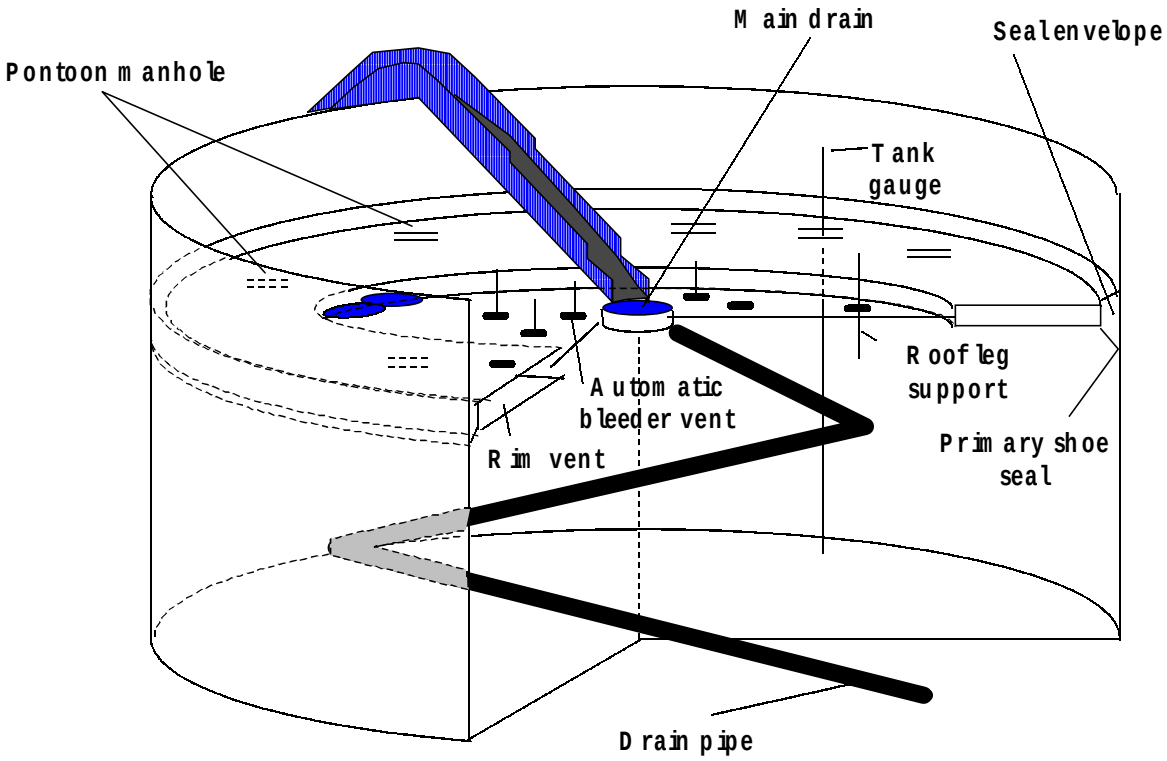
U.S. EPA REGION 7
ORGANIC AIR EMISSIONS ASSISTANCE

RCRA SUBPART CC GUIDANCE MODULE
FOR
TANK LEVEL 2 CONTROLS

EXTERNAL FLOATING ROOF TANK



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FORWARD

The purpose of this Guidance Module is to present information by which affected facilities can achieve better compliance with environmental regulations. This Guidance Module was produced by TechLaw, Inc. under contract to the U.S. Environmental Protection Agency (U.S. EPA) Region 7 for the Compliance Assurance and Enforcement Division of U.S. EPA Region 7.

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GUIDANCE MODULE FOR TANK LEVEL 2 CONTROLS

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1.0 INTRODUCTION

1.1 About this Guidance Module

"Tanks which meet either Tank Level 1 or Tank Level 2 control criteria may use an external floating roof tank for compliance with Subpart CC regulations."

This Guidance Module is a compliance assistance tool for environmental managers responsible for complying with RCRA Subpart CC standards. Subpart CC standards may apply to tanks, containers, or surface impoundments which manage hazardous waste. Compliance with the Subpart CC standards is based on proper knowledge of the waste, good waste management practices, inspection and maintenance of equipment in good repair, and the appropriate application of acceptable control options.

