper work practices is recorded. | Y G | N G |
| 2. | The occurrence of each semiannual visual inspection for control equipment failures is recorded. | Y G | N G |
| 3. | For each inspection during which a control equipment failure was identified, the following were recorded and reported in the next PR ^a | | |
| (a) | Date of the inspection. | Y G | N G |
| (b) | Identification of the wastewater tank, surface impoundment, container, individual drain system, or oil-water separator having the failure. | Y G | N G |
| (c) | Description of the failure. | Y G | N G |
| (d) | Description of the nature of the repair. | Y G | N G |
| (e) | Date the repair was made. | Y G | N G |

B. ADDITIONALLY FOR CONTAINERS

- | | | | |
|----|---|-----|-----|
| 1. | A record of the capacity of each container at the facility is maintained. | Y G | N G |
|----|---|-----|-----|

C. FOR DRAIN, JUNCTION BOXES, AND SEWER LINES, AS AN ALTERNATIVE TO A.

- | | | | |
|----|---|-----|-----|
| 1. | A record documents the occurrence of each semiannual inspection of drains to ensure that caps or plugs are in place and properly installed [<u>or</u> 2] | Y G | N G |
| 2. | A record documents the occurrence of each semiannual verification of water supply to the drain. | Y G | N G |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

| | | | |
|--|---|-----|-----|
| 3. | A record documents the occurrence of each semiannual inspection of junction boxes to ensure that there are no gaps, cracks, or other holes in the cover. | Y G | N G |
| 4. | A record documents the occurrence of each semiannual inspection of the unburied portion of each sewer line to ensure that there are no cracks or gaps that could result in air emissions. | Y G | N G |
| D. ADDITIONALLY FOR OIL-WATER SEPARATORS WITH A FLOATING ROOF | | | |
| 1. | Records indicate that seal gap measurements were performed annually for the secondary seal and every five years for the primary seal. | Y G | N G |
| 2. | When a failure is detected, the date and results of seal gap measurements are submitted in periodic reports, annually for the secondary seal and every five years for the primary seal. | Y G | N G |
| 3. | When a control equipment failure is detected in the seal(s), the date and results of the visual inspection of the seals (which is performed together with the seal gap measurement) are included in the PR. | Y G | N G |
| 4. | The date of the seal gap measurement, the raw data obtained during the measurement, and the calculations made are recorded. | Y G | N G |
| 5. | The raw data and calculations recorded for seal gap measurements is consistent with the information provided in the PR. | Y G | N G |
| 6. | If a failure was detected during a seal gap measurement and visual seal inspection, the PR indicated the date and the nature of the repair or the date the wastewater tank was emptied. | Y G | N G |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

II. VISUAL INSPECTION
A. WASTEWATER TANKS, IF THE CONTROL EQUIPMENT IS A FIXED ROOF OR A FIXED ROOF WITH A CLOSED-VENT SYSTEM ROUTED TO A CONTROL DEVICE

- | | | | |
|----|--|-----|-----|
| 1. | All openings (e.g., access hatches, sampling ports, and gauge wells) are maintained in a closed position (e.g., covered by a lid) when not in use (e.g., during sampling, equipment maintenance, inspection, or repair). | Y G | N G |
|----|--|-----|-----|

B. SURFACE IMPOUNDMENTS

- | | | | |
|----|---|-----|-----|
| 1. | Access hatches and all other openings are closed when not in use. | Y G | N G |
| 2. | All control equipment is functioning properly (e.g., seals, joints, lids, covers, and doors are not cracked, gapped, or broken). | Y G | N G |
| 3. | For surface impoundments with floating flexible membrane covers, the floating flexible membrane cover is made of high density polyethylene with a thickness of no less than 2.5 millimeters, or a material that has an equivalent organic permeability and integrity for the intended service life of the floating cover. | Y G | N G |
| 4. | For surface impoundments with floating flexible membrane covers, all openings are equipped with closure devices such that there are no visible cracks, holes, gaps, or other open spaces between the perimeter of the cover opening and the closure device when it is closed. | Y G | N G |

C. CONTAINERS

- | | | | |
|-----|--|-----|-----|
| 1. | For containers with $0.1 \leq \text{capacity} \leq 0.42 \text{ m}^3$. | | |
| (a) | The container meets existing DOT specifications and testing requirements or the requirements of § 63.148 of subpart G which are contained in the checklists 9-1 and 9-2 . | Y G | N G |
| (b) | The cover and all openings are maintained in a closed position (e.g., covered by a lid) when not in use (e.g., during filling). | Y G | N G |
| 2. | For containers with capacity $>0.42 \text{ m}^3$. | | |
| (a) | The container is equipped with a submerged fill pipe that does not extend more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled. | Y G | N G |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

| | | | |
|------------------------------------|--|-----|-----|
| (b) | The cover and all openings, except those required for the submerged fill pipe and for venting to prevent damage or deformation of the container or cover, are closed. | Y G | N G |
| 3. | Whenever a container with capacity $\geq 0.1 \text{ m}^3$ is open, during treatment in the container of a Group 1 wastewater stream or residual, it is located within an enclosure that is routed by a closed-vent system to a control device. The closed-vent system meets the requirements in checklists 9-1 and 9-2 and the control device meets the requirements in the appropriate checklist in Section 10. | Y G | N G |
| 4. | All control equipment is functioning properly (e.g. covers and doors are not cracked, gapped, or broken). | Y G | N G |
| D. INDIVIDUAL DRAIN SYSTEMS | | | |
| 1. | If the control equipment is a cover with or without a closed-vent system routed to a control device or to a process. | | |
| (a) | The individual drain system is designed and operated to segregate the vapors within the system from other drain systems and the atmosphere. | Y G | N G |
| (b) | The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) are maintained in a closed position when not in use (e.g., during sampling, equipment maintenance, inspection, or repair). | Y G | N G |
| (c) | The cover and all openings are maintained in good condition. | | |
| 2. | For drains, junction boxes, and sewer lines, as an alternative to Item 1: | | |
| (a) | Each drain is equipped with either water seal controls (e.g., p-trap, s-trap) or a tightly-fitting cap or plug. | Y G | N G |
| (b) | For each drain equipped with a water seal, there is water in the water seal. | Y G | N G |
| (c) | If a water seal is used on a drain receiving a Group 1 process wastewater stream, then one of the requirements in (i) or (ii) below, must be met. | Y G | N G |
| (i) | The drain pipe discharging the wastewater extends below the liquid surface in the water seal [or (ii)]. | Y G | N G |
| (ii) | A flexible shield (or other enclosure which restricts wind motion) is installed that encloses the space between the pipe discharging the wastewater and the drain receiving the wastewater. | Y G | N G |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

| | | | |
|------|--|-----|-----|
| (d) | Each junction box is equipped with a tightly fitting solid cover, and, if vented, is equipped with a vent pipe meeting the requirements in (i) or (ii) below. | Y G | N G |
| (i) | The vent pipe is connected to a closed vent system that meets the requirements in Table 9-2 and is routed to a process or to a control device that meets the requirements in Table 10-1 through 10-9 for the applicable control device. | Y G | N G |
| (ii) | If the junction box is filled and emptied by gravity flow or is operated with no more than slight fluctuations in the liquid level, the junction box may be vented to the atmosphere provided the vent pipe is at least 90 centimeters in length and shall not exceed 10.2 centimeters in diameter; and a water seal is installed at the entrance or exit of the junction box that restricts ventilation in the individual drain system and between components in the individual drain system. | Y G | N G |
| (e) | Each sewer line is not open to the atmosphere and is covered or enclosed so that no visible gaps or cracks in joints, seals, or other emission interfaces exist. | Y G | N G |

E. OIL-WATER SEPARATORS**IF THE CONTROL EQUIPMENT IS A FLOATING ROOF**

Note: The inspector should not perform the inspection while on the floating roof if the roof is below four feet of the top of the separator 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 four 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. | The floating roof is resting on the liquid surface of the stored material, unless the floating roof is resting on the roof leg supports because the oil-water separator has just been emptied and degassed or the tank is partially or completely emptied before being subsequently refilled or degassed. | Y G | N G |
| 2. | The floating roof is in good condition (i.e., free of defects such as corrosion and pools of standing liquid). | Y G | N G |
| 3. | There is a secondary seal installed above the primary seal. | Y G | N G |
| 4. | Inspect the secondary seal. | | |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

| | | | |
|-----|---|-----|-----|
| (a) | The secondary seal is continuous and completely covers the annular space between the floating roof and the separator wall. | Y G | N G |
| (b) | There are no holes, tears, or other openings in the seal or seal fabric. | Y G | N G |
| (c) | There are no visible gaps between the seal and the wall of the oil-water separator, except as specified in (e)(1) and (e)(2) below. | Y G | N G |
| (d) | The seal is not detached from the floating deck. | Y G | N G |
| (e) | Perform seal gap measurement of the secondary seal as specified in §60.696(d)(1) of the standards of performance for VOC emissions. | | |
| (1) | The total gap area between the separator wall and the secondary seal does not exceed 6.7 cm ² per meter (0.32 in ² /ft) of the separator wall perimeter. | Y G | N G |
| (2) | The maximum gap width between the separator wall and the seal does not exceed 1.3 cm (0.5 in) at any point. | Y G | N G |
| 5. | Inspect the primary seal. | | |
| (a) | The primary seal is a liquid-mounted seal. | Y G | N G |
| (b) | The primary seal forms a continuous closure that completely covers the annular space between the wall of the oil-water separator and the edge of the floating roof, except as described in (f)(1) and (f)(2) below. | Y G | N G |
| (c) | There are no holes, tears, or other openings in the seal fabric, seal envelope, or shoe (if a metallic shoe seal is used). | Y G | N G |
| (d) | If the primary seal is a liquid-mounted seal (e.g., foam or liquid-filled seal), the seal is in contact with the liquid between the wall of the oil-water separator and the floating roof. | Y G | N G |
| (e) | The seal is not detached from the floating roof. | Y G | N G |
| (f) | Perform seal gap measurements of the primary seal as specified in §60.696(d)(1) of the standards of performance for VOC emissions. | | |
| (1) | The total gap area between the separator wall and the primary seal does not exceed 67 cm ² per meter (3.2 in ² /ft) of separator wall perimeter. | Y G | N G |
| (2) | The maximum gap width between the separator wall and the seal does not exceed 3.8 cm (1.5 in) at any point. | Y G | N G |

TABLE 8-3. COMPLIANCE CHECKLIST FOR WASTE MANAGEMENT UNITS

| | | | |
|----|---|-----|-----|
| 6. | If the floating roof is equipped with one or more emergency roof drains for removal of stormwater, each emergency roof drain is fitted with a slotted membrane fabric cover that covers at least 90 percent of the drain opening area or a flexible fabric sleeve seal. | Y G | N G |
| 7. | All openings in the floating roof are equipped with a gasketed cover, seal, or lid, which is maintained in a closed position at all times, except during inspection and maintenance. | Y G | N G |
| 8. | No gaskets, joints, lids, covers, or doors are cracked, gapped, or broken. | Y G | N G |

PR = Periodic Report

NOTE ALL DEFICIENCIES.

