AIR PA/RN100250844 / 106511 /PA





RECEIVED

OCT 18 2012

REGIONS 1

Registration for Permit-by-Rule §106.261 and §106.262

Dragon Capsule Propellant Offloading and Decontamination McGregor, McLennan County, Texas

October 2012

Prepared For Space Exploration Technologies

RECEIVED

APR 1 5 2013
CENTRAL FILE ROOM





512.329.6080 PHONE 512.329.8750 FAX

www.TRCsolutions.com

October 17, 2012

Air Permits Initial Review Team (APIRIT)
Texas Commission on Environmental Quality (TCEQ)
12100 Park 35 Circle
Mail Code 161, Building C, Third Floor
Austin, Texas 78753

Subject: Registration for a Permit by Rule

Space Exploration Technologies Corporation Regulated Entity Number: RN 100250844

Customer Number: CN 602867657

#### Dear Sir or Madam:

On behalf of Space Exploration Technologies Corporation (SpaceX), TRC Environmental Corporation (TRC) hereby submits the enclosed Registration for a Permit by Rule (PBR) to authorize decontamination and propellant off-loading activities at the Dragon Decontamination Building located at the testing site in McGregor, Texas.

A copy of the enclosed application will be sent to the TCEQ Region 9 Office. The permit fee was submitted via epay to the Revenue Section of TCEQ. If you require additional information regarding this renewal application, please contact Mr. Matthew Thompson of SpaceX at (254) 495-2065 or me at (972) 974-7581.

Sincerely,

TRC Environmental Corporation

Project Manager

cc: Air Section Manager, TCEQ Region 9 - Waco

Mr. Matthew Thompson, SpaceX



1.	Intro	duction		1-1
	1.1	Regula	tory Forms and Information	1-1
	1.2	•	escription	
	1.3		ons Impact	
	1.4		by Rule Registration Fee	
2.	Proc	ess Desc	ription (Confidential)	2-1
2.	Proc	ess Desc	ription (Non-Confidential)	2-1
3.	Emis	sion Cal	lculations (Confidential)	3-1
3.	Emis	sion Ca	lculations (Non-Confidential)	3-1
4.	Cons	ideratio	ns for Granting a Permit-by-Rule	4-1
	4.1	Federa	l New Source Review Applicability	4-1
	4.2	§106.4	Requirements for Exemption from Permitting	4-1
	4.3	§106.8	Recordkeeping	4-3
	4.4	-	51 Facilities (Emission Limitations)	
	4.5	§106.26	52 Facilities (Emission and Distance Limitations)	4-7
List o	f Tabl	es		
Table	1-1		Emissions Summary	1-3
List o	f Figu	res		
Figur	e 1-1		Area Map	1-4
List o	f App	endices		
Appe	ndix .	A	TCEQ Forms and Checklists	
Appe	ndix	В	Emission Calculations (Confidential)	
Appe	ndix	C	Copy of Current Rule Texts	

# Section 1 Introduction

Space Exploration Technologies (SpaceX) is a space services company which develops rockets and space vehicles for missions to Earth's orbit and beyond. The company is headquartered in Hawthorne, California and operates propulsion and structural testing facilities at the McGregor, Texas site. SpaceX has developed a family of launch vehicles to serve satellite markets as well as launch manned spacecraft. The testing facilities at SpaceX are currently authorized by TCEQ Air Quality Permit No. 43047 and Permit by Rule Registration Nos. 42133, 82196, and 98223.

One of the spacecraft SpaceX is developing is the Dragon Capsule (Dragon). The Dragon is a reusable spacecraft which contains its own propellant tanks and systems needed to maneuver the vehicle. After flight, the Dragon spacecraft is recovered, residual propellant is off-loaded into cylinders, and the capsule is decontaminated. SpaceX is proposing to conduct the propellant off-loading and decontamination activities related to the Dragon spacecraft at the McGregor site in the Dragon Decontamination Building. This building is equipped with a thermal oxidizer to control emissions of propellant generated during the propellant off-loading and decontamination activities. SpaceX is proposing to use Permit by Rules (PBR) §106.261 and §106.262 to authorize the operations at the Dragon Decontamination Building.

Registration with the Texas Commission on Environmental Quality (TCEQ) is required for PBRs §106.261 and §106.262, and the site is required to maintain records in accordance with §106.8.