This Guidance Module has been prepared for environmental managers, owners, and operators who are responsible for applying Subpart CC standards to an external floating roof tank. **Tanks which meet either Tank Level 1 or Tank Level 2 control criteria may use an external floating roof tank for compliance with Subpart CC regulations.** Information on applicability, waste determination, monitoring and inspection requirements, waste transfer requirements, repair requirements, recordkeeping requirements and permitting is presented in this Guidance Module.

The inspection, management, and permitting requirements of containers and surface impoundments, and tanks that apply controls other than a external floating roof tank are not discussed in this Guidance Module. Please refer to the *U.S. EPA Region 7 Environmental Manager's Guidance Handbook* (December 1998) for information on the inspection, management, and permitting of these types of equipment. Other federal, state, and local regulations which limit the amount of volatile organics (VO) that can be emitted from a unit are not covered in this Guidance Module.

The Subpart CC standards were initially published on December 6, 1994 (59 FR 69826). Since that time U.S. EPA has published several FEDERAL REGISTER documents to amend or clarify the December 6, 1994 Final Rule. This Guidance Module considers applicable FEDERAL REGISTER documents through the December 8, 1997 (62 FR 64636) corrections and clarifications to the Final Rule.

1.2 General Subpart CC Requirements

Subpart CC standards were published to reduce organic air emissions from tanks, surface impoundments, and containers. The standards allow for controlling organic air emissions from affected equipment by using an acceptable control device, by treating the

waste, or by meeting one of various other design or regulatory requirements included in the standard.

Units which contain hazardous waste that is treated to reduce the VO concentrations to below certain specified limits are exempt from the Subpart CC standards. The acceptable organic treatment methodologies and the required treatment limits are presented in 40 CFR 264.1082(c)(2)(i) to (ix) and 265.1083(c)(2)(i) to (ix) of the Subpart CC standards. These treatment alternatives are discussed in the *U.S. EPA Region 7 Environmental Manager's Guidance Handbook* (December 1998).

Subpart CC standards require that waste determinations be conducted to determine the VO concentration of the waste, to ensure that treatment conditions specified in the standards are met, to determine if equipment is operating with no detectable emissions, and to determine the maximum organic vapor concentration in a tank. Waste determinations are described in 40 CFR 265.1084 and in the *U.S. EPA Region 7 Environmental Manager's Guidance Handbook* (December 1998).