TABLE 8-4. COMPLIANCE CHECKLIST FOR TREATMENT PROCESSES

A "yes" response to all questions will indicate full compliance, and a "no" responses will indicate noncompliance except where noted.

Note: The HON does not specify a particular treatment process that must be used to achieve compliance. The source may use any waste management unit or treatment process to achieve compliance with one of the compliance options (or a combination of compliance options). The compliance options are listed in Tables 7-11 and 7-12 of Volume I. If the source elects to use a design steam stripper, the HON does specify operating parameters in §63.138(d) of Subpart G. These operating parameters are included in this checklist. Sources meeting the requirements of the 1mg/yr exemption, described in 7.4.2 of Volume I wastewater streams.

TREATMENT PROCESS _____

I. REVIEW OF RECORDS

FOR ALL TREATMENT PROCESSES

- | | | | |
|-----|---|-----|-----|
| 1a. | Identification and description of the treatment process, identification of the wastewater streams treated by the process, and identification of monitoring parameters were included in the NCS. | Y G | N G |
| 1b. | If a treatment process other than the design steam stripper is used, the request to monitor site-specific parameters was included in the operating permit application or Implementation Plan. | Y G | N G |
| 2. | Documentation to establish a site-specific range was submitted in the NCS or operating permit application. | Y G | N G |
| 3. | Results of the initial measurement of the parameters approved by the Administrator were submitted in the NCS or operating permit application. | Y G | N G |
| 4. | Records of a design evaluation and supporting documentation that includes operating characteristics were included in the NCS [or #5]. | Y G | N G |
| 5. | Records of performance tests conducted using test methods and procedures specified in §63.145 of Subpart G were included in the NCS. | Y G | N G |

[Note: The records described in #4 and #5 above are not required if the wastewater stream or residual is discharged to: (1) a hazardous waste incinerator permitted under 40 CFR Part 270 and complying with 40 CFR Part 264 Subpart O; (2) an industrial furnace or boiler burning hazardous waste that is permitted under 40 CFR Part 270 and complying with 40 CFR Part 266, Subpart H; (3) an industrial furnace or boiler burning hazardous waste for which the owner or operator has certified compliance with the interim status requirements of 40 CFR Part 266 Subpart H; or (4) an underground injection well permitted under 40 CFR Part 270 or 40 CFR Part 144 and complying with 40 CFR Part 122.]

TABLE 8-4. COMPLIANCE CHECKLIST FOR TREATMENT PROCESSES

| | | | |
|-----|---|-----|-----|
| 6. | Records described in #4 and #5 demonstrate that the level of treatment required by §63.138(b) and/or (c) is achieved. | Y G | N G |
| 7. | Results of visual inspections, in which a control equipment failure was identified, were reported in the PR, including: | | |
| (a) | Identification of the treatment process, | Y G | N G |
| (b) | Description of the failure, | Y G | N G |
| (c) | Description of the nature of the repair, and | Y G | N G |
| (d) | Date the repair was made. | Y G | N G |
| 8. | For each parameter approved by the permitting authority that is required to be monitored continuously: | | |
| (a) | Records of the daily average value of the parameter are kept. | Y G | N G |
| (b) | Each operating day, when the daily average value of the parameter was outside the site-specific range established in the NCS (i.e., a monitoring parameter excursion is detected), or when insufficient monitoring data are collected, they are reported in the PR. | Y G | N G |
| 9. | For each treatment process that receives a residual removed from a Group 1 wastewater stream, the following were submitted in the NCS: | | |
| (a) | Identification of treatment process; | Y G | N G |
| (b) | Identification and description of the residual; | Y G | N G |
| (c) | Identification of wastewater stream from which residual was removed; | Y G | N G |
| (d) | Fate of residual; | Y G | N G |
| (e) | Identification and description of control device (if any) used to destroy the HAP mass in the residual by 99 percent; and | Y G | N G |
| (f) | Documentation of the 99 percent control efficiency of the device in (e). | Y G | N G |
| 10. | Records show that residuals are in compliance with control options in §63.138(k) of Subpart G. | Y G | N G |

FOR DESIGN STEAM STRIPPERS

| | | | |
|----|--|-----|-----|
| 1. | Records are kept of the steam flow rate, wastewater feed mass flow rate, and wastewater feed temperature. | Y G | N G |
| 2. | If the parameters in #1 are not monitored, the facility has documentation that they applied for and received approval to monitor alternative parameter(s) and are performing the required recordkeeping and reporting. | Y G | N G |

TABLE 8-4. COMPLIANCE CHECKLIST FOR TREATMENT PROCESSES

[Note: If #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

FOR BIOLOGICAL TREATMENT UNITS

- | | | | |
|----|---|-----|-----|
| 1. | Records are kept of appropriate monitoring parameters that were approved by the permitting authority. | Y G | N G |
| 2. | Records are kept of the F_{bio} determination made according to the procedures in Appendix C to 40 CFR Part 63 ^a | Y G | N G |

II. VISUAL INSPECTION
FOR ALL TREATMENT PROCESSES

- | | | | |
|----|--|-----|-----|
| 1. | Each opening in the treatment process (except biological treatment systems) is covered and vented to a closed-vent system that is routed to a control device. | Y G | N G |
| 2. | Any associated closed-vent system is in compliance with the HON according to the checklists in Tables 9-1 and 9-2 . | Y G | N G |
| 3. | Any associated control device is in compliance with the HON according to the appropriate checklist: G flare, checklist 10-1 G thermal incinerator, checklist 10-2 G catalytic incinerator, checklist 10-3 G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, checklist 10-4 G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, checklist 10-5 G carbon adsorber, checklist 10-6 G condenser, checklist 10-8 G other control device, checklist 10-9 | Y G | N G |
| 4. | Each cover is kept closed and is in compliance with the HON according to the checklist in Table 9-2 . | Y G | N G |

**TABLE 8-5. COMPLIANCE CHECKLIST FOR HEAT EXCHANGE SYSTEMS
REQUIRING LEAK DETECTION**

A "yes" response to all questions will indicate full compliance, and "no" responses will indicate noncompliance except where noted.

HEAT EXCHANGE SYSTEM _____

Note: Sources are not required to comply with leak detection monitoring requirements if one or more of the following conditions are met: (1) the heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; (2) the once-through heat exchange system has an NPDES permit with an allowable discharge limit of less than or equal to 1 ppm above influent concentration or 10% or less above influent concentration, whichever is greater; (3) there is an interviewing cooling fluid, containing less than 5% of total HAP listed in Table 4 of subpart F, between the process and cooling water; (4) the once-through heat exchange system is subject to an NPDES permit that requires monitoring of a parameter or condition, that specifies that normal range of the parameter or condition, and that requires monitoring of the parameters no less frequently than monthly for the first 6 months and quarterly thereafter; (5) the recirculating heat exchange system is used to cool process fluids that contain less than 5% of total HAPs listed in Table 4 of Subpart F; or (6) the once-through heat exchange system is used to cool process fluids that contain less than 5% of total HAP listed in Table 9 of subpart G. See paragraph 63.104(a) of Subpart F for additional details.

I. REVIEW OF RECORDS

- | | | | |
|-----|--|-----|-----|
| 1a. | For once-through heat exchange systems, records indicate that systems are monitored for leaks of HAPs listed on Table 9 of Subpart G. [or 2] | Y G | N G |
| 1b. | For recirculating heat exchange systems, records indicate that systems are monitored for leaks of HAPs listed on Table 4 of Subpart F. [or 2] | Y G | N G |
| 2. | When monitoring of a surrogate indicator of heat exchange system leaks is used, a monitoring plan contains the following: | | |
| (a) | The procedures that will be used to detect leaks of process fluids into cooling water; | Y G | N G |
| (b) | A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak; | Y G | N G |
| (c) | The parameter level or condition that shall constitute a leak, documented by data or calculations; | Y G | N G |
| (d) | The monitoring frequency which shall be no less frequently than monthly for the first 6 months and quarterly thereafter; and | Y G | N G |

**TABLE 8-5. COMPLIANCE CHECKLIST FOR HEAT EXCHANGE SYSTEMS
REQUIRING LEAK DETECTION**

| | | | |
|--|---|-----|-----|
| (e) | The records that will be maintained. | Y G | N G |
| [Note: If #2(a), 2(b), 2(c), 2(d), and 2(e) are all checked "Yes", the facility is in compliance even if numbers 1a and/or 1b are checked "No".] | | | |
| 3. | Records indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination. | Y G | N G |
| 4. | If a leak is detected, the dates of efforts to repair the leak. | Y G | N G |
| 5. | If a leak is detected, the method or procedure used to confirm repair of a leak and the date repair was confirmed. | Y G | N G |
| 6. | Documentation for the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying the repair; or documentation that the necessary parts or personnel were not available to make the repair. ^a | Y G | N G |
| 7. | If there is a delay of repair of a leak, the following information was reported in the PR and maintained as a record. | | |
| (a) | Identification of the leak and date the leak was detected. | Y G | N G |
| (b) | Whether or not the leak has been repaired. | Y G | N G |
| (c) | Reason for delay of repair. | Y G | N G |
| (d) | The expected date of repair if the leak remains unrepaired. | Y G | N G |
| (e) | The date of repair, if the leak is repaired. | Y G | N G |

PR = Periodic Reports.

^a Documentation for a delay of repair is not necessary if the equipment is isolated from the process, or if a shutdown is expected within the next 2 months after it is determined that a delay of repair is necessary.

