



Texas Commission on Environmental Quality
Form OP-UA28 - Instructions
Polymer Manufacturing Attributes

General:

This form is used to provide a description and data pertaining to all polymer manufacturing facilities 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 polymer manufacturing facility, 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 1a - 1f: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

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, and the regulated entity number.

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 TCEQ requires that a Core Data Form be submitted on all incoming registrations unless a Regulated Entity and Customer Reference Number has been issued by the TCEQ and no core data information has changed. If a Regulated Entity or Customer Reference Number has been issued, then the number must be noted on the request or applicable form. For more information regarding the Core Data Form, call (512) 239 5175 or go to the TCEQ Web site at: www.tceq.texas.gov/permitting/central_registry

Specific:

Table 1a: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

Manufactured Product: Select one of the following options to describe the product manufactured by the affected facility. Enter the code on the form.

Code	Description
PROPYL	Polypropylene or polyethylene
STYRENE	Polystyrene
PET	Poly (ethylene terephthalate)
OTHER	The affected facility is not involved with the manufacture of polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate)

Note: If “Manufactured Product” is “PROPYL,” “STYRENE,” or “PET,” Form OP-UA12 entitled “Fugitive Emission Unit Attributes,” Table 5 must be submitted with this application.

▼ **Continue only if “Manufactured Product” is “PROPYL,” “STYRENE,” or “PET.”**

Continuous Process: Enter “YES” if the affected facility process is continuous. Otherwise, enter “NO.”

★ **Complete the rest of Table 1 only if “Continuous Process” is “YES.”**

Construction/Modification Date: Select one of the following options that describes the date of commencement of the most recent construction, reconstruction, or modification. Enter the code on the form.

Code	Description
87-	On or before September 30, 1987
87-89	After September 30, 1987 and on or before January 10, 1989
89+	After January 10, 1989

▼ **Continue only if “Construction/ Modification Date” is “87-89” or “89+.”**

Experimental Process Line: Enter “YES” if the affected facility is an experimental process line. Otherwise, enter “NO.”

★ **Complete the rest of Table 1 only if “Experimental Process Line” is “NO.”**

★ **Complete “Modified after Applicability Date” if “Manufactured Product” is “STYRENE” or “PET.”**

Modified after Applicability Date: Enter “YES” if the affected facility modified or reconstructed after its applicability date. Otherwise, enter “NO.”

★ **Complete “Table 2 Threshold Emission Rates” only for processes that meet one of the following criteria:**

1. “Manufactured Product” is “PROPYL” and “Construction/Modification Date” is “87-89”; or
2. “Manufactured Product” is ASTYRENE” or “PET,” and “Modified after Applicability Date” is “YES.”

Table 2 Threshold Emission Rates: Select one of the following options to describe the uncontrolled emission rate. Enter the code on the form.

Code	Description
LESS	The uncontrolled emission rate is less than or equal to the uncontrolled threshold emission rates in Table 2 of 40 CFR § 60.560
MORE	The uncontrolled emission rate is greater than the uncontrolled threshold emission rates in Table 2 of 40 CFR § 60.560

Table 1b: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

★ **Complete only if “Manufactured Product” is “STYRENE” or “PET.”**

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (maximum 10 characters) as listed on Form OP-SUM entitled “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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

★ **Complete “Control Device Method” only if “Table 2 Threshold Emission Rates” is “MORE.”**

Control Device Modification: Enter “YES” if the affected facility is controlled by an existing control device that has been modified, reconstructed, or replaced. Otherwise, enter “NO.”

★ **Complete the rest of Table 1b only for processes that meet one of the following criteria:**

1. “Control Device Modification” is “YES”; or
2. “Manufactured Product” is “STYRENE” and “Modified after Applicability Date” is “NO.”

Emergency Vapor Recovery System: Enter “YES” if emissions are routed through an existing emergency vapor recovery system (EVRS). Otherwise, enter “NO.”

★ Complete “EVRS Modification Date” only if “Emergency Vapor Recovery System” is “YES.”

EVRS Modification Date: Select one of the following options to describe the date which the EVRS was modified, reconstructed, or replaced. Enter the code on the form.