#### 1.1 Regulatory Forms and Information

Texas Commission on Environmental Quality forms and checklists required to complete this registration are listed below and are provided in Appendix A. Copies of the current applicable rule texts are included in Appendix C.

PI-7 – CERT - Certification and Registration for Permits by Rule Chapter §106.4 PBR Applicability Checklist Permit by Rule §106.261 Checklist Permit by Rule §106.262 Checklist

#### 1.2 Site Description

The enclosed Area Map, Figure 1-1, includes the site orientation, scale, and plant boundaries. A 3,000-foot radius and a one-mile radius are indicated on the map.

#### 1.3 Emissions Impact

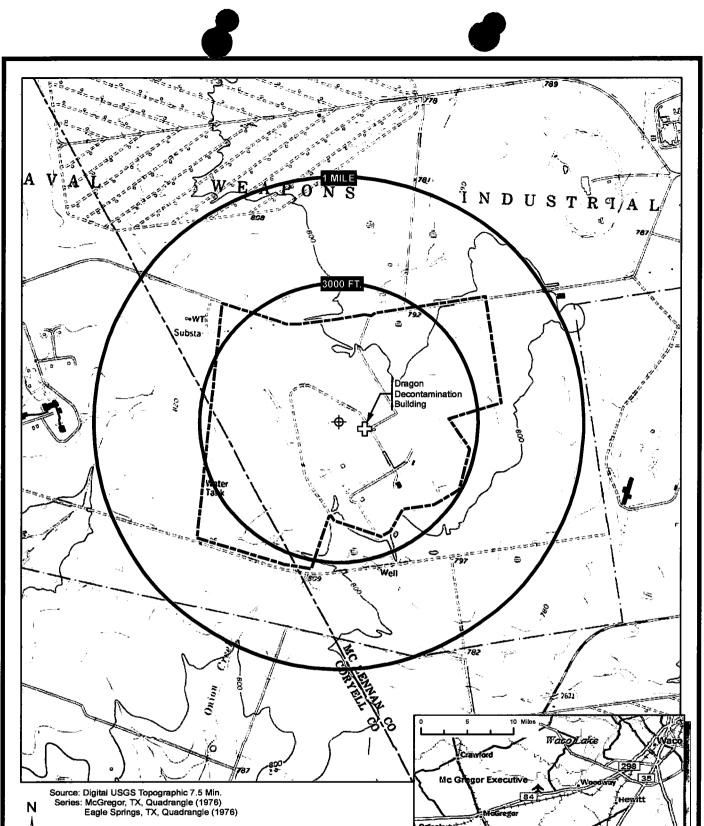
The Dragon propellant off-loading and decontamination activities will result in the hourly and annual emissions as shown in Table 1-1 on the following page. The emissions calculation methodology is provided in Confidential Section 3 and detailed emissions calculations are included in Confidential Appendix B.

#### 1.4 Permit by Rule Registration Fee

The fee for this permit by rule registration is \$450.

Table 1-1 Emissions Summary

		EMISSIONS ESTIMATES										
SITE			NOx		co		VOC		PM <sub>10</sub> /PM <sub>2.6</sub>		SO <sub>2</sub>	
NAME	ACTIVITY DESCRIPTION	PBR	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
DTS	Dragon Decontamination and Bulk Propellant Off- loading	106.261 and 106.262	2.43	0.08	1.68	1.97	0.0016	<0.01				
DTS	Thermal Oxidizer Fuel Combustion	106.261	0.06	0.06	0.04	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01



ESRI, Tele Atlas North America

2,000 FEET <u>LEGEND</u>

PROPERTY LINE

SPACE EXPLORATION TECHNOLOGIES 1 ROCKET ROAD MCGREGOR, TEXAS

> FIGURE 1-1 AREA MAP

DRAWN BY:	PAPEZ
APPROVED BY:	HUFFL
PROJECT NO:	004692
FILE NO.	004692-03.mxd
DATE:	OCTOBER 2012

Copyrigh (© 2012

**C**TRC

10011 Meadowglen Lane Suite 100 Houston, TX 77042

Phone: 713.244.1000 Fax: 713.244.1099

\Space\_X\1\_Rocket\_Rd\004692\004692-03.mxd



This section is considered confidential and is provided under separate cover.

# **Section 3 Emission Calculations (Non-Confidential)**

This section is considered confidential and is provided under separate cover.