TABLE 8-6. ROADMAP TO THE CHECKLISTS FOR ITEMS OF EQUIPMENT HANDLING IN-PROCESS LIQUID STREAMS

Complete this form for items of equipment that meet criteria of § 63.149 of Subpart G. [Checklist 4-11](#) can be used to determine if the items of equipment meet the criteria in §63.149.

I. FOR MANHOLES, LIFT STATIONS, AND TRENCHES:

1. Is a tightly fitting solid cover with no vent being used?

Y G Go to [checklist 8-7](#)

N G Continue with this section of the checklist

2. Is a tightly fitting solid cover being used with a vent to either a process, to a fuel gas system, or to a control device?

Y G Go to [checklist 8-7](#), and, if emissions are routed to a control device, select from below the checklist corresponding to the appropriate control device:

G flare, [checklist 10-1](#);

G thermal incinerator, [checklist 10-2](#);

G catalytic incinerator, [checklist 10-3](#);

G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);

G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);

G carbon adsorber, [checklist 10-6](#);

G condenser, [checklist 10-8](#); or

G other control device, [checklist 10-9](#).

N G Continue with this checklist

3. If the item is vented to the atmosphere, is a tightly fitting solid cover being used with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system?

Y G [Go to checklist 8-7.](#)

Manhole, lift stations and trenches must use one of the compliance options in I.1 through I.3.

TABLE 8-6. ROADMAP TO THE CHECKLISTS FOR ITEMS OF EQUIPMENT HANDLING IN-PROCESS LIQUID STREAMS

II. DRAIN OR DRAIN HUB

1. Is a tightly fitting solid cover with no vent being used?

Y G Go to [checklist 8-7](#)

N G Continue with this section of the checklist

2. Is a tightly fitting solid cover being used with a vent to either a process, to a fuel gas system, or to a control device?

Y G Go to [checklist 8-7](#); and, if emissions are routed to a control device, select from below the checklist corresponding to the appropriate control device:

G flare, [checklist 10-1](#);

G thermal incinerator, [checklist 10-2](#);

G catalytic incinerator, [checklist 10-3](#);

G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);

G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);

G carbon adsorber, [checklist 10-6](#);

G condenser, [checklist 10-8](#); or

G other control device, [checklist 10-9](#).

N G Continue with this section of the checklist

3. Is a water seal with submerged discharge or barrier to protect the discharge from wind being used?

Y G Continue with this checklist.

Drains or drain hubs must use one of the compliance options in II.1 through II.3.

TABLE 8-6. ROADMAP TO THE CHECKLISTS FOR ITEMS OF EQUIPMENT HANDLING IN-PROCESS LIQUID STREAMS

III. OIL-WATER SEPARATOR

1. Is the oil-water separator equipped with a fixed roof and closed vent system routed to a process or control device?

G Y Select from below the checklist corresponding to the appropriate control device:

- G flare, [checklist 10-1](#);
- G thermal incinerator, [checklist 10-2](#);
- G catalytic incinerator, [checklist 10-3](#);
- G boiler or process heater with a capacity less than 44 MW that does not have the emission stream introduced with the primary fuel, [checklist 10-4](#);
- G boiler or process heater with a capacity greater than 44 MW or that has the vent stream introduced with the primary fuel, [checklist 10-5](#);
- G carbon adsorber, [checklist 10-6](#);
- G condenser, [checklist 10-8](#); or
- G other control device, [checklist 10-9](#).

G N Continue with this checklist.

2. If the oil-water separator equipped with a floating roof?

[Checklist 8-3](#) applies to floating roofs used on oil-water separators.

Oil-water separators must have either a fixed roof and a closed-vent system routed to a control device, or use a floating roof; no other options apply.

IV. TANKS^a

1. Does the tank have a fixed roof^b only?

G Y The tank is in compliance

G N Continue with this checklist

2. Is the tank equipped with a fixed roof, closed vent system and are emissions routed to a fuel gas system, process or control device?

G Y For emissions routed to a control device, go to [checklist 7-7](#)

Must use one of the compliance options in IV.1 or IV.2.

**TABLE 8-7. COMPLIANCE CHECKLIST FOR EQUIPMENT HANDLING
IN-PROCESS LIQUID STREAMS**

Complete this form for manholes, lift stations, trenches, drains and drain hubs that handle in-process liquid streams and that meet the criteria of section 63.149 of Subpart G. Drain or drain hubs with a water seal with submerged discharge or barrier to protect the discharge from the wind are not subject to the provisions in this checklist. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance.

VISUAL INSPECTION

- | | | | |
|----|--|-----|-----|
| 1. | Tight fitting solid covers are maintained with no visible gaps or openings, except during periods of sampling, inspection, or maintenance . | Y G | N G |
| 2. | For tight fitting solid covers with water seals, the vent pipe is at least 90 cm in length and does not exceed 10.2 cm in nominal inside diameter. This item does not apply to drains or drain hubs. | Y G | N G |
| 3. | For lift stations with tight fitting solid covers with water seals, the lift station is level controlled to minimize changes in liquid level. | Y G | N G |

9.0 CLOSED-VENT SYSTEMS AND CONTROL EQUIPMENT REQUIRING LEAK DETECTION

This section contains checklists for equipment that require leak detection. These equipment include vent, closed-vent, vapor collection, and vapor balancing systems, and the covers, enclosures, and fixed roofs associated with wastewater streams and in-process liquid streams handled by equipment subject to §63.149 of Subpart G.

Table 9-1 contains a checklist for the bypass line provisions and **Table 9-2** contains the checklist for the leak detection of closed-vent systems and control equipment. The checklists in **Sections 5, 6, 7, and 8** refer to these checklists when the provisions regarding bypass lines and leak detection of closed-vent systems and control equipment apply.

Section 9. Closed-Vent Systems and Control Equipment Requiring Leak Detection

| | | |
|-------------------|---|--------------|
| Table 9-1. | Compliance Checklist for Bypass Provisions for Vent, Closed-Vent, Vapor Collection, and Vapor Balancing Systems | II-87 |
| Table 9-2. | Compliance Checklist for Closed-Vent, Vapor Collection, And Vapor Balancing Systems, and Covers, Enclosures, And Fixed Roofs | II-89 |

TABLE 9-1. COMPLIANCE CHECKLIST FOR BYPASS LINE PROVISIONS FOR VENT, CLOSED-VENT, VAPOR COLLECTION, AND VAPOR BALANCING SYSTEMS^a

Complete this form for vent, closed-vent, vapor collection, and vapor balancing systems used on process vents, storage vessels, transfer operations, and waste management and treatment units for wastewater streams. This checklist does not apply to vent systems routing vapors to recovery devices that are part of a process. A "yes" response to all questions will indicate compliance and a "no" response will indicate noncompliance with the standard except where noted.

System Identification: _____

REVIEW OF RECORDS

[Note: Items #1 through #4 do not apply to low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes.]

- | | | | |
|----|--|-----|-----|
| 1. | Hourly records are kept of whether the flow indicator in the bypass line was operating and whether a diversion was detected at any time during the hour, when seal mechanisms are not used <u>and</u> | Y G | N G |
| 2. | The time of all periods when flow is diverted or the flow indicator is not operating are reported in the PR when seal mechanisms are not used [<u>or</u> #3 and #4]. | Y G | N G |
| 3. | Records of monthly visual inspections are kept when seal mechanisms are used <u>and</u> | Y G | N G |
| 4. | All periods when the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out are recorded and reported in the PR when seal mechanisms are used. | Y G | N G |

[Note: In order to be in compliance with provisions for bypass lines either: #1 and #2 must both be checked "yes" or both #3 and #4 must both be checked "yes".]

VISUAL INSPECTION

- | | | | |
|----|--|-----|-----|
| 1. | A flow indicator is present at the entrance to any bypass line that could divert the vent stream flow away from the control device to the atmosphere <u>or</u> all bypass line valves are sealed in a closed position (e.g., with a car seal or lock-and-key configuration). | Y G | N G |
|----|--|-----|-----|

PR = Periodic Reports.

^a This checklist is not applicable to closed-vent systems that are subject to §63.172 in the negotiated rule for equipment leaks (40 CFR Part 63 Subpart H) because such closed-vent systems are exempt from the requirements in §63.148 of Subpart G of the HON.

NOTE ALL DEFICIENCIES

**TABLE 9-2. COMPLIANCE CHECKLIST FOR CLOSED-VENT,
VAPOR COLLECTION, AND VAPOR BALANCING SYSTEMS,
AND COVERS, ENCLOSURES, AND FIXED ROOFS^a**

Complete this form for closed-vent, vapor collection, and vapor balancing systems. This form is also for covers, enclosures and fixed roofs associated with wastewater streams or equipment subject to §63.149. A "yes" response to all questions will indicate compliance, and a "no" response will indicate noncompliance with the standard.

Equipment Identification: _____

[Note: This checklist does not apply to vapor collection systems that are operated under negative pressure.]

- | | | | |
|-----|---|-----|-----|
| 1. | Records are kept of all parts of any closed-vent, vapor-collection, or vapor balancing system, fixed roof, cover, or enclosure that are designated as either unsafe-to-inspect or difficult-to-inspect. | Y G | N G |
| 2. | For equipment that is designated as difficult to inspect, a written plan is kept that requires inspection of equipment at least once every five years. | Y G | N G |
| 3. | For equipment that is designated as unsafe to inspect, a written plan is kept that requires inspection of equipment as frequently as practicable. | Y G | N G |
| 4. | For each annual inspection during which a leak was detected, the following information is recorded and reported. ^b | | |
| (a) | Instrument identification numbers, operator name or initials, and equipment identification information; | Y G | N G |
| (b) | The date the leak was detected and the date of the first attempt to repair it; | Y G | N G |
| (c) | Maximum instrument reading after the leak is repaired or determined to be non-repairable; | Y G | N G |
| (d) | Explanation of delay in repair, if the leak was not repaired within 15 days after it was discovered or by the next transfer loading operation, for transfer racks; | Y G | N G |
| (e) | Name or initials of person who decides repairs cannot be made without a shutdown; | Y G | N G |
| (f) | Expected date of successful repair if not repaired within 15 days; | Y G | N G |
| (g) | Dates of shutdowns that occur while the equipment is unrepaired; and | Y G | N G |
| (h) | Date of successful repair of the leak. | Y G | N G |

10.0 CONTROL DEVICE AND RECOVERY DEVICE CHECKLISTS

This section contains checklist specific to the control or recovery device being used. The checklists in sections 5, 6, 7, and 8 refer to these checklists when they are applicable.