Code	Description
87-	On or before September 30, 1987
87+	After September 30, 1987

★ Complete the rest of Table 1 only if “EVRS Modification Date” is “87+.”

Emission Control Method: Select one of the following options to describe the means by which total organic compound (TOC) emissions are limited from the material recovery section. Enter the code on the form.

Code	Description
TOC	Facility limits continuous TOC emissions
OUTLET	Facility limits outlet gas stream temperatures for each final condenser
562A	Facility is choosing to comply with 40 CFR § 60.562-1(a) (1) (I) (A)
562B	Facility is choosing to comply with 40 CFR § 60.562-1(a) (1) (I) (B)
562C	Facility is choosing to comply with 40 CFR § 60.562-1(a) (1) (I) (C)

★ Complete the rest of Table 1b only if “Emission Control Method” is “TOC,” “562A,” “562B,” or “562C.”

Control Device: Select one of the following options to describe the control device of the system. Enter the code on the form.

Code	Description
ABSORB	An absorber is the final system unit
CONDEN	A condenser is the final system unit
CARBADS	A carbon adsorber is the final system unit
CATINC	Catalytic incinerator
INCIN	Incinerator other than a catalytic incinerator
FLARE	Flare
BOIL150-	Boiler or process heater with a design heat input capacity is less than 150 MMBtu/hr
BOIL150+	Boiler or process heater with a design heat input capacity is greater than or equal to 150 MMBtu/hr
OTHER	Another type of control device is utilized

Control Device ID No.: Enter the identification number (ID No.) for the control device to which emissions are routed (maximum 10 characters). This number should be consistent with the control device identification number listed on Form OP-SUM. If there is no control device, then leave this column blank.

Table 1c: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

★ Complete Table 1c only if “Manufactured Product” is “PET” and “Modified after Applicability Date” is “NO.”

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (maximum 10 characters) as listed on Form OP-SUM entitled “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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

Uses Dimethyl Terephthalate Process: Enter “YES” if the process line uses the dimethyl terephthalate process. Otherwise, enter “NO.”

★ **Complete “Esterification Vessels in the Raw Materials Preparation Area” only if “Uses Dimethyl Terephthalate Process” is “NO.”**

Esterification Vessels in the Raw Materials Preparation Area: Enter “YES” if the affected facility is the esterification vessels in the raw materials preparation area. Otherwise, enter “NO.”

★ **Complete “Material Recovery Section” only if “Uses Dimethyl Terephthalate Process” is “YES.”**

Material Recovery Section: Enter “YES” if the affected facility is the material recovery section. Otherwise, enter “NO.”

★ **Complete “TOC Emissions” only if “Material Recovery Section” is “YES.”**

TOC Emissions: Select one of the following options to describe the TOC limited emissions. Enter the code on the form.

Code	Description
0.018-	TOC emissions are less than or equal to 0.018 kg TOC per Mg product (0.036 lbs/ton)
0.018+	TOC emissions are greater than 0.018 kg TOC per Mg product (0.036 lbs/ton)

PET Control Device: Select one of the following options to describe the control device of the system. Enter the code on the form.

Code	Description
ABSORB	An absorber is the final system unit
CONDEN	A condenser is the final system unit
CARBADS	A carbon adsorber is the final system unit
CATINC	Catalytic incinerator
INCIN	Incinerator other than a catalytic incinerator
FLARE	Flare
BOIL150-	Boiler or process heater with a design heat input capacity less than 150 MMBtu/hr
BOIL150+	Boiler or process heater with a design heat input capacity greater than or equal to 150 MMBtu/hr
OTHER	Another type of control device is utilized

Control Device ID No.: If applicable, enter the identification number (ID No.) for the control device to which emissions are routed (maximum 10 characters). This number should be consistent with the control device identification number listed on Form OP-SUM. If there is no control device, then leave this column blank.

★ **Complete the rest of Table 1c only if “Material Recovery Section” is “NO” or “Esterification Vessels in the Raw Materials Preparation Area” is “NO.”**

Using Stream-Jet Ejectors: Enter “YES” if steam-jet ejectors are used. Otherwise, enter “NO.”