2.0 APPLICABILITY

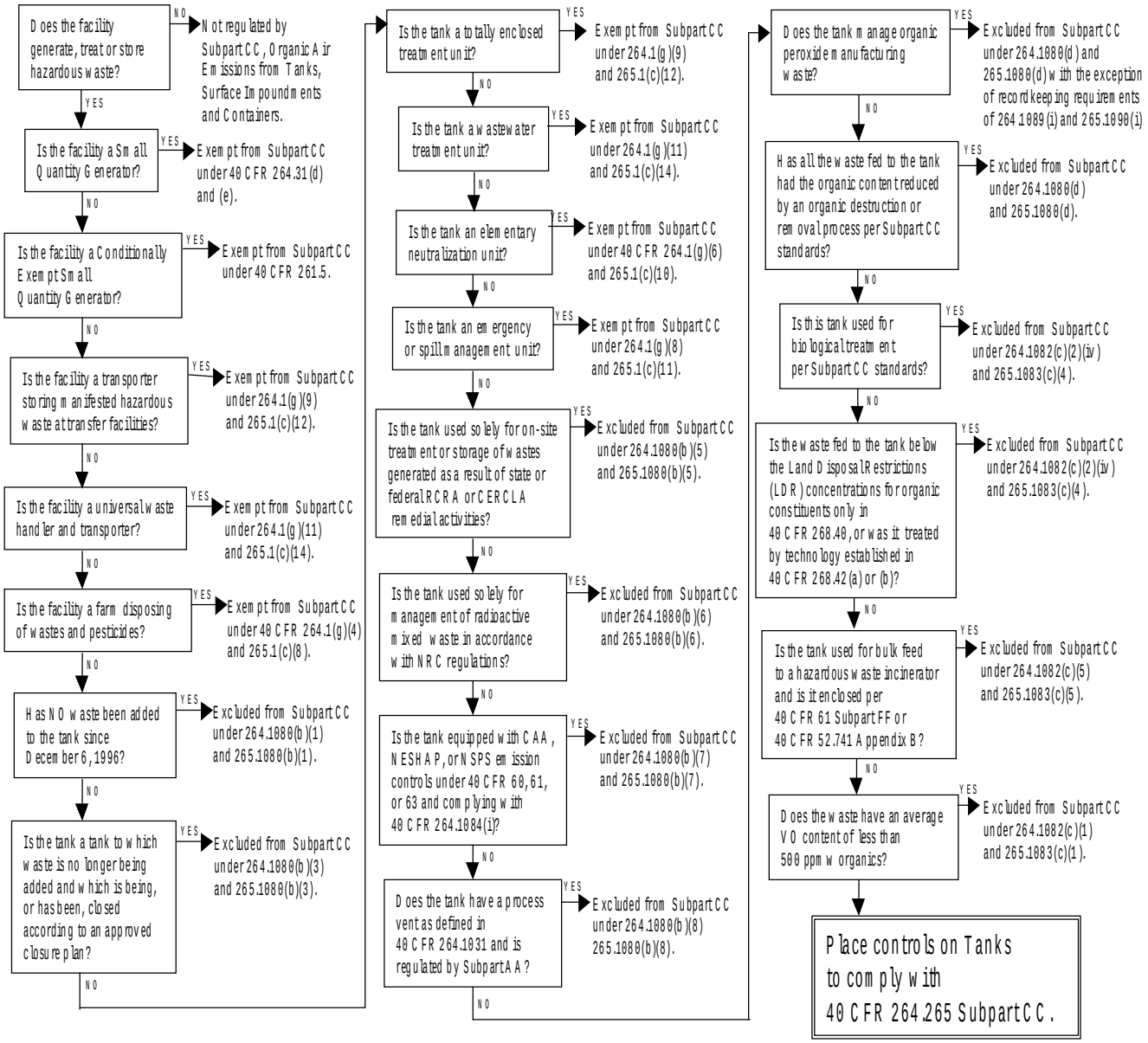
Subpart CC standards apply to any tank, surface impoundment or container which manages hazardous waste and which is subject to permit standards under 40 CFR 264, interim status standards under 40 CFR 265, or less than 90-day Large Quantity Generator (LQG) standards under 40 CFR 262.34(a)(1)(i) or (ii). Certain exemptions or exclusions also may apply. The descriptions of the exemptions and exclusions presented in the following applicability decision tree (Figure 2-1) are abbreviated. Please consult the Code of Federal Regulations references cited in the decision tree for additional detail.

The exclusions presented in Figure 2-1 do not affect the requirement to maintain appropriate records which provide information on the basis of the exclusion that is applied to the unit.

3.0 TANK LEVEL 2 CONTROL REQUIREMENTS

An external floating roof tank may be subject to Subpart CC control requirements if it manages hazardous waste which has an annual average concentration of VO at the point of waste origination equal to or exceeding 500 ppm by weight (ppmw) as measured by methods specified in 40 CFR 265.1084(a). Equipment such as piping that is associated with the external

Figure 2-1: Applicability Decision Tree for Tanks



floating roof tank may also be subject to RCRA air rules. Piping and associated equipment which feeds the tank may be subject to Subpart BB regulations if it contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight. Other equipment which exists downstream of the Subpart CC affected tank may, or may not, be subject to RCRA air rules depending on the VO concentration of waste in the equipment.

3.1 Level of Control Required for Tanks

Two levels of air pollution emission controls are specified by 40 CFR 264.1084: Tank Level 1 and Tank Level 2. Tank Level 1 controls are typically easier to implement than Tank Level 2 controls.

The level of control required for a tank is determined by the tank design capacity, the maximum organic vapor pressure of the waste in the tank, the extent to which the hazardous waste in the tank is heated and whether the tank is used for a waste stabilization process. To determine if a tank may apply Tank Level 1 controls, the vapor pressure of the waste must be determined as specified in 40 CFR 265.1084(c)(2) to (4).