Section 10. Control Device and Recovery Device Checklists

| | |
|---|--------|
| Table 10-1. Compliance Checklist for Flares | II-92 |
| Table 10-2. Compliance Checklist for Thermal Incinerators | II-93 |
| Table 10-3. Compliance Checklist for Catalytic Incinerators | II-96 |
| Table 10-4. Compliance Checklist for a Boiler or Process Heater With a Design Heat Input Capacity less than 44 Megawatts and the Vent Stream Is Not Introduced with the Primary Fuel | II-99 |
| Table 10-5. Compliance Checklist for a Boiler or Process Heater with a Design Heat Input Capacity Greater than 44 Megawatts .. | II-102 |
| Table 10-6. Compliance Checklist for a Carbon Adsorber Used as a Control or Recovery Device | II-103 |
| Table 10-7. Compliance Checklist for an Absorber Used as a Control or Recovery Device | II-106 |
| Table 10-8. Compliance Checklist for a Condenser Used as a Control or Recovery Device | II-109 |
| Table 10-9. Compliance Checklist for a Control or Recovery Device Not Specifically Listed | II-112 |
| Table 10-10. Compliance Checklist for Combusted Halogenated Vent Streams Using a Scrubber | II-115 |

TABLE 10-1. COMPLIANCE CHECKLIST FOR FLARES

Complete this form when emissions are routed to a flare from a process vent, storage vessel, transfer rack, waste management or wastewater treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard.

Flare Identification: _____

REVIEW OF RECORDS

- | | | | |
|----|--|-----|-----|
| 1. | Results of the initial test were submitted in the NCS. | Y G | N G |
| 2. | The presence of a continuous flare pilot flame is monitored using a device designed to detect the presence of a flame. | Y G | N G |
| 3. | All periods when all pilot flames to a flare were absent or the monitor was not operating have been recorded and reported in the PR. | Y G | N G |
| 4. | For a storage vessel flare, the total number of hours of routine maintenance of the flare during which the flare is bypassed is recorded and reported in the PR. | Y G | N G |

VISUAL INSPECTION

- | | | | |
|----|--|-----|-----|
| 1. | A device for detecting the flame is present. | Y G | N G |
|----|--|-----|-----|

NCS = Notification of Compliance Status. PR = Periodic Reports.

NOTE ALL DEFICIENCIES

TABLE 10-2. COMPLIANCE CHECKLIST FOR THERMAL INCINERATORS

Complete this form when emissions are routed to a thermal incinerator from a process vent, transfer rack, waste management or wastewater treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control Device: _____

REVIEW OF RECORDS

- | | | | |
|-----|---|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^a | Y G | N G |
| 3. | A temperature monitoring device equipped with a continuous recorder is used to measure the temperature of the gas stream in the firebox (or in the ductwork immediately downstream of the firebox before any substantial heat exchange occurs). | Y G | N G |
| 4. | Documentation to establish a site-specific range for firebox temperature was submitted in the NCS or operating permit application. | Y G | N G |
| 5. | Continuous records ^b of firebox temperature are kept. | Y G | N G |
| 6. | Records of daily average firebox temperature are kept. | Y G | N G |
| 7. | All daily average firebox temperatures that are outside the site-specific established range and all operating days when insufficient monitoring data are collected are reported in the PR. | Y G | N G |
| 8. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^c | Y G | N G |
| 9. | If the firebox temperature is not monitored, the facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting. | Y G | N G |
| 10. | For thermal incinerators used for emissions from waste management units and wastewater treatment units, if the firebox temperature is not monitored and if #9 is checked "No": | | |

TABLE 10-2. COMPLIANCE CHECKLIST FOR THERMAL INCINERATORS

- | | | | |
|-----|--|-----|-----|
| (a) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (b) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (c) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. | Y G | N G |

[Note: If #9 is checked "Yes", or 10(a), 10(b) and 10(c) are checked "Yes", the facility is in compliance even if numbers 3 through 8 are checked "No".]

VISUAL INSPECTION

- | | | | |
|----|--|-----|-----|
| 1. | A temperature monitoring device is present, or approved alternative monitor is present. | Y G | N G |
| 2. | For waste management and wastewater treatment units, if the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if #1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

- ^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.
- ^b Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

TABLE 10-2. COMPLIANCE CHECKLIST FOR THERMAL INCINERATORS

c The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

NOTE ALL DEFICIENCIES

TABLE 10-3. COMPLIANCE CHECKLIST FOR CATALYTIC INCINERATORS

Complete this form when emissions are routed to a catalytic incinerator from a process vent, transfer rack, waste management or wastewater treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control Device: _____

REVIEW OF RECORDS

- | | | | |
|----|--|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^a | Y G | N G |
| 3. | Temperature monitoring devices equipped with continuous recorders are used to measure the temperature in the gas stream immediately before and after the catalyst bed. | Y G | N G |
| 4. | Documentation to establish a site-specific range for the gas stream temperature upstream of the catalyst bed and the temperature difference across the bed was submitted in the NCS or operating permit application. ^b | Y G | N G |
| 5. | Continuous records ^c are kept of the temperature of the gas stream upstream of the catalyst bed and the temperature difference across the catalyst bed. | Y G | N G |
| 6. | Records of the daily average temperature upstream of the catalyst bed and the temperature difference across the catalyst bed are kept. ^b | Y G | N G |
| 7. | All daily average upstream temperatures that are outside the site-specific range and all operating days when insufficient monitoring data are collected are reported in the PR. ^b | Y G | N G |
| 8. | All daily average temperature differences across the catalyst bed that are outside the site-specific range and all operating days when insufficient monitoring data are collected are reported in the PR. ^b | Y G | N G |
| 9. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^d | Y G | N G |

TABLE 10-3. COMPLIANCE CHECKLIST FOR CATALYTIC INCINERATORS

| | | | |
|-----|--|-----|-----|
| 10. | If the temperature upstream of the catalyst bed and/or the temperature differential across the catalyst bed are not monitored, the facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting. ^b | Y G | N G |
| 11. | For catalytic incinerators used for emissions from waste management units and wastewater treatment units, if the firebox temperature is not monitored and if #10 is checked "No": | | |
| (a) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (b) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (c) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. | Y G | N G |

[Note: If #10 is checked "Yes", or 11(a), 11(b) and 11(c) are checked "Yes", the facility is in compliance even if numbers 3 through 9 are checked "No".]

VISUAL INSPECTION

| | | | |
|----|--|-----|-----|
| 1. | A temperature monitoring device is present, or approved alternative monitor is present. | Y G | N G |
| 2. | For waste management and wastewater treatment units, if the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

- ^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.

TABLE 10-3. COMPLIANCE CHECKLIST FOR CATALYTIC INCINERATORS

b For catalytic incinerators used for wastewater emission, either the gas stream temperature upstream of the catalyst bed or the temperature difference across the bed can be monitored.^c Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

c The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

NOTE ALL DEFICIENCIES

TABLE 10-4. COMPLIANCE CHECKLIST FOR A BOILER OR PROCESS HEATER WITH A DESIGN HEAT INPUT CAPACITY LESS THAN 44 MEGAWATTS AND THE VENT STREAM IS NOT INTRODUCED WITH THE PRIMARY FUEL

Complete this form when emissions are routed to a boiler or process heater with a design heat input capacity less than 44 megawatts and the vent stream is not introduced with the primary fuel from a process vent, transfer rack, waste management or waste treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control Device: _____

REVIEW OF RECORDS

- | | | | |
|-----|---|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | A description of the location at which the vent stream is introduced into the boiler or process heater was submitted in the NCS. | Y G | N G |
| 3. | The vent stream is introduced into the flame zone of the boiler or process heater. | Y G | N G |
| 4. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. | Y G | N G |
| 5. | A temperature monitoring device equipped with a continuous monitor is used to measure the temperature of the gas stream in the firebox. | Y G | N G |
| 6. | Documentation to establish a site-specific range for firebox temperature was submitted in the NCS or operating permit application. | Y G | N G |
| 7. | Continuous records ^b are kept of the firebox temperature. | Y G | N G |
| 8. | Records of the daily average firebox temperature are kept. | Y G | N G |
| 9. | All daily average firebox temperatures that are outside the site-specific range and all operating days when insufficient monitoring data are collected are reported in the PR. | Y G | N G |
| 10. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^c | Y G | N G |

TABLE 10-4. COMPLIANCE CHECKLIST FOR A BOILER OR PROCESS HEATER WITH A DESIGN HEAT INPUT CAPACITY LESS THAN 44 MEGAWATTS AND THE VENT STREAM IS NOT INTRODUCED WITH THE PRIMARY FUEL

| | | | |
|-----|---|-----|-----|
| 11. | If the firebox temperature is not monitored, the facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting. | Y G | N G |
| 12. | For boilers or process heaters used for emissions from waste management units and wastewater treatment units, if the firebox temperature is not monitored and if #11 is checked "No": | | |
| (a) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (b) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (c) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. | Y G | N G |

[Note: If #11 is checked "Yes" or 12(a), 12(b), and 12(c) are checked "Yes", the facility is in compliance even if numbers 5 through 10 are checked "No"]

VISUAL INSPECTION

| | | | |
|----|--|-----|-----|
| 1. | A temperature monitoring device is present, or approved alternative monitor is present. | Y G | N G |
| 2. | For waste management and wastewater treatment units, if the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.