Finishers: Select one of the following options to describe the number of finishers. Enter the code on the form.

Code	Description
SINGLE	Single end finisher
MULT	Multiple end finishers

Viscosity of Product: Select one of the following options to describe the viscosity types. Enter the code on the form.

Code	Description
LOW	Low viscosity product
HIGH	High viscosity product

Tables 1d: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

▼ **Complete only if “Manufactured Product” is “PROPYL.”**

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (maximum 10 characters) as listed on Form OP-SUM entitled “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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

Polyolefin Production: Select one of the following options to describe the number of polyolefin (propylene, low density polyethylene, high density polyethylene, or their copolymers) produced in a process line. Enter the code on the form.

Code	Description
1-	One or no polyolefin is produced
1+	More than one polyolefin is produced

▼ **Continue only if “Table 2 Threshold Emission Rates” is “MORE” or “Construction/Modification Date” is “89+.”**

Process Emissions: Select one of the following options to describe the vent gas stream emissions process. Enter the code on the form.

Code	Description
CONT	Individual vent gas streams emit continuous emissions
INTER	Individual vent gas streams emit intermittent emissions
BOTH	Process contains vent gas streams, some of which are emitted continuously and some which are emitted intermittently
NONE	Process section does not emit VOC emissions

★ **Complete “Uncontrolled Annual Emissions” and “Weight Percent TOC” Only If “Process Emissions” Is “CONT” OR “BOTH.”**

Uncontrolled Annual Emissions: Select one of the following emission rates from an individual vent of a new, modified, or reconstructed facility. Enter the code on the form.

Code	Description
1.6-	Uncontrolled annual emissions are less than 1.6 Mg/yr (1.76 tpy)
1.6+	Uncontrolled annual emissions are greater than or equal to 1.6 Mg/yr (1.76 tpy)

Weight Percent TOC: Select one of the following TOC weight percent's from an individual vent of a new, modified, or reconstructed facility. Enter the code on the form.

Code	Description
0.1-	Weight percent TOC is less than 0.10%
0.1+	Weight percent TOC is greater than or equal to 0.10%

Table 1e: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

★ **Complete only if “Manufactured Product” is “PROPYL” and “Process Emissions” is “CONT” or “BOTH.”**

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (maximum 10 characters) as listed on Form OP-SUM entitled “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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

Note: These questions only pertain to those vent gas streams which are continuously emitted.

Control of Continuous Emissions: Select one of the following options to describe the control of the continuous emissions. Enter the code on the form.

Code	Description
ALL	All continuous emissions are controlled in an existing control device (as defined in 40 CFR § 60.561)
SOME	Some of the continuous emissions are controlled in an existing control device (as defined in 40 CFR § 60.561)
NONE	Vent gas stream emissions are not controlled with an existing control device (as defined in 40 CFR § 60.561)

★ **Complete the Rest of Table 1e only if “Control of Continuous Emissions” is “ALL” or “SOME.”**

Continuous Control Device: Select one of the following options to describe the control device of the system. Enter the code on the form.

Code	Description
ABSORB	Absorber
CONDEN	Condenser
CARBADS	Carbon adsorber
CATINC	Catalytic incinerator
INCIN	Incinerator other than a catalytic incinerator

FLARE	Flare
BOIL150-	Boiler or process heater with a design heat input capacity less than 150 MMBtu/hr
BOIL150+	Boiler or process heater with a design heat input capacity greater than or equal to 150 MMBtu/hr
OTHER	Another type of control device is utilized (e.g., material recovery system)

Control Device ID No.: Enter the identification number (ID No.) for the control device to which emissions are routed. This number should be consistent with the control device identification number listed on Form OP SUM. If there is no control device, then leave this column blank (maximum 10 characters).

Annual Emissions Entering the Control Device: Select one of the following options to describe the emission levels. Enter the code on the form.

Code	Description
CTE-	Annual emissions entering the control device are less than calculated threshold emissions (CTE) levels calculated in Table 3
CTE+	Annual emissions entering the control device are greater than or equal to CTE levels calculated in Table 3

★ **Complete “Table 3 Control Requirements” only if “Control of Continuous Emissions” is “SOME” or “NONE.”**

Table 3 Control Requirements: Enter “YES” if calculations from Table 3 require controls. Otherwise, enter “NO.”

