

**Texas Commission on Environmental Quality**  
**Form OP-UA13 - Instructions**  
**Cooling Tower Attributes**

**General:**

This form is used to provide a description and data pertaining to all cooling towers with potentially applicable requirements associated with a particular regulated entity number and application. Each table number, along with the possibility of a corresponding letter (i.e., Table 1a, Table 1b), corresponds to a certain state or federal rule. If the rule on the table is not potentially applicable to a cooling tower, then it should be left blank and need not be submitted with the application. If the codes entered by the applicant show negative applicability to the rule or sections of the rule represented on the table, then the applicant need not complete the remainder of the table(s) that corresponds to the rule. Further instruction as to which questions should be answered and which questions should not be answered are located in the “Specific” section of the instruction text. The following is included in this form:

- Table 1:** Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart Q: National Emission Standards for Hazardous Air Pollutants (HAPs) for Industrial Process Cooling Towers
- Table 2:** Title 40 Code of Federal Regulations Part 61 (40 CFR Part 61), Subpart L: National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants
- Tables 3a - 3b:** Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), Subchapter H, Division 2: Cooling Tower Heat Exchange Systems
- Table 4:** Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart JJJ: National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins
- Table 5:** Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart CC: National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries
- Tables 6:** Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart FFFF: National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

The Texas Commission on Environmental Quality (TCEQ) regulated entity number (RNXXXXXXXXXX) and the application area name from Form OP-1 (Site Information Summary) must appear in the header of each page for the purpose of identification for the initial submittal. The date of the initial form submittal must also be included and should be consistent throughout the application (MM/DD/YYYY). **Leave the permit number blank for the initial form submittal.** If this form is included as part of the permit revision process, enter the permit number assigned by the TCEQ, the area name (from Form OP-1), the date of the revision submittal.

Unit attribute questions that do not require a response from all applicants are preceded by qualification criteria in the instructions. If the unit does not meet the qualification criteria, a response to the question is not required. **Anytime a response is not required based on the qualification criteria, leave the space on the form blank.**

Notwithstanding any qualification criteria in the form instructions or information provided in other TCEQ guidance, the applicant may leave an attribute question blank (or indicate “N/A” for “Not Applicable”) if the attribute is not needed for the applicable requirement determinations of a regulation for a unit.

In some situations, the applicant has the option of selecting alternate requirements, limitations, and/or practices for a unit. Note that these alternate requirements, limitations, and/or practices must have the required approval from the TCEQ Executive Director and/or the U.S. Environmental Protection Agency Administrator before the federal operating permit application is submitted.

The Texas Commission on Environmental Quality (TCEQ) **requires** that a Core Data Form be submitted on all incoming registrations unless **all** of the following are met: the Regulated Entity and Customer Reference Numbers have been issued by the TCEQ and no core data information has changed. The Central Registry, a common record area of the TCEQ, maintains information about TCEQ customers and regulated activities, such as company names, addresses, and telephone numbers. This information is commonly referred to as “core data.” The Central Registry provides the regulated community with a central access point within the agency to check core data and make changes when necessary. When core data about a facility is moved to the Central Registry, two new identification numbers are assigned: the *Customer Reference (CN)* number and the *Regulated Entity (RN)* number. The Core Data Form is required if facility records are not yet part of the Central Registry or if core data for a facility has changed. If this is the initial registration, permit, or license for a facility site, then the Core Data Form must be completed and submitted with application or registration forms. If amending, modifying, or otherwise updating an existing record for a facility site, the Core Data Form is not required, unless any core data information has changed. To review additional information regarding the Central Registry, go to the TCEQ website at [www.tceq.texas.gov/permitting/central\\_registry/guidance.html](http://www.tceq.texas.gov/permitting/central_registry/guidance.html).