TABLE 10-4. COMPLIANCE CHECKLIST FOR A BOILER OR PROCESS HEATER WITH A DESIGN HEAT INPUT CAPACITY LESS THAN 44 MEGAWATTS AND THE VENT STREAM IS NOT INTRODUCED WITH THE PRIMARY FUEL

b Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

c The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

NOTE ALL DEFICIENCIES

TABLE 10-6. COMPLIANCE CHECKLIST FOR A CARBON ADSORBER USED AS A CONTROL OR RECOVERY DEVICE

Complete this form when emissions are routed to a carbon adsorber from a process vent, transfer rack, waste management or wastewater treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control Device: _____

REVIEW OF RECORDS

FOR CARBON ADSORBERS USED AS A RECOVERY DEVICE ON A PROCESS VENT TO MAINTAIN THE TRE INDEX VALUE GREATER THAN 1.0

- | | | | |
|----|---|-----|-----|
| 1. | Documentation of the initial TRE calculation including test results was submitted in the NCS. | Y G | N G |
|----|---|-----|-----|

FOR CARBON ADSORBERS USED AS A CONTROL DEVICE

- | | | | |
|----|--|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^{a,b} | Y G | N G |
| 3. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^c | Y G | N G |

FOR ALL CARBON ADSORBERS

- | | | | |
|----|--|-----|-----|
| 1. | An integrating regeneration stream (e.g., steam) flow monitoring device having an accuracy of ± 10 percent and capable of recording total regeneration stream mass or volumetric flow for each regeneration cycle is used to measure regeneration stream flow. | Y G | N G |
| 2. | A carbon bed temperature monitoring device capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle is used to measure carbon bed regeneration temperature. | Y G | N G |
| 3. | Documentation to establish a site-specific range for the regeneration stream flow and carbon bed regeneration temperature was submitted in the NCS or operating permit. | Y G | N G |

TABLE 10-6. COMPLIANCE CHECKLIST FOR A CARBON ADSORBER USED AS A CONTROL OR RECOVERY DEVICE

| | | | |
|-----|--|-----|-----|
| 4. | Records are kept of the total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. | Y G | N G |
| 5. | Records are kept of the temperature of the carbon bed after each carbon bed regeneration. | Y G | N G |
| 6. | All regeneration cycles when the total regeneration stream mass or volumetric flow is outside the site-specific range are reported in the PR. | Y G | N G |
| 7. | All regeneration cycles during which the temperature of the carbon bed after regeneration is outside the site-specific range are reported in the PR. | Y G | N G |
| 8. | If the regeneration stream flow and/or the carbon bed regeneration temperature are not monitored, either: | | |
| (a) | The facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting <u>or</u> continue with items [(b) <u>and</u> (c) <u>and</u> (d)]. | Y G | N G |
| (b) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (c) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (d) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. ^b | Y G | N G |

[Note: If #8(a) is checked "Yes", or if 8(b) and 8(c) and 8(d) are checked "Yes", the facility is in compliance even if numbers 1 through 7 are checked "No".]

VISUAL INSPECTION

| | | | |
|----|--|-----|-----|
| 1. | A device for measuring carbon bed temperature and a device for measuring regeneration stream flow are present [or #2]. | Y G | N G |
| 2. | If the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

TABLE 10-6. COMPLIANCE CHECKLIST FOR A CARBON ADSORBER USED AS A CONTROL OR RECOVERY DEVICE

- ^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.
- ^b The 20 ppmv compliance option is not available for owners or operators using carbon adsorbers on emissions from surface impoundments or containers.
- ^c The number of excused excursions is as follows:

For the first semi-annual period after the NCS is due - 6 excursions;
 For the second semi-annual period - 5 excursions;
 For the third semi-annual period - 4 excursions;
 For the fourth semi-annual period - 3 excursions;
 For the fifth semi-annual period - 2 excursions;
 For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

NOTE ALL DEFICIENCIES

**TABLE 10-7. COMPLIANCE CHECKLIST FOR AN ABSORBER USED AS
A CONTROL OR RECOVERY DEVICE**

Complete this form when emissions are routed to an absorber from a process vent or transfer rack. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control or Recovery Device: _____

REVIEW OF RECORDS

**FOR ABSORBERS USED AS A RECOVERY DEVICE ON A
PROCESS VENT TO MAINTAIN THE TRE INDEX VALUE
GREATER THAN 1.0**

- | | | | |
|----|---|-----|-----|
| 1. | Documentation of the initial TRE calculation including test results was submitted in the NCS. | Y G | N G |
|----|---|-----|-----|

FOR ABSORBERS USED AS A CONTROL DEVICE

- | | | | |
|----|--|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^a | Y G | N G |
| 3. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^b | Y G | N G |

FOR ALL ABSORBERS

- | | | | |
|----|---|-----|-----|
| 1. | A temperature monitoring device and a specific gravity monitoring device equipped with a continuous monitor are used to measure the exit temperature of the scrubbing liquid and the exit specific gravity. | Y G | N G |
| 2. | Documentation to establish a site-specific range for the exit temperature of the scrubbing liquid and exit specific gravity was submitted in the NCS or operating permit. | Y G | N G |
| 3. | Records of the daily average exit temperature of the scrubbing liquid and exit specific gravity are kept. | Y G | N G |
| 4. | Continuous records ^c of the exit temperature of the absorbing liquid are kept. | Y G | N G |
| 5. | Continuous records ^c of the exit specific gravity are kept. | Y G | N G |
| 6. | All daily average exit temperatures of the absorbing liquid that are outside the site-specific range are reported in the PR. | Y G | N G |

**TABLE 10-7. COMPLIANCE CHECKLIST FOR AN ABSORBER USED AS
A CONTROL OR RECOVERY DEVICE**

| | | | |
|-----|--|-----|-----|
| 7. | All daily average specific gravity values that are outside the site-specific range are reported in the PR. | Y G | N G |
| 8. | If the exit temperature and/or the exit specific gravity are not monitored, either: | | |
| (a) | The facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting <u>or</u> continue with items [(b) <u>and</u> (c) <u>and</u> (d)]. | Y G | N G |
| (b) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (c) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (d) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. | Y G | N G |

[Note: If #8(a) is checked "Yes", or if 8(b) and 8(c) and 8(d) are checked "Yes", the facility is in compliance even if numbers 1 through 7 are checked "No".]

VISUAL INSPECTION

| | | | |
|----|--|-----|-----|
| 1. | A device for measuring exit liquid temperature and a device for measuring exit specific gravity are present [or #2]. | Y G | N G |
| 2. | If the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.

**TABLE 10-7. COMPLIANCE CHECKLIST FOR AN ABSORBER USED AS
A CONTROL OR RECOVERY DEVICE**

b The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

c Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

NOTE ALL DEFICIENCIES

TABLE 10-8. COMPLIANCE CHECKLIST FOR A CONDENSER USED AS A CONTROL OR RECOVERY OR DEVICE

Complete this form when emissions are routed to a condenser from a process vent, transfer rack, waste management unit, or wastewater treatment unit, or equipment that handles in-process liquid streams and that meet the criteria of § 63.149 of Subpart G. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control or Recovery Device: _____

REVIEW OF RECORDS

FOR CONDENSERS USED AS A RECOVERY DEVICE ON A PROCESS VENT TO MAINTAIN THE TRE INDEX VALUE GREATER THAN 1.0

- | | | | |
|----|---|-----|-----|
| 1. | Documentation of the initial TRE calculation including test results was submitted in the NCS. | Y G | N G |
|----|---|-----|-----|

FOR CONDENSERS USED AS A CONTROL DEVICE

- | | | | |
|----|--|-----|-----|
| 1. | Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. | Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^{a,b} | Y G | N G |
| 3. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^c | Y G | N G |

FOR ALL CONDENSERS

- | | | | |
|----|---|-----|-----|
| 1. | A temperature monitoring device equipped with a continuous recorder is used to measure the product side exit temperature. | Y G | N G |
| 2. | Documentation to establish a site-specific range for the exit temperature was submitted in the NCS or operating permit. | Y G | N G |
| 3. | Records of the daily average exit temperature are kept. | Y G | N G |
| 4. | Continuous records ^d of the exit temperature are kept. | Y G | N G |
| 5. | All product side daily average exit temperatures that are outside the site-specific range are reported in the PR. | Y G | N G |

TABLE 10-8. COMPLIANCE CHECKLIST FOR A CONDENSER USED AS A CONTROL OR RECOVERY OR DEVICE

| | | | |
|-----|--|-----|-----|
| 6. | If the exit temperature is not monitored, either: | | |
| (a) | The facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting <u>or</u> continue with items [(b) <u>and</u> (c) <u>and</u> (d)]. | Y G | N G |
| (b) | Continuous records are kept of the concentration level or reading indicated by an organic monitoring device at the outlet of the control device. | Y G | N G |
| (c) | Records are kept of the daily average concentration level or reading for each operating day. | Y G | N G |
| (d) | All daily average concentration levels or readings that are outside the site-specific range are reported in the PR. | Y G | N G |

[Note: If #6(a) is checked "Yes", or if 6(b) and 6(c) and 6(d) are checked "Yes", the facility is in compliance even if numbers 1 through 5 are checked "No".]

VISUAL INSPECTION

| | | | |
|----|---|-----|-----|
| 1. | A temperature monitoring device is present [or #2]. | Y G | N G |
| 2. | If the monitoring devices listed in item 1 is not present, an organic compounds monitor is present. | Y G | N G |

[Note: If item #2 is checked "Yes", the facility is in compliance even if number 1 is checked "No".]

NCS = Notification of Compliance Status. PR = Periodic Reports.

^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.

^b The 20 ppmv compliance option is not available for owners or operators using condensers on emissions from surface impoundments or containers.

TABLE 10-9. COMPLIANCE CHECKLIST FOR A CONTROL OR RECOVERY DEVICE NOT SPECIFICALLY LISTED

Complete this form when emissions are routed from a process vent, transfer rack, waste management unit or wastewater treatment unit, or equipment that handle in-process liquid streams and that meet the criteria of § 63.149 of Subpart G to a control or recovery device not specifically listed in the HON. A "yes" response to all questions will indicate compliance and "no" response will indicate noncompliance with the standard except where noted.