Criteria for Tank Level 1 Controls

Tank Capacity		Maximum Organic Vapor Pressure		
cubic meters	**gallons, approximate**	**kiloPascals**	**mm Hg**	**psi**
≥151	≥40,000	5.2	40	0.75
≥75 and < 151	≥20,000 and < 40,000	27.6	207	4.0
< 75	< 20,000	76.6	574	11.1

Reference: 40 CFR 264.1084(b)(1)(i)

To meet Tank Level 1 control requirements, the waste in the tank may not be heated to a temperature above that at which the vapor pressure of the waste was determined. Also, the waste may not be treated using a waste stabilization process [40 CFR 265.1085(b)(ii) and (iii)].

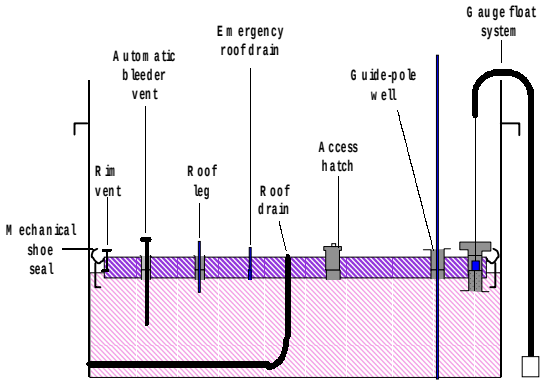
A tank that manages hazardous waste that does not meet the above requirements must use Tank Level 2 controls and therefore must use a control option other than a fixed roof tank and closure device to manage VO emissions from the waste in the tank.

Tanks which meet the above requirements (vapor pressure/ capacity, the tank temperature maintained below the temperature at which the maximum vapor pressure was measured, and no waste stabilization) may use Tank Level 1 or Tank Level 2 controls. If an owner or operator chooses to use an external floating roof tank to control organic air emissions from a tank, no vapor pressure determination is necessary for the tank because organic air emissions from the tank are already being controlled with a Tank Level 2 control option.

3.2 Operating Requirements Specific to an External Floating Roof Tank

The basic requirements for the external floating roof tank are as follows:

- The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.



- The external floating roof must be equipped with two continuous seals, one above the other, between the tank wall and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal. The primary seal must be either a liquid-mounted or metallic shoe seal. The total area of the gaps between the tank wall and the primary seal must not exceed 212 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps must not exceed 3.8 cm. If a metallic shoe seal is used, it must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 cm above the liquid surface. The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal must not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of these gaps must not exceed 1.3 cm.

- All openings in the noncontact external floating roof, with the exception of automatic bleeder vents and rim space vents, must project below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof must be equippedwith a gasketed cover, seal or lid. Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position. Each automatic bleeder vent and each rim space vent must be equipped with a gasket. Each roof drain that empties into

the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. Each unslotted and slotted guide pole must be equipped with a gasketed sliding cover or flexible fabric sleeve seal. Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole. Each slotted guide pole must be equipped with a gasketed cover.

- When the floating roof is resting on the leg supports, the process of filling, emptying or refilling must be continuous and completed as soon as practical. With the exception of automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof must be secured and maintained in a closed position at all times except when the closure device must be open for access. Covers on each access hatch and each gauge float well must be bolted or fastened when secured in the closed position. **Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.** Rim space vents must be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

"Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports."

- The cap on the end of each unslotted guide pole must be secured in the closed position at all times except when measuring the level or collecting samples of liquid in the tank. The cover on each gauge hatch sample well must be secured in the closed position at all times except when the hatch or well must be opened for access. Both the primary seal and the secondary seal must completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

- Safety devices, as defined in 40 CFR 265.1081, on tanks subject to Tank Level 2 controls may open anytime necessary to avoid an unsafe condition, however they must not be used for routine venting of the vapor space in a tank [40 CFR 264.1084(g)(2)(ii) and 265.1085(g)(2)(ii)].

3.2.1 Monitoring and inspection requirements [40 CFR 264.1084(g)(3) and 265.1085(g)(3)]

Subpart CC specific monitoring and inspection requirements for an external floating roof tank are presented in 40 CFR 264.1084(g)(3) and 265.1085(g)(3). Additional monitoring and inspection requirements for tanks are presented in 40 CFR 264

and 265 Subpart J. These additional monitoring and inspection requirements are not discussed in this guidance.