★ **Complete “Emission Reduction from Control Device” only if “Table 3 Control Requirements” is “YES” or if “Annual Emissions Entering the Control Device” is “CTE+.”**

Emission Reduction from Control Device: Select one of the following options to describe the emission reductions of the existing control device. Enter the code on the form.

Code	Description
98-	Existing control device (as defined in 40 CFR § 60.561) reduces emission by less than 98 percent or is greater than 20 ppmv
98+	Existing control device (as defined in 40 CFR § 60.561) reduces emissions by greater than or equal to 98 percent or less than or equal to 20 ppmv

Table 1f: Title 40 Code of Federal Regulations Part 60, Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

★ **Complete Table 1f only if “Manufactured Product” is “PROPYL” and “Process Emissions” is “INTER” or “BOTH.”**

Process ID No.: Enter the identification number (ID No.) for the polymer manufacturing facility (maximum 10 characters) as listed on Form OP-SUM entitled “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 refer to the TCEQ website at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_initial.pdf.

Note: These questions only pertain to those vent gas streams which are intermittently emitted.

Emergency Vent: Enter "YES" if the emissions are an emergency vent stream from a new, modified, or reconstructed facility. Otherwise, enter "NO."

★ **Complete "Existing Control Device" only if "Emergency Vent" is "NO."**

Existing Control Device: Enter "YES" if the vent stream is controlled in an existing control device (as defined in 40 CFR ' 60.561) which has not been reconstructed, replaced, or its operating conditions modified as a result of state or local regulations. Otherwise, enter "NO."

★ **Complete "Intermittent Control Device" only if "Existing Control Device" is "NO."**

Intermittent Control Device: Select one of the following options to describe the control device of the system. Enter the code on the form.

Code	Description
CATINC	Catalytic incinerator
INCIN	Incinerator other than a catalytic incinerator
FLARE	Flare
BOIL150-	Boiler or process heater with a design heat input capacity less than 150 MMBtu/hr
BOIL150+	Boiler or process heater with a design heat input capacity greater than or equal to 150 MMBtu/hr
OTHER	Another type of control device is utilized

Control Device ID No.: Enter the identification number (ID No.) for the control device to which emissions are routed (maximum 10 characters). This number should be consistent with the control device identification number listed on Form OP SUM. If there is no control device, then leave this column blank.

**Texas Commission on Environmental Quality
 Polymer Manufacturing Attributes
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 Federal Operating Permit Program
 Table 1a: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Manufactured Product	Continuous Process	Construction/Modification Date	Experimental Process Line	Modified After Applicability Date	Table 2 Threshold Emission Rates

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 Federal Operating Permit Program
 Table 1b: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Control Device Modification	Emergency Vapor Recovery System	EVRS Modification Date	Emission Control Method	Control Device	Control Device ID No.

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 Federal Operating Permit Program
 Table 1c: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Uses Dimethyl Terephthalate Process	Esterification Vessels in the Raw Materials Preparation Area	Material Recovery Section	TOC Emissions	PET Control Device	Control Device ID No.	Using Steam-jet Ejectors	Finishers	Viscosity of Product

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 Federal Operating Permit Program
 Table 1d: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Polyolefin Production	Process Emissions	Uncontrolled Annual Emissions	Weight Percent TOC

**Texas Commission on Environmental Quality
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 Federal Operating Permit Program
 Table 1e: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Control of Continuous Emissions	Continuous Control Device	Control Device ID No.	Annual Emissions Entering the Control Device	Table 3 Control Requirements	Emission Reduction From Control Device

**Texas Commission on Environmental Quality
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 Federal Operating Permit Program
 Table 1f: Title 40 Code of Federal Regulations Part 60**

**Subpart DDD: Standards of Performance for Volatile Organic Compound (VOC) Emissions from the
 Polymer Manufacturing Industry**

Date:	Permit No.:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Process ID No.	SOP Index No.	Emergency Vent	Existing Control Device	Intermittent Control Device	Control Device ID No.