# Section 4 Considerations for Granting a Permit-by-Rule

The following information is provided to demonstrate compliance with the applicable requirements of PBRs §106.261 and §106.262, as well as the general site wide requirements outlined in §106.4 and the record keeping requirements in §106.8. The applicable TCEQ checklists for each of these rules are included in Appendix A of this document. Furthermore, the proposed project will not trigger Federal New Source Review (FNSR) permitting.

#### 4.1 Federal New Source Review Applicability

SpaceX's McGregor Site is located in McLennan County, Texas, which is classified as an attainment county for all federally regulated NSR pollutants. Therefore, non-attainment review is not required for this facility.

There will be emissions of VOC, CO, NOx, SO<sub>2</sub>, and PM<sub>10</sub>/PM<sub>2.5</sub> associated with this PBR. SpaceX is not an existing PSD major source and the emission increases associated with this project are less than major source thresholds; therefore, PSD review is not applicable.

#### 4.2 §106.4 Requirements for Exemption from Permitting

- (a) To qualify for a permit by rule, the following general requirements must be met.
  - Total actual emissions authorized under permit by rule from the facility shall not exceed 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NOx); or 25 tpy of volatile organic compounds (VOC) or sulfur dioxide (SO2) or inhalable particulate matter (PM10); or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.
    - The proposed emissions to be authorized under permit by rule are below the specified levels, as shown in Section 1.3, above.
  - 2. Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to

New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

The facility is located in McLennan County and is not classified as a new major stationary source.

3. Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter.

The facility is located in McLennan County and is not classified as a new major stationary source.

4. Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NOX; or 25 tpy of VOC or SO2 or PM10; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.

The site also operates under New Source Review Permit No. 43047 and has been through public notice; therefore, this paragraph does not apply.

- 5. Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.
  - The proposed project is covered by permits by rule under 30 TAC §106 that are effective at the time the changes are implemented.
- 6. A facility shall comply with all applicable provisions of the FCAA, §111 (regarding Federal New Source Performance Standards) and §112 (regarding Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

The provisions of FCAA §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants) and New Source Review requirements of the FCAA Parts C and D and regulations promulgated there under are not applicable to this project.

- 7. There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.
  - There are no permits under the same commission account number that preclude the use of a permit by rule.
- 8. The proposed facility or group of facilities shall obtain allowances for NOx if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).
  - SpaceX is not subject to the provisions of Chapter 101, Subchapter H, Division 3 related to Mass Emissions Cap and Trade Program, therefore this is not applicable.
- (b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).
  - SpaceX will not circumvent the requirements of 30 TAC §116.110.
- (c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the TCAA, including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.
  - SpaceX will comply with all applicable requirements above.
- (d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with TCAA, §382.113 and any other applicable law.
  - The proposed project is not subject to any additional local air pollution control agency permitting or registration requirements.

#### 4.3 §106.8 Recordkeeping

- (a) Owners or operators of facilities and sources that are de minimis as designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.
  - The facility and sources affected by the proposed project are not considered de minimis.
- (b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection (c) of this section. A list of these PBRs will be available through the commission's Austin central office, regional offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that

would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in effect at the time of the claim, and the PBR under which the facility is authorized.

The PBRs claimed are not specified in the above requirement.

- (c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:
  - maintain a copy of each PBR and the applicable general conditions of §106.4 of this title
    or the general requirements, if any, in effect at the time of the claim under which the
    facility is operating. The PBR and general requirements claimed should be the version
    in effect at the time of construction or installation or changes to an existing facility,
    whichever is most recent. The PBR holder may elect to comply with a more recent
    version of the applicable PBR and general requirements;

A copy of the PBRs claimed will be maintained in the files at the McGregor site.

- maintain records containing sufficient information to demonstrate compliance with the following:
  - (A) all applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and

Compliance with the requirements of §106.4 are addressed above.

- (B) all applicable PBR conditions;
  - Compliance with the requirements of §106.261 and §106.262 are addressed in this letter.
- 3. keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site;
  - All records will be maintained at the facility.
- 4. make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;
  - The required records will be maintained at the McGregor site and made available for review upon the request of the TCEQ.
- 5. beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and
  - All required records will be maintained to demonstrate compliance for any consecutive 12-month period.

6. for facilities located at sites designated as major in accordance with §122.10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supersede any retention conditions of an individual PBR.