**Specific:**

**Table 1: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart Q: National Emission Standards for Hazardous Air Pollutants (HAPs) for Industrial Process Cooling Towers**

**Unit ID No.:**

Enter the identification number (ID No.) for the industrial process cooling tower (IPCT) (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP index numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Used Compounds Containing Chromium on or After September 8, 1994:**

Enter “YES” if the IPCT has used compounds containing chromium on or after September 8, 1994. Otherwise, enter “NO.”

▼ Continue only if “Used Compounds Containing Chromium on or After September 8, 1994” is “YES.”

**Initial Start-Up Date:**

Select one of the following ranges based on the initial start-up date for the IPCT. Enter the code on the form.

Code	Description
94-	Before September 8, 1994
94+	On or after September 8, 1994

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**Table 2:** Title 40 Code of Federal Regulations Part 61 (40 CFR Part 61), Subpart L: National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants

★ **Complete only for final cooler cooling towers at coke by-product recovery plants.**

**Unit ID No.:**

Enter the identification number (ID No.) for the final cooler cooling tower (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 10 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Initial Start-Up Date:**

Select one of the following options to describe the initial startup of the final cooler cooling tower. Enter the code on the form.

Code	Description
89-	Before September 14, 1989
89+	On or after September 14, 1989

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**Table 3a:** Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), Subchapter H, Division 2: Cooling Tower Heat Exchange System

★ **Complete this table only if the site is located in Houston/Galveston/Brazoria area and emit or have the potential to emit highly-reactive volatile organic compounds (HRVOC) as defined in 115.10.**

**Unit ID No.:**

Enter the identification number (ID No.) for the final cooler cooling tower (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 10 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Cooling Tower Heat Exchange Systems Exemptions:**

Select one of the following codes that best describe the exemption that applies to the source. Enter the code on the form.

Code	Description
PRESS	The cooling tower heat exchange system in which each individual heat exchanger with greater than 100 ppmw HRVOCs is operated with the minimum pressure on the cooling water side at least 5 psig greater than the maximum pressure on the process side.
PSF100-	Each individual heat exchanger of the cooling tower heat exchange system does not have greater than 100 ppmw HRVOCs in the process side fluid.
HRVOC5-	The stream directed to the cooling tower heat exchange system contains less than 5.0% by weight HRVOC
OOS	The cooling tower heat exchange system was permanently out of service by April 1, 2006.
ICF100-	The cooling tower heat exchange system has an intervening cooling fluid containing less than 100 ppmw of HRVOC between the process and cooling water.
NONE	Does not meet an exemption.

▼ Continue only if “Cooling Tower Heat Exchange Systems Exemptions” is “HROVC5-” or “NONE.”

**Alternative Monitoring:**

Enter “YES” if you are using alternative monitoring and testing methods approved by the executive director as allowed in § 115.764(f). Otherwise, enter “NO.”

**Modified Monitoring:**

Enter “YES” if you are using any minor modifications to the monitoring and testing methods approved by the executive director as allowed in § 115.764(f). Otherwise, enter “NO.”

★ Complete “Approved Monitoring ID NO.” only if “Alternative Monitoring” or “Modified Monitoring” is “YES.”

**Approved Monitoring ID No.:**

If an alternative monitoring and testing method or any minor modification to the monitoring and testing methods has been approved, then enter the monitoring and testing method unique identifier for each unit (maximum 10 characters). If the unique identifier is unavailable, then enter the date of the alternative/modified monitoring and testing method approval letter. A copy of the approval letter should be submitted to the TCEQ APD.

▼ Do NOT continue if “Alternative Monitoring” is “YES.”

**Table 3b: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), Subchapter H: Highly Reactive Volatile Organic Compound-Cooling Tower Heat Exchange System**

**Unit ID No.:**

Enter the identification number (ID No.) for the final cooler cooling tower (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 10 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Jacketed Reactor:**

Enter “YES” if the cooling tower heat exchange system is in dedicated service to a jacketed reactor. Otherwise, enter “NO.”