Control or Recovery Device: _____

REVIEW OF RECORDS

FOR OTHER DEVICES USED AS A RECOVERY DEVICE ON A PROCESS VENT TO MAINTAIN THE TRE INDEX VALUE GREATER THAN 1.0

- | | | |
|--|-----|-----|
| 1. Documentation of the initial TRE calculation including test results was submitted in the NCS. | Y G | N G |
|--|-----|-----|

FOR OTHER DEVICES USED AS A CONTROL DEVICE

- | | | |
|---|-----|-----|
| 1. Results of the initial performance test or design evaluation ^a were submitted in the NCS. | Y G | N G |
| 2. Test documentation demonstrates 98 percent HAP or TOC control efficiency for process vents and transfer racks, and 95 percent HAP or TOC control efficiency for wastewater, or an outlet concentration of 20 ppmv or less HAP or TOC. ^a | Y G | N G |
| 3. The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^b | Y G | N G |

FOR OTHER DEVICES USED AS EITHER A RECOVERY OR CONTROL DEVICE

- | | | |
|--|-----|-----|
| 1. The facility has documentation that they applied for and received approval to monitor an alternative parameter and are performing the required recordkeeping and reporting. | Y G | N G |
| 2. Documentation to establish a site-specific range for the monitored parameter was submitted in the NCS or operating permit. | Y G | N G |
| 3. Records of the daily average monitored parameter are kept. | Y G | N G |
| 4. Continuous records ^c of the monitored parameter are kept. | Y G | N G |
| 5. Monitored parameters that are outside the site-specific range are reported in the PR. | Y G | N G |

TABLE 10-9. COMPLIANCE CHECKLIST FOR A CONTROL OR RECOVERY DEVICE NOT SPECIFICALLY LISTED

VISUAL INSPECTION

- | | | | |
|----|--|-----|-----|
| 1. | The monitoring device to monitor the approved monitoring parameter is present. | Y G | N G |
|----|--|-----|-----|

NCS = Notification of Compliance Status. PR = Periodic Reports.

^a Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, or from transfer racks that transfer less than 11.8 million liters per year. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater or §63.128(h) for transfer racks is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.

^b The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

^c Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

**TABLE 10-10. COMPLIANCE CHECKLIST FOR COMBUSTED HALOGENATED VENT STREAMS
USING A SCRUBBER**

Complete this form for halogenated vent stream routed from a process vent or transfer rack to a scrubber before or after combustion. A "yes" response to all questions will indicate full compliance and, "no" response will indicate noncompliance with the standard except where noted.

Control device_____

REVIEW OF RECORDS

**FOR A SCRUBBER FOLLOWING A COMBUSTOR FOR A
HALOGENATED VENT STREAM**

- | | | | |
|----|---|-----|-----|
| 1. | Results of the initial performance test were submitted in the NCS. | Y G | N G |
| 2. | Either: (1) Test documentation demonstrates 99 percent control efficiency for total halogens and hydrogen halides or test documentation demonstrates that the outlet mass of total hydrogen halides and halogens are less than 0.45 kilograms per hour, or, (2) if the scrubber was installed prior to December 31, 1992, test documentation demonstrates 95 percent control efficiency for total halogens and hydrogen halides or test documentation demonstrates that the outlet mass of total hydrogen halides and halogens are less than 0.45 kilograms per hour. | Y G | N G |

**FOR A SCRUBBER FOLLOWING OR PRIOR TO A COMBUSTOR
FOR A HALOGENATED VENT STREAM**

- | | | | |
|----|--|-----|-----|
| 1. | A pH monitoring device equipped with a continuous recorder is used to monitor the pH of the scrubber effluent. | Y G | N G |
| 2. | A flow meter equipped with a continuous recorder is used to measure the influent liquid flow and effluent vapor flow. | Y G | N G |
| 3. | Documentation to establish a site-specific range for the pH, and liquid/gas ratio was submitted in the NCS or operating permit. | Y G | N G |
| 4. | Continuous records ^a of the pH of the scrubber effluent are kept. | Y G | N G |
| 5. | Continuous records ^a of the scrubber liquid/gas ratio are kept. | Y G | N G |
| 6. | Records of the daily average pH and the daily average liquid/gas ratio are kept. | Y G | N G |
| 7. | All daily average pH values of the scrubber effluent that are outside the site-specific range and all operating days when insufficient monitoring data are collected are reported in the PR. | Y G | N G |

**TABLE 10-10. COMPLIANCE CHECKLIST FOR COMBUSTED HALOGENATED VENT STREAMS
USING A SCRUBBER**

| | | | |
|-----|---|-----|-----|
| 8. | All daily average scrubber liquid/gas ratios that are outside the site-specific range and all operating days when insufficient monitoring data are collected are reported in the PR. | Y G | N G |
| 9. | The number of excursions does not exceed the number of excused excursions in the semi-annual reporting period. ^b | Y G | N G |
| 10. | If the pH and/or the scrubber liquid to gas ratio are not monitored, the facility has documentation that they applied for and received approval to monitor an alternative parameter, and are performing the required recordkeeping and reporting. | Y G | N G |

[Note: If #10 is checked "Yes", the facility is in compliance even if numbers 1 through 9 are checked "No".]

VISUAL INSPECTION

| | | | |
|----|--|-----|-----|
| 1. | A device for measuring pH and a device for measuring flow are present. | Y G | N G |
|----|--|-----|-----|

NCS = Notification of Compliance Status. PR = Periodic Reports.

^a Continuous records, as defined in §63.111, means documentation, either in computer readable form or hard copy, or data values measured at least once every 15 minutes and recorded at the frequency specified in §63.152(f). Section 63.152(f) allows the owner to record either values measured every 15 minutes or 15-minute (or shorter period) block average values calculated from all measured values during each period. If the daily average value of a monitored value for a given parameter is within the range established in the NCS, the owner or operator may retain block hourly averages instead of the 15-minute values. An owner or operator may request approval to use alternatives to continuous monitoring under §63.151(g) of Subpart G.

^b The number of excused excursions is as follows:

- For the first semi-annual period after the NCS is due - 6 excursions;
- For the second semi-annual period - 5 excursions;
- For the third semi-annual period - 4 excursions;
- For the fourth semi-annual period - 3 excursions;
- For the fifth semi-annual period - 2 excursions;
- For the sixth and all subsequent semi-annual periods - 1 excursion.

An excursion occurs when: (1) the daily average value of the monitored parameter is outside the range established in the NCS or operating permit; or (2) if monitoring data are insufficient. In order to have sufficient data, a source must have measured values for each 15-minute period within each hour for at least 75 percent of the hours the control device is operating in a day. For example, if a control device operates 24 hours per day, data must be available for all 15-minute periods in at least 18 hours; but up to 6 hours may have incomplete data. If more than 6 hours have incomplete data, an excursion has occurred. For control devices that operate less than 4 hours a day, one hour of incomplete data is allowed.

**TABLE 10-10. COMPLIANCE CHECKLIST FOR COMBUSTED HALOGENATED VENT STREAMS
USING A SCRUBBER**

NOTE ALL DEFICIENCIES

11.0 COMPLIANCE TIMELINE AND REPORTING CHECKLIST

Once it is known that a source has emission points that are subject to the HON, the inspector may use the checklists contained in this portion of the guide to evaluate the content of the reports submitted as part of the source's compliance procedures.

Figure 11-1 is a compliance timeline for the HON; it shows the compliance dates as well as the dates when reports must be submitted. Table 11-1 is a checklist for the Initial Notification.

The checklist contained in Table 11-2 pertains to the implementation data to be present

in operating permit applications or in the implementation plan. Table 11-3 covers the Notification of Compliance Status. Tables 11-4 deals with periodic reports. Table 11-5 provides a checklist for assessing requests for an extension of compliance. Table 11-6 is a checklist for evaluating requests for use of alternative monitoring or recordkeeping procedures. A checklist for the Start-Up, Shutdown and Malfunction Plan is given in Table 11-7. Table 11-8 is a checklist for evaluating Start-up, Shutdown and Malfunction reports. Table 11-9 is a checklist for initial notifications for new or reconstructed major affected sources. Table 11-10 is a checklist for source construction and reconstruction permit application. The tables in this section include general provisions applicable to the HON that pertain to reporting.

Section 11.0. Compliance Timeline and Reporting Checklists

| | | |
|--------------|---|--------|
| Figure 11-1. | HON Compliance Timeline | II-119 |
| Table 11-1. | Checklist for the Initial Notification | II-120 |
| Table 11-2. | Checklist for Implementation Data | II-121 |
| Table 11-3. | Checklist for the Notification of Compliance Status | II-123 |
| Table 11-4. | Checklist for Periodic Reports | II-128 |
| Table 11-5. | Checklist for a Request of Compliance Extension | II-131 |
| Table 11-6. | Checklist for Request to Use Alternative Monitoring or Recordkeeping Procedures | II-132 |
| Table 11-7. | Checklist for Start-up, Shutdown and Malfunction Plan | II-134 |
| Table 11-8. | Checklist for Start-up, Shutdown and Malfunction Reports | II-135 |
| Table 11-9. | Checklist for Initial Notifications by New or Reconstructed Major Affected Sources | II-136 |
| Table 11-10. | Checklist for Source Construction and Reconstruction Permit Applications | II-137 |

TABLE 11-1. CHECKLIST FOR THE INITIAL NOTIFICATION

Complete this form for any source with emission points subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

- | | | |
|--|-----|-----|
| 1. The report contains the name and address of the owner or operator. | Y G | N G |
| 2. The report provides the physical location (address) of the affected sources. | Y G | N G |
| 3. The report identifies the kinds of emission points within the chemical manufacturing process units that are subject to Subpart G. | Y G | N G |
| 4. The report identifies the chemical manufacturing processes subject to Subpart G. | Y G | N G |
| 5. The report provides a statement of whether the source can achieve compliance by the relevant compliance dates specified in Subpart F. | Y G | N G |

TABLE 11-2. CHECKLIST FOR IMPLEMENTATION DATA

Complete this form for existing sources and for new sources. For existing sources, this information must be submitted in an operating permit application or as otherwise specified by the permitting authority. For new sources, this information must be submitted in the implementation plan, unless already submitted in the operating permit application, or as otherwise specified by the permitting authority. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance except where noted.