All required records will be retained for at least two years.

#### 4.4 §106.261 Facilities (Emission Limitations)

- (a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.
  - 1. The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.
    - The Dragon Decontamination Building is located more than 100 feet from any recreational area or residence or other structure not owned or occupied by SpaceX.
  - 2. Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.
    - Emissions of NOx, CO, propane (VOC), and SO<sub>2</sub> generated from the decontamination and propellant off-loading activities do not exceed 6.0 pounds per hour or ten tons per year.
  - 3. Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m3) as listed and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m3 are not allowed under this section.

- Emissions of particulate matter generated by the combustion of propane in the thermal oxidizer's burner do not exceed 1.0 lb/hr. No other chemicals listed in Table 262 are generated during the decontamination and propellant off-loading activities above the levels specified.
- 4. For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.
  - SpaceX is not proposing any physical changes or modifications to existing facilities.
- 5. Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.
  - SpaceX will ensure visible emissions do not exceed 5.0% opacity in any six-minute period.
- 6. For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.
  - This section is not applicable since the emission increases are less than five tons per year.
- 7. For emission increases of less than five tons per year, notification must be provided using either:
  - (A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or
  - (B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.
    - Attached in Appendix A is a completed PI-7-CERT form.
- (b) The following are not authorized under this section:
  - construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
  - any change to any facility authorized under another section of this chapter or authorized under a standard permit.
    - This PBR is not being used to authorize any of the activities identified in paragraph (b) of this section.

#### 4.5 §106.262 Facilities (Emission and Distance Limitations)

§106.262 will authorize VOC (MMH) emissions from the decontamination and off-loading of propellants not covered under §106.261.

- (a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.
  - (1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

    The Dragon Decontamination Building is located more than 100 feet from any recreational area or residence or other structure not owned or occupied by SpaceX.
  - (2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K and the following table.

    The proposed MMH emission increase is less than 5 tons per year and less than the emissions calculated using the equation E=L/K. For this determination, L was set to 0.019, and K was interpolated from Figure 1 to be 8.624. As such, E is equal to 0.002 lb/hr.
  - (3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any. Attached in Appendix A is a completed PI-7-CERT form.
  - (4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phospene, phosphine, phosphorus

trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.

The Dragon Decontamination Building is located more than 300 feet from the nearest property line and more than 600 feet from any recreational area or residence or other structure not owned or occupied by SpaceX. The proposed project will result in monomethylhydrazine (also known as methyl hydrazine, MMH) being handled at the facility. SpaceX will comply with the storage and handling requirements set forth in this section.

- (5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.
  - The proposed project will utilize an existing thermal oxidizer and will therefore not result in any changes or additions of air pollution abatement equipment.
- (6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.
  - The proposed project will not result in any visible emissions that exceed the above requirement.
- (b) The following are not authorized under this section except as noted in subsection (c) of this section:
  - (1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
  - (2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.
    - This PBR is not being used to authorize any of the activities identified in paragraph (b) of this section.
- (c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.
  - SpaceX will comply with the requirements of this section.

# Appendix A TCEQ Forms and Checklists







I. REGISTRANT INFORMATION	1				
A. Company or Other Legal Customer	Name: Space Explor	ation Technologies Corp	oration		
Company Official Contact Name: Ni	ickey Raines				
Title: Texas Site Deputy Director					
Mailing Address: 1 Rocket Road	ı				
City: McGregor	State: Texas		ZIP Code:	76657-39	82
Phone: 254-840-5719	Fax:		E-mail: Nic	ckey.Raine	es@spacex.com
B. Technical Contact Name: Matthew T	hompson				
Title: Environmental Manager					
Company: Space Exploration Technol	ogies				
Mailing Address: 1 Rocket Road					
City: McGregor	State: Texas		ZIP Code:	76657-39	82
Phone: 254-840-5486	Fax:		E-mail: ma	atthew.tho	mpson@spacex.com
C. Facility Location Information - Stree	et Address: 1 Rocket	t Road			
If "NO," street address, provide written	driving directions t	to the site: (attach des	cription if a	dditional	space is needed)
City: McGregor	County: McLennan		ZIP Code:	76657-39	82
D. Is the Core Data Form (TCEQ Form	10400) attached?				YES X NO
If "No," provide customer reference num	nber and regulated e	entity number below:			
Customer Reference Number (CN): 602	867657				
Regulated Entity Number (RN): 1002508	844				
II. FACILITY AND SITE INFORM	ATION				
A. Name and Type of Facility: Dragon I	Decontamination Build	g		N Perm	anent Portable
B. PBR claimed under 30 TAC 106 (La	ist all):				
106. 261 Facilities (Emission Limitations)		106.			
106. 262 Facilities (Emission and Distance	Limitations)	106.			
106.		106.			
Are you claiming a historical standard	exemption or PBR	1?			☐ YES 🖾 NO
If "YES," enter effective date(s) and rule	e number(s) in the s	paces provided below			