**Design Capacity:**

Select one of the following codes that best represents the total design capacity of the cooling tower heat exchange system to circulate cooling water. Enter the code on the form.

Code	Description
8000+	Design capacity to circulate >8000 gpm.
8000-	Design capacity to circulate <8000 gpm.

★ Complete “Finite Volume System” only if “Design Capacity” is “8000+.”

**Finite Volume System:**

Enter “YES” if the cooling tower heat exchange system is in dedicated service to a finite volume system and you are electing to comply with the requirements of § 115.764(h) in lieu of the requirements in § 115.764(a). Otherwise enter “NO.”

**Flow Monitoring/Testing Method:**

Select one of the following options that best describes the monitoring method used by the facility. Enter the code on the form.

Code	Description
INLET	Choosing to use a continuous flow monitor on each inlet of each cooling tower in accordance with § 115.764(a)(1), (b)(1), or (h)(1).
DATA	Choosing to use the maximum potential flow rate based on the manufacturer’s pump performance data in accordance with § 115.764(e)(1).
TDH	Choosing to use a monitor to continuously measure and record each cooling water pump discharge pressure to establish the total dynamic head of the cooling water system in accordance with § 115.764(e)(2).
HRVOC	Choosing to monitor cooling water flow rate at a point representative of the flow of cooling water from only the HRVOC-containing units (option only for cooling towers which service both HRVOC and non-HRVOC process units or cooling towers that service multiple type of heat exchange systems)
TOTAL	Choosing to monitor cooling water flow rate at a location representative of the total flow rate to the cooling tower in accordance with § 115.764(g)(2)

**Total Strippable VOC:**

Enter “YES” if you own or operate a cooling tower heat exchange system in which each individual heat exchanger has less than 5.0% HRVOC in the process side and you have chosen to comply with § 115.764(d). Otherwise enter “NO.”

★ Complete “On-Line Monitor” only if “Total Strippable VOC” is “NO.”

**On-Line Monitor:**

Enter “YES” if you are using a continuous on-line monitor capable of providing total HRVOC and speciated HRVOCs in ppbw (as specified in § 115.764(a)(6) or (b)(6)). Otherwise enter “NO.”

**Table 4: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart JJJ: National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins**

**Unit ID No.:**

Enter the identification number (ID No.) for the final cooler cooling tower (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 10 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Unit Type:**

Select one of the following that describes the unit being addressed. Enter the code on the form.

Code	Description
HEATX	Unit is a heat exchange system other than a process contact cooling tower.
COOLT	Unit is a process contact cooling tower.

**Thermoplastic Product:**

Select one of the following options that describe the thermoplastic produced by the thermoplastic product process unit (TPPU) that the heat exchange system or process contact cooling tower serves. Enter the code on the form.

Code	Description
PET	TPPU produces poly (ethylene terephthalate) resin (PET)
OTHER	TPPU produces a thermoplastic other than PET

**Construction/Modification Date:**

Select one of the following options that describes the construction, reconstruction or modification date of the affected source served by the heat exchange system or process contact cooling tower. Enter the code on the form.

Code	Description
1995-	Construction, reconstruction or modification of the affected source began on or prior to March 29, 1995
1995+	Construction, reconstruction or modification of the affected source began after March 29, 1995

- ★ **Complete “Monitored for HAP” if “Thermoplastic Product” is “OTHER” or “Construction/Modification Date” is “1995+.”**

**Monitored for HAP:**

Enter “YES” if the cooling water is being monitored for the presence of HAP. Otherwise, enter “NO.”

- ▼ **Continue only if “Unit Type” is “COOLT,” “Thermoplastic Produced” is “PET” and “Construction/Modification Date” is “1995-.”**

**PET Process:**

Enter “YES” if PET is produced using a continuous terephthalic acid high viscosity multiple end finisher process. Otherwise, enter “NO.”