The owner or operator must visually inspect the external floating roof and its closure devices for defects that could result in air pollutant emissions. Such defects include, but are not limited to holes, tears or other openings in the floating roof, the rim seal detached from the floating roof, all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank, broken, cracked or otherwise damaged seals or gaskets on closure device, and broken or missing hatches, access covers, caps or other closure devices. These visual inspections must be performed on an annual basis.

The conditions provided in 40 CFR 264.1084(l) and 265.1085(l) maintain the requirement of performing the initial inspection and monitoring on the cover and closure devices, but allows for subsequent inspection and monitoring to take place at intervals longer than one year if the inspection and monitoring would expose personnel to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate a cover as an "unsafe to inspect and monitor cover". For an "unsafe to inspect and monitor cover" inspections may take place at intervals longer than one year, but inspection and monitoring are still required as frequently as practicable during those times when a worker can safely access the cover [40 CFR 264.1084(l)(ii) and 265.1085(l)(ii)].

If a facility has a Subpart CC affected tank with an "unsafe to inspect and monitor cover" the facility must prepare a written explanation which states the reasons why the cover is unsafe to inspect and monitor. This explanation must be recorded in a log that is kept in the facility operating record [40 CFR 264.1089(g) and 265.1090(g)]. A written plan and schedule which describes the monitoring and inspection of the "unsafe to inspect and monitor cover" must also be recorded in a log that is kept in the facility operating record.

The identification number of tanks which have an "unsafe to inspect and monitor cover" must be recorded and maintained in the facility operating record along with the explanation of the designation and the plan and schedule for monitoring and inspecting the cover [40 CFR 264.1089(g) and 265.1090(g)].

The owner or operator must perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the

floating roof and, thereafter, at least once every five days. The owner or operator must perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter at least once every year. If a tank ceases to hold hazardous waste for a period of one year or more, subsequent introduction of hazardous waste into the tank must be considered an initial operation. The owner or operator must determine the total surface area of gaps in the primary seal and in the secondary seal individually.

The seal gap measurements must be performed at one or more floating roof levels when the roof is floating on the roof supports. Seal gaps, if any, must be measured around the entire perimeter of the floating roof in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank. For a seal gap measured, the gap surface area will be determined using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. The total gap area must be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of respective standards for the seal type.

If the seal gap exceeds 212 cm^2 per meter of tank diameter for the primary seal or 21.2 cm^2 per meter of tank diameter for the secondary seal, the owner or operator must repair the defect within 45 calendar days of defect detection.

Monitoring and inspection records for Subpart CC affected equipment must be maintained according to the requirements of 40 CFR 264.1089 or 265.1090 as applicable.

3.2.2 Waste transfer requirements [40 CFR 264.1084(j) and 265.1085(j)]

Waste transfer to a Subpart CC affected tank must be through continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. An individual drain system is considered to be a closed system when it meets the requirements of 40 CFR 63, subpart RR [40 CFR 264.1084(j)(1) and 265.1085(j)(1)].

As set forth at 40 CFR 264.1084(j)(2) and 265.1085(j)(2), the requirement to use continuous hard-piping or another closed system does not apply under any of the following conditions:

- The waste contains an average VO concentration of less than 500 ppmw as described in 40 CFR 264.1082(c)(1) and 265.1083(c)(1);

- The waste has been treated by an organic destruction or removal process to meet the requirements in 40 CFR 264.1082(c)(2) and 265.1083(c)(2); or,

- The waste meets LDR Requirements as presented in 40 CFR 264.1082(c)(4) and 264.1083(c)(4).

3.2.3 Repair requirements [40 CFR 264.1084(k) and 265.1085(k)]

For each defect detected during an inspection, the initial effort at repair must be made no later than five calendar days after detection and repair must be completed as soon as possible but no later than 45 calendar days after detection. An exemption to this repair requirement exists such that the repair may be delayed beyond 45 calendar days if the repair requires the emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. Additional details on this exemption are provided in 40 CFR 264.1084(k)(2) and 265.1085(k)(2).