II.	<b>FACILITY</b>	AND SITE	INFORM	AATION (continues	d)				
C.	C. Is there a previous Standard Exemption or PBR for the facility in this registration?							☐ YES ☒ NO	
	If "YES," ent	er registratio	on numbe	r(s), rule number(s)	and effe	ective dates in t	the spaces	provided	below.
								•	
D.	D. Are there any other facilities at this site which are authorized by an Air Standard Exemption or PBR?						⊠ YES □ NO		
	If "YES," enter registration number(s), rule number(s) and effective dates in the spaces provided below.								
РВ	R 82196; rule 10	06.261, 263, 4	172; July 20	007	PBR	Registration No.	42133, 10	6.261, 262	, 472; July 2005
РВ	R 98223; rule 10	06.261, 262, 4	176; Augus	st 2011					
E.	Are there any	other air pre	econstruct	ion permits at this si	te?		-		YES □ NO
	If "YES," ent	er permit nu	mber(s) ii	n the spaces provided	d below	·.			
43	047								
	Are there any this project?	other air pre	econstruct	ion permits at this si	te that v	would be direct	ly associa	ted with	☐ YES 🗵 NO
	If "YES," ent	er permit nu	mber(s) ir	n the spaces provided	d below	·			
F.				h is required to obtai 30 TAC Chapter 12		eral	YES	⊠ NO [	To be determined
	If the site curr	rently has an	existing t	federal operating per	mit, ent	ter the permit n	umber.		
	Check the req	uirements o	f 30 TAC	Chapter 122 that wi	ll be tri	ggered if this c	ertification	n is accep	ted.
	Initial Applica	tion for an F	FOP	Significant Revi	sion for	r an SOP	Mino	or Revisio	n for an SOP
	Operational Fl	lexibility/off	Permit N	otification for an SO	P		Revi	sion for C	ЮР
	To be Determi	ined		None					
	Identify the ty	pe(s) issued	and/or FO	OP application(s) sub	omitted	pending for the	e site. (C	heck all th	nat apply)
	SOP	GOP		GOP application/r	evision	application: S	ubmitted	or under A	APD review.
×	▼ N/A SOP application/revision application: submitted or under APD review.								
G.	G. TCEQ Account Identification Number (if known):  MB-0470-E								







Ш	FEE INFORMATION				
	See Section VI. for address to send fee or go to www6.tceq	q.tex	as.gov/epay <b>to pay online.</b>		
A.	Is this certification to solely establish a federally enforceable emission limit and not authorize any new facilities?			☐ YES ☒ NO	
	If "YES," than no fee is required.				
	If "NO," then go to Section III.B.				
B.	If "YES," to any of the following three questions, a \$100 f	fee is	s required. Otherwise, a \$450 fee is a	equired.	
	Does this business have less than 100 employees?			☐ YES 🏿 NO	
	Does this business have less than 6 million dollars in annu	ross receipts?	☐ YES 🗵 NO		
	Is this registration submitted by a governmental entity with	opulation of less than 10,000?	☐ YES 🗵 NO		
C.	Enter the check, money order, or transaction number.		Voucher 163173		
	Enter the individual or company name printed on the chec	k.			
	Fee amount (spell out): Four hundred and fifty dollars			\$ 450.00	
	Was fee Paid online?			X YES ☐ NO	
IV.	SELECTED FACILITY REVIEWS ONLY—TECHN	IICA	L INFORMATION		
II .	te: If claiming one of the following PBRs, complete this sec istration" below:	ction	, then skip to Section VI., "Submittin	g your	
Gra	Animal Feeding Operations 30 TAC 106.161, Livestock Auction Facilities 30 TAC 106.162, Saw Mills 30 TAC 106.223, Grain Handling, Storage and Drying 30 TAC 106.283, Auto Body Refinishing Facilities 30 TAC 106.436, and Air Curtain Incinerator 30 TAC 106.496				
A.	Is the applicable PBR checklist attached which shows the requirements of the PBR(s) being claimed?	facil	ity meets all general and specific	☐ YES ☐ NO	
B.	Distance from this facility's emission release point to the n	neare	est property line:	feet	
	Distance from this facility's emission release point to the n	neare	est off-property structure:	feet	
<b>v.</b>	TECHNICAL INFORMATION - The following infor Place a check next to the appropriate box to verify you			rm PI-7CERT.	
	Process Flow Diagram	× s	ite Process and Project description		
X	Emissions data and calculations	Γ	Table 1(a) (Form 10153) Emission Po	int Summary	