- ▼ **Continue only if “Pet Process” is “YES.”**

**Subject to Subpart DDD:**

Enter “YES” if the TPPU is subject to 40 CFR Part 60 Subpart DDD. Otherwise, enter “NO.”

**Table 5: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart CC: National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries**

- **Complete this table for heat exchange systems that:**
  - are located at a petroleum refinery plant site that is a major source of HAP emissions,
  - emit, contain, or contact one or more of the HAPs listed in Table 1 of 40 CFR Part 63, Subpart CC, and
  - meet the definition of an affected source as defined by § 63.641.

**Unit ID No.:**

Enter the identification number (ID No.) for the heat exchange system (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 10 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Monitoring Exemptions:**

Select one of the following options that describes applicable exemptions from monitoring the heat exchange system. Enter the code on the form.

Code	Description
PRESS	All heat exchangers within the heat exchange system operate with minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.
ICF5-	All heat exchangers within the heat exchange system employ an intervening cooling liquid containing less than 5 percent by weight of total organic HAP between the process and the cooling water.
NONE	Heat exchange system is not exempt from leak monitoring.

▼ Continue only if “Monitoring Exemptions” is “NONE.”

**Existing Source:**

Select one of the following options to indicate if the heat exchange system is existing or new. Enter the code on the form.

Code	Description
EXIST	The heat exchange system is an existing source
NEW	The heat exchange system is a new source

**Heat Exchange System Type:**

Select one of the following options that describes the type of heat exchange system. Enter the code on the form.

Code	Description
CLOSED	Closed-loop recirculation heat exchange system
ONCE	Once-through heat exchange system

**Table 6:** Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart FFFF: National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

- ★ Complete this table only for heat exchange systems that meet criteria in 40 CFR § 63.2435(a)-(b) and § 63.2490(a).
- ★ Do not complete this table if the heat exchange system meets one or more of the criteria in 40 CFR §63.104(a)(1)-(6)

**Unit ID No.:**

Enter the identification number (ID No.) for the oil-water separator (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

**SOP Index No.:**

Site operating permit (SOP) applicants should indicate the SOP Index Number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP Index Numbers, please go to the TCEQ website at [www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title\\_V/additional\\_fop\\_guidance.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf).

**Monitoring:**

Enter “YES” if the cooling water is being monitored for the presence of HAPs or other representative substances that would indicate a leak. Otherwise enter “NO.”

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**Federal Operating Permit Program**

**Table 1: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)**

**Subpart Q: National Emission Standards for Hazardous Air Pollutants (HAPs) for Industrial Process Cooling Towers**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Used Compounds Containing Chromium on or After September 8, 1994	Initial Start-up Date



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**Federal Operating Permit Program**

**Table 2: Title 40 Code of Federal Regulations Part 61 (40 CFR Part 61)**

**Subpart L: National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Initial Start-Up Date

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**Federal Operating Permit Program**

**Table 3a: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)**

**Subchapter H, Division 2: Cooling Tower Heat Exchange Systems**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Cooling Tower Heat Exchange Systems Exemptions	Alternative Monitoring	Modified Monitoring	Approved Monitoring ID No.

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**Federal Operating Permit Program**

**Table 3b: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)**

**Subchapter H, Division 2: Cooling Tower Heat Exchange Systems**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Jacketed Reactor	Design Capacity	Finite Volume System	Flow Monitoring/ Testing Method	Total Strippable VOC	On-Line Monitor

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**Federal Operating Permit Program**

**Table 4: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)**

**Subpart JJJ: National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Unit Type	Thermoplastic Product	Construction/Modification Date	Monitored for HAP	PET Process	Subject to Subpart DDD

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**Federal Operating Permit Program**

**Table 5: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)**

**Subpart CC: National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Monitoring Exemption	Existing Source	Heating Exchange System Type

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**Federal Operating Permit Program**

**Table 6: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)**

**Subpart FFFF: National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing**

Date	Permit No.:	Regulated Entity No.

Unit ID No.	SOP Index No.	Monitoring