When a defect is identified the following information must be recorded: the location of the defect, a description of the defect, the date the defect was detected, and the corrective action that was taken to repair the defect. If the repair of the defect was delayed in accordance with the provisions set forth in 40 CFR 264.1085(k)(2) and 265.1085(k)(2), the facility operating record must contain the reason for the delay and the expected date of repair [40 CFR 264.1089(b)(1)(i)(B) and 265.1090(b)(1)(i)(B)].

3.2.4 Recordkeeping requirements [40 CFR 264.1089(b) and 265.1090(b)]

All records that are maintained in accordance with Subpart CC standards, including those stored electronically, must be maintained in a central location and be easily accessible during inspections. The following table summarizes the recordkeeping requirements which apply to an external floating roof tank.

RECORDKEEPING REQUIREMENTS SUMMARY TABLE

WASTE DETERMINATION REQUIREMENTS	40 CFR
Prepare and maintain records for each determination of the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with 40 CFR 264.1083(c) and 265.1084(c) to demonstrate that Tank Level 1 controls may be applied to the tank. If process knowledge is applied, the records must include the basis for the process knowledge per 40 CFR 265(c)(4). If direct measurement is used according to 40 CFR 265.1084(c)(3), the sampling date and time, the analysis method used, and the analysis results must be maintained in the facility operating record.	264.1089(b)(2)(i) and 265.1090(b)(2)(i)
MONITORING AND INSPECTION REQUIREMENTS	**40 CFR**
Annual inspection records must be maintained in the facility operating record for a minimum of three years including: a unique tank identification number or other unique descriptor for each tank and a record for each inspection that was conducted on the tank. Inspection records must include the date of the inspection and information about any defects identified during the inspection, including the location of the defect, a description of the defect, the date the defect was detected and the corrective action that was taken to repair the defect. When the repair of a defect is delayed in accordance with 40 CFR 264.1085(k)(2) and 265.1085(k)(2), the facility records must contain the reason for the delay and expected date of repair.	264.1089(b)(1)(i)(B) and 265.1090(b)(1)(i)(B)
UNSAFE TO MONITOR	**40 CFR**
The identification number of tanks designated as "unsafe to inspect and monitor" must be recorded and maintained in the facility operating record along with the explanation of the designation, and the plan and schedule for monitoring and inspecting the cover.	264.1089(g) and 265.1090(g)
TANKS WITH CLEAN AIR ACT CONTROLS	**40 CFR**
A facility subject to the control device standards in 40 CFR 60, Subpart VV, or 40 CFR part 61, Subpart V, may demonstrate compliance with Subpart CC by documentation either pursuant to Subpart CC, or pursuant to the provisions of 40 CFR part 60, Subpart VV or 40 CFR part 61, Subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by 40 CFR 264.1089 or 265.1090.	264.1089 and 265.1090
For each hazardous waste tank not using air emission controls specified in 40 CFR 264.1084 through 264.1087 or 265.1085 through 265.1088, in accordance with the provisions 40 CFR 264.1080(b)(7) or 265.1080(b)(7), the owner or operator must record and maintain: 1) Certification that the tank is equipped with and operating air emission controls in accordance with the requirements of applicable Clean Air Act regulations codified under 40 CFR part 60, 61, or 63; and 2) Identification of the specific requirements codified under 40 CFR part 60, part 61, or part 63 with which the tank is in compliance. This information must be maintained in the operating record for as long as the waste management unit is not using the air emission controls specified in 40 CFR 264.2084 and 265.1085 [40 CFR 264.1089(a) and 265.1090(a)], which may exceed the three year recordkeeping requirement that applies to most other information.	264.1089(h) and 265.1090(h)

RECORDKEEPING REQUIREMENTS SUMMARY TABLE

CONTROL DEVICES	40 CFR
Air emission control device design documentation must be maintained in the facility operating record until the air emission control equipment is replaced or otherwise no longer in service.	264.1089(a) and 265.1090(a)

4.0 PERMIT REQUIREMENTS

This section addresses permit requirements for an existing treatment, storage, or disposal facility (TSDF) that meets the Level 2 control requirements for a tank through the use of an external floating roof tank. Although the 40 CFR Part 264 requirements are self-implementing (i.e., the requirements apply to all affected facilities prior to revising the RCRA Part B permit), eventually all affected interim status and permitted TSDFs will be issued a RCRA Part B permit that incorporates the requirements of 40 CFR Part 264. In addition, any existing TSDF that becomes newly subject to the regulations or any new TSDF that is subject to the regulations must submit a permit application and receive a permit incorporating the RCRA Part B requirements prior to construction and operation of the newly affected unit or facility.