V. TECHNICAL INFORMATION - The following inf Place a check next to the appropriate box to verify:				ERT.			
Information on meeting the specific PBR requirements (PBR checklists maybe used and are optional.)  Information on meeting the general PBR requirements 30 TAC 106.4. (PBR checklists maybe used and are optional.)							
Note: Please be reminded that if the facilities listed in this program under 30 TAC Chapter 101, Subchapter H, Divisiallowances equivalent to the actual $NO_x$ , emissions from the	on 3, the owner/operator of						
Distance from this facility's emission release point to the ne	arest property line:		2400	feet			
Distance from this facility's emission release point to the ne	arest off-property structure:		2896	feet			
Note: In limited cases, a map or drawing of the site and sur review or at the request of the TCEQ Regional Office or loc			,				
				A 200 ST 100 ST 100 ST			

#### VI. SIGNATURE FOR CERTIFICATION AND REGISTRATION

The signature below indicates that the Responsible Official has knowledge of the facts herein set forth and that the same are true, accurate, and complete to the best of my knowledge and belief. By this signature, the maximum emission rates listed on this certification reflect the maximum anticipated emissions due to the operation of this facility and all representations in this certification of emissions are conditions upon which the facilities and sources will operate. It is understood that it is unlawful to vary from these representations unless the certification is first revised. The signature certifies that to the best of the Responsible Official's knowledge and belief, the project will satisfy the conditions and limitations of the indicated exemption or permit by rule and the facility will operated in compliance with all regulations of the Texas Commission on Environmental Quality and with Federal U.S. Environmental Protection Agency regulations governing air pollution. The signature below certifies that, based on information and belief formed after reasonable inquiry, the statements and information above and contained in the attached document(s) are true, accurate, and complete. If you questions on how to fill out this form or about air quality permits. Please call (512) 239-1250. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, call (512) 239-3282.

SIGNATURE: ORIGINAL SIGNATURE REQUIRED)







#### VII. SUBMITTING COPIES OF THE CERTIFICATION AND REGISTRATION

Copies must be sent as listed below:

Processing delays may occur if copies are not sent as noted.								
Who	Where	What						
Air Permits Initial Review Team (APIRT)	Regular, Certified, Priority Mail MC161, P.O. Box 13087 Austin, Texas 78711-3087 Hand Delivery, Overnight Mail MC 161, 12100 Park 35 Circle, Building C, Third Floor Austin, Texas 78753 Fax: (512) 239-2123 (do not follow fax with paper copies)	Originals Form PI-7, Core Data Form and all attachments						
Revenue Section, TCEQ	Regular, Certified, Priority Mail MC 214, P.O. Box 13088 Austin, Texas 78711-3088 Hand Delivery, Overnight Mail MC 214, 12100 Park 35 Circle, Building A, Third Floor Austin, Texas 78753	Original Money Order or Check Copy of Form PI-7 and Core Data Form						
Appropriate TCEQ Regional Office	To find your Regional Office address, go to the TCEQ Web site at www.tceq.texas.gov.us/, or call (512) 239-1250.	Copy of Form PI-7, Core Data Form, and all attachments.						
Appropriate Local Air Pollution Control Program(s)	To Find your local or Regional Air Pollution Control Programs go to the TCEQ, APD Website at www.tceq.texas.gov/nav/permits/air_permits.html or call (512) 239-1250	Copy of Form PI-7, Core Data Form, and all attachments.						