- | | | |
|---|-----|-----|
| 1. The report contains a list designating each emission point complying with §§63.113 through 63.149 and whether each emission point is Group 1 or Group 2. | Y G | N G |
| 2. The report specifies the control technology or method of compliance that will be applied to each Group 1 emission point. | Y G | N G |
| 3. The report includes a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in §§63.113 through 63.149 that are applicable to each emission point will be implemented beginning on the date of compliance. | Y G | N G |
| 4. The report includes the operating plan required by §63.122(a)(2) and (b) for each storage vessel controlled with a closed vent system with a control device other than a flare. | Y G | N G |
| 5. If the owner or operator of the source seeks to comply through use of a control technique other than those for which monitoring parameters are specified in §63.114 for process vents, §63.127 for transfer racks, and §63.143 for process wastewater, the report includes: | | |
| (a) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); | Y G | N G |
| (b) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report; | Y G | N G |
| (c) The frequency and content of and rationale for monitoring and recording, if monitoring and recording is not continuous; and | Y G | N G |
| (d) The frequency and content of and rationale for reporting, if reporting of daily average monitoring parameter values being outside the acceptable range will not take place in the Periodic Reports required under §63.152(c). | Y G | N G |

TABLE 11-2. CHECKLIST FOR IMPLEMENTATION DATA

- | | | |
|---|-----|-----|
| 6. If alternative monitoring or recordkeeping is being requested, the information in checklist 11-6 . | Y G | N G |
|---|-----|-----|
-
-

TABLE 11-3. CHECKLIST FOR THE NOTIFICATION OF COMPLIANCE STATUS

Complete this form for any source with emission points subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance except where noted. Any of the information required in the checklist that has already been submitted in the operating permit application does not need to be resubmitted in the NCS.

I. GENERAL CONTENTS

- | | | | |
|------|--|-----|-----|
| 1. | The report contains results of emission point group determinations and performance tests including, as necessary: ^{a,b} | | |
| (a) | At least one complete test report for each test method used for a particular kind of emission point where the complete test report includes: | Y G | N G |
| (1) | A brief process description, | Y G | N G |
| (2) | A sampling site description, | Y G | N G |
| (3) | A description of sampling and analysis procedures and any modifications to standard procedures, | Y G | N G |
| (4) | Quality assurance procedures, | | |
| (5) | Records of operating conditions during the test, | Y G | N G |
| (6) | Records of preparation of standards, | Y G | N G |
| (7) | Records of calibrations, | Y G | N G |
| (8) | Raw data sheets for field sampling, | Y G | N G |
| (9) | Raw data sheets for field and laboratory analyses, and | Y G | N G |
| (10) | Documentation of calculations; and | Y G | N G |
| (b) | The results – but not necessarily the complete test report – for additional tests of other emission points tested by the same method. | Y G | N G |
| 2. | The report contains the operating range of monitored parameters established during performance tests. | Y G | N G |
| 3. | Where a parameter range and operating day is required to be established, the report includes: | | |
| (a) | The specific range of the monitored parameter(s) for each emission point; | Y G | N G |

TABLE 11-3. CHECKLIST FOR THE NOTIFICATION OF COMPLIANCE STATUS

| | | | |
|-----|---|-----|-----|
| (b) | The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control device; and | Y G | N G |
| (c) | A definition of the source's operating day for purposes of determining daily average values of monitored parameters, specifying the times at which an operating day begins and ends. | Y G | N G |
| 4. | If the provisions of § 63.110 allows the owner to choose which testing, monitoring, reporting and recordkeeping provisions will be followed, the report indicates which of the rule's requirements will be followed. | Y G | N G |
| 5. | For any Group 1 wastewater stream or any residual removed from a Group 1 wastewater stream transferred for treatment by another party pursuant to §63.132(g), the report includes the name and location of the transferee and a description of the Group 1 wastewater stream or residual. | Y G | N G |
| 6. | When a flare is used as a control device, the report contain the results of the flare compliance determination including: | | |
| (a) | The flare design (i.e., steam-assisted, air-assisted, or non-assisted); | Y G | N G |
| (b) | All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determinations; and | Y G | N G |
| (c) | All periods during the compliance determination when the pilot flame is absent. | Y G | N G |

TABLE 11-3. CHECKLIST FOR THE NOTIFICATION OF COMPLIANCE STATUS

II. FOR STORAGE VESSELS EQUIPPED WITH A CLOSED-VENT SYSTEM AND CONTROL DEVICE AND FOR TRANSFER RACKS WHERE A DESIGN EVALUATION IS CONDUCTED

- | | | | |
|-----|--|-----|-----|
| 1. | The report contains a design evaluation of the control device and a description of the gas stream entering the control device. ^{c,d,e} | | |
| (a) | If the control device is a thermal incinerator, the design evaluation includes the autoignition temperature of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature. ^{c,d} | Y G | N G |
| (b) | If the control device is a carbon adsorber, the design evaluation includes the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop is included. | Y G | N G |
| (c) | If the control device is a condenser, the design evaluation includes the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream. | Y G | N G |
| 2. | For storage vessels, the documentation described in (1) demonstrates that the control device achieves 95-percent control efficiency during reasonably expected maximum loading conditions (or 90-percent efficiency if the control device was installed prior to December 31, 1992). For transfer racks, the documentation described in (1) demonstrates that the control device achieves 98-percent control efficiency during reasonably expected maximum loading conditions. | Y G | N G |

III. FOR STORAGE VESSELS AND TRANSFER RACKS WITH EMISSIONS ROUTED TO A FUEL GAS SYSTEM OR PROCESS

- | | | | |
|----|---|-----|-----|
| 1. | For storage vessels with emissions routed to a process, the report contains a design evaluation or engineering assessment demonstrating the extent to which the emissions are recycled, consumed, transformed by chemical reaction into materials that are not HAP's, incorporated into a product and/or recovered. | Y G | N G |
| 2. | The report contains information that indicates the emission stream is routed to a fuel gas system or a process. | Y G | N G |

TABLE 11-3. CHECKLIST FOR THE NOTIFICATION OF COMPLIANCE STATUS**IV. FOR WASTEWATER STREAMS TREATMENT PROCESSES**

- | | | | |
|----|--|-----|-----|
| 1. | The report contains identification and description of the treatment process, identification of the wastewater streams treated by the process, and identification of monitoring parameters. | Y G | N G |
| 2. | The report contains records of a design evaluation and supporting documentation that includes operating characteristics or records of performance tests conducted using test methods and procedures specified in § 63.145 of subpart G. ^C | Y G | N G |

[Note: The information described in #2 above is not required if the wastewater stream or residual is discharged to an underground injection well permitted under 40 CFR Part 270 or 40 CFR Part 144 and complying with 40 CFR Part 122.]

- | | | | |
|-----|---|-----|-----|
| 3. | For each treatment process that receives a residual removed from a Group 1 wastewater stream, the report includes: | | |
| (a) | Identification of treatment process; | Y G | N G |
| (b) | Identification and description of the residual; | Y G | N G |
| (c) | Identification of wastewater stream from which residual was removed; | Y G | N G |
| (d) | Fate of residual; | Y G | N G |
| (e) | Identification and description of control device (if any) used to destroy the HAP mass in the residual by 99 percent; and | Y G | N G |
| (f) | Documentation of the 99 percent control efficiency of the device in (e). | Y G | N G |

V. FOR A BOILER OR PROCESS HEATER WITH A DESIGN HEAT INPUT CAPACITY GREATER THAN 44 MEGAWATTS, OR WITH A DESIGN HEAT INPUT CAPACITY LESS THAN 44 MEGAWATTS WHERE THE VENT STREAM IS NOT INTRODUCED WITH THE PRIMARY FUEL.

- | | | | |
|----|--|-----|-----|
| 1. | The report contains a description of the location at which the vent stream is introduced into the boiler or process heater. ^C | Y G | N G |
|----|--|-----|-----|

TABLE 11-3. CHECKLIST FOR THE NOTIFICATION OF COMPLIANCE STATUS

- ^a Information may be included in the operating permit application.
- ^b Owners or operators are not required to conduct performance tests on control devices used to control emissions from waste management units, wastewater treatment units, from transfer racks that transfer less than 11.8 million liters per year, or from storage vessels. For these emission points, a design evaluation documenting that the control device being used achieves the required control efficiency as specified in §63.139(d)(2) for wastewater, §63.128(h) for transfer racks, or § 63.120(d) for storage vessels is required to be submitted as part of the NCS. Owners and operators of process vents routed to a control device do not have the option of submitting a design evaluation and must perform a performance test.
- ^c A design evaluation is not required for a boiler or process heater with a capacity of 44 MW or greater; a boiler or process heater burning hazardous waste with a final permit under 40 CFR Part 270 meeting the requirements of 40 CFR Part 266 Subpart H, or has certified compliance that it meets the requirements of 40 CFR Part 266 Subpart H; a hazardous waste incinerator with a final permit under 40 CFR Part 270 meeting the requirements of 40 CFR Part 264 Subpart O, or has certified compliance that it meets the requirements of 40 CFR Part 265 Subpart O; or a boiler or process heater into which the vent stream is introduced with the primary fuel.
- ^d If an enclosed combustion device is documented to have a minimum residence time of 0.5 seconds and a minimum temperature of 760°C, then additional documentation is not required.
- ^e If the control device used to comply with the storage vessel provisions is also used to comply with the process vent, transfer, or wastewater provisions, the performance test required by those provisions is an acceptable substitute for the design evaluation for determining compliance.

TABLE 11-4. CHECKLIST FOR PERIODIC REPORTS

Complete this form for any source with emission points subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance except where noted.