Prior to promulgation of the Subpart CC requirements on December 6, 1994, 40 CFR Section 270.4 stipulated that compliance with a RCRA permit constituted compliance with the provisions of RCRA. In other words, facilities subject to the RCRA regulations were not required to comply with changes to the RCRA regulations until such revised requirements were incorporated into the facility's RCRA permit by the permitting authority. This provision is commonly known as "permit-as-a-shield". The December 6, 1994 FEDERAL REGISTER changed the "permit-as-a-shield" practice by amending Section 270.4 to require that owners/operators of TSDFs that have been issued final RCRA permits prior to October 6, 1996, comply with the air emissions standards under Part 265, Subparts AA, BB and CC until the facility's permit is reviewed or reissued. Therefore, the TSDF owner or operator is not required to initiate a permit modification to add the requirements of 40 CFR Part 264, Subparts AA, BB or CC for existing units, but must comply with the applicable requirements of 40 CFR Part 265, Subparts AA, BB and CC by the compliance date of December 8, 1997.

The RCRA permit for affected TSDFs will be revised to incorporate the applicable requirements of 40 CFR Part 264, Subparts AA, BB and CC whenever the permit is reopened or subject to renewal, or when a TSDF owner or operator submits a Class 3 modification request pertaining to an existing unit or addition of a new unit subject to the Subpart AA, BB, or CC requirements. Interim status TSDFs which have submitted Part B applications to the U.S. EPA, but have not received a draft permit as of December 5, 1996, are required to modify the Part B application to incorporate the applicable requirements of 40 CFR Part 264, Subparts AA, BB, and CC prior to the draft being issued by the U.S. EPA. If the TSDF has received a draft permit as of December 5, 1996, the applicable requirements of 40 CFR Part 264 Subparts AA, BB, and CC must be incorporated into the final permit determination. The U.S. EPA Regional Administrator will establish, on a case-by-case basis, the deadline for submittal of the revised Part B permit application.

4.1 Permit Content - General

Development of the permit application is critical to receipt of a permit that is acceptable to the facility. It must be remembered that the permit application is the primary source of information for the permitting authority to use in preparing the permit. Although the regulations specify the minimum information that is required to be included in the permit application, the applicant may want to consider including additional optional information. In this manner the permitting authority will have all the information necessary for the development of complete, accurate and acceptable permit terms and conditions. Please contact your U.S. EPA or State permit writer for a permit writers checklist or for permit writing guidance.

Examples of additional information that an owner or operator may want to submit with an application that addresses an external floating roof tank include:

- Description of the monitoring device used to continuously record temperature.
- Description of operating procedures (i.e., how the closure device will be kept closed except during periods of routine maintenance or inspections).
- Description of schedules and procedures for tank inspections, including example log forms.

- Description of the procedures followed in attempting to repair a defect.
- Description of the procedures used to transfer waste.
- Documentation to demonstrate that the fixed roof and its closure device are designed to form a continuous barrier over the entire surface area of the hazardous waste.
- Documentation that the fixed roof and its closure device are made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere.

The incorporation of this type of information into the permit application may be beneficial to the permit application review process and result in the process proceeding smoothly so that the permit can be issued as quickly as possible.

4.2 Permit Content - Tank Standards

Design features, operating requirements, monitoring provisions, inspection procedures, and recordkeeping and repair provisions may vary depending on the control level that is being used to control air emissions from the tank. The following are the requirements that will be included in a permit for an external floating roof tank. These design, operating, monitoring, inspection, repair, recordkeeping and reporting requirements are summarized only for the control option that uses an external floating roof. At a minimum, the following requirements will appear as terms and conditions in the RCRA permit.