## Texas Commission on Environmental Quality Permit by Rule Applicability Checklist Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), <u>Air Permits Division</u>, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of <u>Title 30 Texas Administrative Code § 106.4</u> (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing <u>Form PI-7</u> (Registration for Permits by Rule) or <u>Form PI-7-CERT</u> (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.state.tx.us/permitting/air/nav/air pbr.html.

1. 30 TAC § 106.4(a)(1) & (4): Emission limits							
List emissions in tpy for <b>each</b> facility (add additional pages or table if needed): $SO_2 = PM_{10} = VOC = 0.0003  NO_x = 0.08  CO = 1.97  Other = SO_2 = 0.006  PM_{10} = 0.003  VOC = 0.004  NO_x = 0.06  CO = 0.03  Other = SO_2 = PM_{10} = VOC = NO_x = CO = Other = SO_x = CO = Other = SO_x = CO = Other = SO_x = CO = SO_x = CO = Other = SO_x = CO = Other = SO_x = CO = Other = SO_x = CO = S$							
Total 0.006 0.003 0.0043 0.14 2.0							
• Are the SO <sub>2</sub> , PM <sub>10</sub> , VOC, or other air contaminant emissions claimed for each facility in this PBR submittal less than	<b>✓</b> YES □ NO						
25 tpy?  ■ Are the NO <sub>x</sub> and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	✓ YES 🗆 NO						
If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a PBR cannot be claimed.							
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)							
If "Yes," skip to Section 2. If "No," continue to the questions below.							
If the site has had no public notice, please answer the following:  • Are the SO <sub>2</sub> , PM <sub>10</sub> , VOC, or other emissions claimed for all facilities in this PBR submittal less than 25 tpy?  • Are the NO <sub>x</sub> and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?							
If the answer to both questions is "Yes," continue to Section 2. If the answer to either question is "No," <b>a PBR cannot be claimed</b> . A permit will be required under Chapter 116.							
2. 30 TAC § 106.4(a)(2): Nonattainment check							
Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?  If "Yes," please indicate which county by checking the appropriate box to the right.  (Marginal) - Hardin, Jefferson, and Orange counties (BPA)  (Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties (HGA)  (Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties (DFW)							
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.							





Do •	□YES □NO				
• :	operational design unless limited by a permit, rule, or made federally enforceable by a certification. Is the site an existing major nonattainment site and are the emissions of VOC or NO <sub>x</sub> increasing by 40 tpy or more?	□YES □NO			
Ad	needed, attach contemporaneous netting calculations per nonattainment guidance.  ditional information can be found at:  www.tceq.state.tx.us/permitting/air/forms/newsourcereview/tables/nsr_table8.html and  www.tceq.state.tx.us/permitting/air/nav/air_docs_newsource.html				
If "Yes," to any of the above, the project is a major source or a major modification and <b>a PBR may not be used</b> A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.					
3.	30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check				
•	es this project trigger a review under PSD rules? To determine the answer, review the information below:  Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?  Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?  Are emissions increasing above significance levels at an existing major site?	☐YES ☑NO ☐YES ☑NO ☐YES ☑NO			
	D information can be found at:  www.tceq.state.tx.us/permitting/air/forms/newsourcereview/tables/nsr table9.html and  www.tceq.state.tx.us/permitting/air/nav/air_docs_newsource.html				
	'Yes," to any of the above, <b>a PBR may not be used</b> . A PSD Permit review must be completed to authorize the project. 'No," continue to Section 4.				
4.	30 TAC § 106.4(a)(6): Federal Requirements				
•	Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)? If "Yes," which Subparts are applicable?:	□YES □NO ☑N/A			
•	Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards? If "Yes," which Subparts are applicable?:	□yes □no ☑n/a			
•	Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)? If "Yes," which Subparts are applicable?:	□yes □no ☑n/a			
70 11					
IJ	'Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.				
H	Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.  30 TAC § 106.4(a)(7): PBR prohibition check				
5.		□YES <b>☑</b> NO			
<b>5.</b> Are	30 TAC § 106.4(a)(7): PBR prohibition check	□YES <b>☑</b> NO			