- | | | | |
|-----|--|-----|-----|
| 1. | The report indicates periods when any monitored parameters were outside their established ranges. | Y G | N G |
| 2. | The report contains the daily average values of monitored parameters for both excused and unexcused excursions, and for excursions caused by a lack of monitoring data, the duration of periods when monitoring data were not collected. | Y G | N G |
| | [Note: Questions No. 1 and No. 2 do not apply to any storage vessel for which the owner or operator is not required by the applicable monitoring plan to keep continuous records.] | | |
| 3. | If any performance tests or group determination are included in the report, the following information is provided: | Y G | N G |
| (a) | At least one complete test report for each test method used for a particular kind of emission point where the complete test report includes: | Y G | N G |
| | 1. A brief process description, | Y G | N G |
| | 2. A sampling site description, | Y G | N G |
| | 3. A description of sampling and analysis procedures and any modifications to standard procedures, | Y G | N G |
| | 4. Quality assurance procedures, | Y G | N G |
| | 5. Records of operating conditions during the test, | Y G | N G |
| | 6. Records of preparation of standards, | Y G | N G |
| | 7. Records of calibrations, | Y G | N G |
| | 8. Raw data sheets for field sampling, | Y G | N G |
| | 9. Raw data sheets for field and laboratory analyses, and | Y G | N G |
| | 10. Documentation of calculations; and | Y G | N G |
| (b) | The results – but not necessarily the complete test report – for additional tests of other emission points tested by the same method. | Y G | N G |
| 4. | For process vents, the report contains a description of process changes, results of the recalculation of group determination, and a statement that the owner or operator will comply with the rule, if the group status has changed and control is now required. | Y G | N G |

TABLE 11-4. CHECKLIST FOR PERIODIC REPORTS

| | | | |
|-----|--|-----|-----|
| 5. | The report contains any needed supplements to the data provided in the Implementation Plan or in operating permit applications, as required by §63.151(l) and(j). | Y G | N G |
| 6. | The report contains notification of any Group 2 emission point that has become a Group 1 emission point, including a compliance schedule. | Y G | N G |
| 7. | For process wastewater streams transferred for treatment by another party in accordance with §63.132(g), the report includes changes in the identity of the treatment facility or the transferee, if applicable. | Y G | N G |
| 8. | The report contains information on the occurrence of any control equipment, seal gap, or seal failure, including: | | |
| | (a) Date of inspections; | Y G | N G |
| | (b) Identification of equipment (i.e., storage vessel, wastewater tank, surface impoundment, seal, etc.) having the failure; | Y G | N G |
| | (c) Description of the failure; | Y G | N G |
| | (d) Description of the nature of the repair; and | Y G | N G |
| | (e) Date repair was made. | Y G | N G |
| 9. | The report contains times and durations of all periods recorded when the vent stream is diverted from the control device through a bypass line. | Y G | N G |
| 10. | The report contains all periods recorded in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line was checked out. | Y G | N G |
| 11. | The report contains the times and durations of all periods recorded in which all pilot flames of a flare were absent. | Y G | N G |
| 12. | If an extension to repairing or emptying a tank is utilized in accordance with § 63.120(b)(7)(ii), (b)(8), § 63.133(e)(2), or (h) of subpart G, the report shall include the following: | | |
| | (a) Identify the storage vessel or wastewater tank; | Y G | N G |
| | (b) An explanation of why it was unsafe to perform the inspection or seal or gap measurement or a description of the failure that cannot be repaired in 45 days; | Y G | N G |
| | (c) Documentation that alternate storage capacity is unavailable; | Y G | N G |

TABLE 11-4. CHECKLIST FOR PERIODIC REPORTS

| | | | |
|-----|--|-----|-----|
| (d) | A schedule of actions that will ensure the storage vessel or wastewater tank will be emptied as soon as practical. | Y G | N G |
|-----|--|-----|-----|

TABLE 11-5. CHECKLIST FOR A REQUEST OF COMPLIANCE EXTENSION

Complete this form for any source, subject to the HON, that has requested an extension of compliance. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

Note: Requests for extensions must be submitted no later than 120 days prior to the compliance dates specified in § 63.100(k)(2), §63.100(l)(4), and §63.100(m) of Subpart F, except as provided for in §63.151(a)(6)(iv).^a

| | | | |
|-----|--|-----|-----|
| 1. | The request contains a description of the controls to be installed to comply with the standards. | Y G | N G |
| 2. | The request contains a compliance schedule specifying dates by which: | Y G | N G |
| (a) | Contracts for emission control systems or process changes for emission control will be awarded; | Y G | N G |
| (b) | On-site construction, installation of emission control equipment, or a process change is to be initiated; | Y G | N G |
| (c) | On-site construction, installation of emission control equipment, or a process change is to be completed; and | Y G | N G |
| (d) | Final compliance will be achieved. | Y G | N G |
| 3. | The request states whether the owner or operator is also requesting an extension of other applicable requirements (e.g., performance testing). | Y G | N G |

^a Requests must be submitted with the operating permit application, as part of the Initial Notification, or as a separate submittal.

**TABLE 11-6. CHECKLIST FOR REQUEST TO USE ALTERNATIVE
MONITORING OR RECORDKEEPING PROCEDURES^a**

Complete this form for any source requesting to use alternative monitoring or recordkeeping procedures. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

- | | | | |
|----|--|-----|-----|
| 1. | If the source does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and generating continuous records, the request for a less frequent, non-automated monitoring system includes: | Y G | N G |
| | (a) Manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour and calculation and recording of the daily average value from these measurements; | Y G | N G |
| | (b) A description of the planned monitoring and recordkeeping system; | Y G | N G |
| | (c) Documentation that the source does not have an automated monitoring and recording system; | Y G | N G |
| | (d) A justification for requesting an alternative monitoring and recordkeeping system; and | Y G | N G |
| | (e) A demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent the control device operating conditions considering typical variability of the specific process and control device operating parameter being monitored. | Y G | N G |
| 2. | If the source wishes to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency, but instead records all values that meet set criteria for variation from previously recorded values, the request must address the systems ability to: | Y G | N G |
| | (a) Measure the operating parameter once every 15 minutes; | Y G | N G |
| | (b) Record at least 4 values each hour during periods of operation; | Y G | N G |
| | (c) Record the date and time when monitors are turned on or off; | Y G | N G |
| | (d) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident; | Y G | N G |

**TABLE 11-6. CHECKLIST FOR REQUEST TO USE ALTERNATIVE
MONITORING OR RECORDKEEPING PROCEDURES^a**

| | | | |
|-----|--|-----|-----|
| (e) | Compute daily average values of the monitored operating parameter based on recorded data; and | Y G | N G |
| (f) | Retain all recorded data for that operating day if the daily average operating parameter value is an excursion. | Y G | N G |
| 3. | In addition, the request for a system described in question 2 above includes a description of the monitoring system and the data compression recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all the requirements outlined in questions 2(a) through 2(f) above. | Y G | N G |

^a The information shall be submitted with the operating permit application or as otherwise specified by the permitting authority.

TABLE 11-7. CHECKLIST FOR START-UP, SHUTDOWN AND MALFUNCTION PLAN^a

Complete this form for any source with emission points subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

| | | |
|---|-----|-----|
| 1. The Plan describes in detail the procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction. | Y G | N G |
| 2. The Plan defines a program of corrective action for malfunctioning process and air pollution control equipment used for compliance. | Y G | N G |
| 3. The Plan identifies all routine or otherwise predictable continuous monitoring system malfunctions. | Y G | N G |
| 4. The plan includes procedures for managing maintenance wastewater and specifies the following items: | | |
| (a) The process equipment and/or maintenance tasks that are expected to create wastewater during maintenance activities. | Y G | N G |
| (b) The procedure for properly managing the wastewater and controlling HAP emissions to the atmosphere. | Y G | N G |
| (c) The procedures for clearing materials from process equipment. | Y G | N G |

^a The plan must be submitted by the compliance date.

TABLE 11-8. CHECKLIST FOR START-UP, SHUTDOWN AND MALFUNCTION REPORTS^a

Complete this form for any source with emission points subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

- | | | | |
|----|--|-----|-----|
| 1. | A record of the occurrence and duration of each start-up, shutdown and malfunction of operation of air pollution control equipment or continuous monitoring systems used to comply with Subparts F, G or H during which excess emissions occur. (This record is not required to be submitted in the Start-up, Shutdown and Malfunction Report. | Y G | N G |
| 2. | For each start-up, shutdown or malfunction during which excess emissions occur, the report indicates: | | |
| | (a) That the procedures specified in the source's start-up, shutdown and malfunction plan were followed; and | Y G | N G |
| | (b) Any actions taken that are not consistent with the plan. | Y G | N G |
| 3. | The report includes a letter stating the name, title, and signature of the responsible official certifying the report's accuracy. | Y G | N G |

^a Reports of Start-up, shutdown and malfunction must be submitted semi-annually and may be included with the semiannual report.

TABLE 11-9. CHECKLIST FOR INITIAL NOTIFICATIONS BY NEW OR RECONSTRUCTED MAJOR AFFECTED SOURCES

Complete this form to address the construction or reconstruction of major affected sources subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance.

- | | | | |
|----|---|-----|-----|
| 1. | A notification contains a statement of intention to construct a new major affected source, reconstruct a major affected source, or reconstruct a major source such that it becomes a major affected source. | Y G | N G |
| 2. | A notification indicates the date when construction or reconstruction was commenced, submitted simultaneously with the permit application if it was commenced before the effective date of the relevant standard. | Y G | N G |
| 3. | A notification indicates the date when construction or reconstruction was commenced, postmarked no later than 30 days after such date if it was commenced after the effective date of the relevant standard. | Y G | N G |
| 4. | A notification indicates the actual date of startup postmarked within 15 days after that date. | Y G | N G |

**TABLE 11-10. CHECKLIST FOR SOURCE CONSTRUCTION AND
RECONSTRUCTION PERMIT APPLICATIONS**

Complete this form to address the construction or reconstruction of sources subject to the HON. A "yes" response to all questions will indicate compliance, and a "no" will indicate noncompliance except where noted.

| | | |
|---|-----|-----|
| 1. The application contains the applicant's name and address. | Y G | N G |
| 2. The application contains a notification of intention to construct a new major affected source or make any physical or operational change to a major affected source. | | |
| 3. The application notes the (proposed) physical location/address of the source. | Y G | N G |
| 4. The application identifies the relevant standard that is the basis of the application. | Y G | N G |
| 5. The application indicates the expected commencement date of the construction or reconstruction. | Y G | N G |
| 6. The application identifies the expected date of initial startup. | Y G | N G |
| 7. The application addresses the type and quantity of HAPs emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, as well as operating parameters to the extent that they are used to demonstrate compliance. | Y G | N G |
| 8. For reconstructions only, the application contains a brief description of the affected source and the components to be replaced. | | |
| 9. For reconstructions only, the application contains a description of present and proposed emission control system, including control efficiencies for each HAP. | Y G | N G |
| 10. For reconstructions only, the application contains an estimate of the fixed capital cost of replacements and of constructing a comparable entirely new source unless the owner or operator declares that there are no economic or technical limitations to prevent compliance. | Y G | N G |
| 11. For reconstructions only, the application contains the estimated life of the affected source after the replacements unless the owner or operator declares that there are no economic or technical limitations to prevent compliance. | Y G | N G |

**TABLE 11-10. CHECKLIST FOR SOURCE CONSTRUCTION AND
RECONSTRUCTION PERMIT APPLICATIONS**

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|---|-----|-----|
| 12. For reconstructions only, the application contains a discussion of any technical or economic limitations the source may have in complying with the applicable requirements unless the owner or operator declares that there are no economic or technical limitations to prevent compliance. | Y G | N G |
|---|-----|-----|
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