4.2.1 Design requirements [40 CFR 264.1087 and 264.1033(c)]

The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports. The external floating roof must be equipped with two continuous seals, one above the other, between the tank wall an d the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal. The primary seal must be either a liquid-mounted or metallic shoe seal. The total area of the gaps between the tank wall and the primary seal must not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of these gaps must not exceed 3.8 cm. If a metallic shoe seal is used, it must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 cm above the liquid surface. The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the

secondary seal must not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of these gaps must not exceed 1.3 cm.

All openings in the noncontact external floating roof, with the exception of automatic bleeder vents and rim space vents, must project below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof must be equipped with a gasketed cover, seal or lid. Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position. Each automatic bleeder vent and each rim space vent must be equipped with a gasket. Each roof drain that empties into the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. Each unslotted and slotted guide pole must be equipped with a gasketed sliding cover or flexible fabric sleeve seal. Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole. Each slotted guide pole must be equipped with a gasketed cover.

4.2.2 Operating Requirements (40 CFR 264.1084(g) and 264.1087)

Whenever a hazardous waste is in the tank, the tank must be operated as a closed system that does not vent to the atmosphere except in the event that a safety device is required to open to avoid an unsafe condition.

4.2.3 Inspection Requirements (40 CFR 264.1084(g), 264.1087, and 264.1033)

The owner or operator must visually inspect the external floating roof tank and its closure devices for defects that could result in air pollutant emissions. Such defects include, but are not limited to holes, tears or other openings in the tank, broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure device. These visual inspections must be performed on an annual basis.

4.2.4 Repair requirements [40 CFR 264.1084(k) and 264.1033(l)(3)]

When a defect is detected during an inspection of a tank, the owner or operator must make an initial effort to repair the defect no later than five calendar days after detection and the repair must be completed as soon as possible but no later than 45 calendar days after detection. The repair may be delayed beyond this 45 day period if the owner or operator determines that the defect requires the emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the

tank. In this case, the repair must be performed during the next time the process or unit that is generating the waste managed in the tank stops operation.

4.2.5 Recordkeeping requirements [40 CFR 264.1089]

All information required by Subpart CC must be recorded and maintained in the operating record for a period of three years. Records of air emission control equipment design information must be maintained in the operating record until the control equipment is replaced or taken out of service.

Records that must be maintained for floating roof tanks include a tank identification number, a record for each inspection performed including date of inspection, location of any defects detected, description of any defect detected, and the date corrective action was taken. If the repair is delayed, records of the reason for the delay and the expected date of repair also need to be maintained.

The following information must be recorded on a semi-annual basis: a description of planned routine maintenance for the control device that is anticipated to be performed over the next six-month period and a description of the planned routine maintenance that was performed for the control device during the previous six-month period. Only those planned activities that would cause the control device to not meet the applicable requirements need to be recorded.

For unexpected control device malfunctions that cause the control device to not meet applicable requirements, the following information must be recorded: the occurrence and duration of each malfunction, the duration of each period during a malfunction when gases are vented to the control device while it is not properly functioning, and actions taken during the periods of malfunctions to restore the control device to its normal operation.

Additional recordkeeping requirements for external floating roof tanks are included in Section 3.2.4. of this Guidance Module.

4.2.6 Reporting requirements [40 CFR 264.1090 (b)]

The owner or operator must notify the Regional Administrator in advance of each inspection to provide the Regional Administrator with the opportunity to have an observer present during the inspection. The owner or operator must notify the Regional Administrator of the date and location of the inspection as follows:

- Prior to each inspection to measure external floating roof seal gaps, written notification must be prepared and sent by the owner or operator to the Regional Administrator at least 30 calendar days before the date the measurements are scheduled to be performed.

- Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification must be sent by the owner or operator to the Regional Administrator at least 30 calendar days before refilling the tank.

- In the event that a visual inspection is not planned, the owner or operator must notify the Regional Administrator by phone at least seven calendar days before refilling the tank. This notification must be followed by a written explanation as why no inspection was planned.

Web Site

Clarification and additional information concerning EPA regulations can be obtained by contacting the EPA through the internet at the following web site:

www.epa.gov/region07