6.	30 TAC § 106.4(a)(8): NO, Cap and Trade						
• If	Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County? YES NO If "Yes," answer the question below. If "No," continue to Section 7.						
•	Will the proposed facility or group of facilities obtain required allowances for NO <sub>x</sub> if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?						
7.	Highly Reactive Volatile Organic Compounds (HRVOC) check						
•	<ul> <li>Is the facility located in Harris County? If "Yes," answer the next question. If "No," skip to the box below.</li> <li>Will the project be constructed after June 1, 2006? If "Yes," answer the next question. If "No," skip to the box below.</li> <li>Will one or more of the following HRVOC be emitted as a part of this project?</li> </ul>						
If'	"Yes," complete the information below: lb/hr tpy   1,3-butadiene						
•	Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County? "Yes," answer the next question. If "No," the checklist is complete.  Will the project be constructed after June 1, 2006? "Yes," answer the next question. If "No," the checklist is complete.  Will one or more of the following HRVOC be emitted as a part of this project?	□YES ☑NO □YES □NO □YES □NO					
If '	"Yes," complete the information below:  • ethylene  • propylene    b/hr   tpy						

PRINT



## Title 30 Texas Administrative Code § 106.261 Permit By Rule (PBR) Checklist Facilities (Emission Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.261 (30 TAC § 106.261) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at, www.tceq.state.tx.us/nav/permits/air\_permits.html.

CI	CHECK THE MOST APPROPRIATE ANSWER						
	Is a description or checklist of how this claim meets the general TAC § 106.4 attached?	eral requirements for the use of PBRs	s in	YES NO N/A			
b1	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? If "YES," this PBR cannot be used to authorize emissions from the project   □ YES □ NO □ N/A						
b2	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard permit? If "YES," this PBR cannot be used to authorize emissions from the project						
a1	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?						
a2	Are total new or increased emissions, including fugitives, le (lb/hr) and ten tons per year of the following materials (chec	ess than or equal to 6.0 pounds per hock all that apply):	our	YES NO NA			
	acetylene argon   isohexane butane   isopropyl alcohol crude oil   methyl acetylene carbon monoxide   methyl chloroform cyclohexane   methyl cyclohexane cyclohexene   meon cyclopentan   monan ethyl acetate   oxides of nitrogen ethanol   propane ethyl ether   propyl alcohol ethylene   propylene  refinery petroleum fractions (except for pyrolysis naphthas and fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114,	propyl ether sulfur dioxide alumina calcium carbonate calcium silicate cellulose fiber cement dust glycerin mist gypsum iron oxide dust kaolin d pyrolysis gasoline) containing less th		imestone magnesite marble pentaerythritol plaster of paris silicon silicon carbide starch sucrose einc stearate einc oxide			
a3	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m³) as listed and referenced in Table 262 of 30 TAC § 106.262 of this title (relating to Facilities (Emission and Distance Limitations)? List chemical:  L value:						
	Are total new or increased emissions, including fugitives, chemical not listed or referenced in Table 262? List chemic	less than or equal to 1.0 lb/hr of an	ny	YES NO N/A			
	Are total new or increased emissions, including fugitives, of a 200 mg/m <sup>3</sup> ? If "Yes" the authorization of the chemical is not you use 30 TAC §106.262 to authorize the emissions, if appli	an est	☐ YES ☐ NO <b>☑</b> N/A				





a4	Are	there any changes to or additions of any existing air pollution abatement equipment?	☐YES ☑NO ☐N/A
a5	Will poin	there be any visible emissions, except uncombined water, emitted to the atmosphere from any to r fugitive source in amounts greater than 5.0% opacity in any six-minute period?	□YES ☑NO □N/A
<b>a</b> 6	Forr shal	emission increases five tons per year or greater? If "YES," this checklist must be attached to a n PI-7 within ten days following the installation or modification of the facilities. The notification linclude a description of the project, calculations, data identifying specific chemical names, limit es, and a description of pollution control equipment, if any.	□YES ☑NO □N/A
a7	Form	emission increases less than five tons per year? If "YES," this checklist must be attached to a n PI-7 and include a description of the project, calculations, data identifying specific chemical es, limit values, and a description of pollution control equipment, if any. (pick one):	YES NO N/A
		Within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or By March 31 of the following year summarizing all uses of this permit by rule in the previous	
	u	calendar year.	

PRINT







### Title 30 Texas Administrative Code § 106.262 Permit by Rule (PBR) Checklist Facilities (Emission and Distance Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.262 (30 TAC § 106.262) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at, www.tceq.state.tx.us/nav/permits/air\_permits.html.

CHECK THE MOST APPROPRIATE ANSWER					
of PBRs in 30 TAC §	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?			□ NO	□ N/A
or for which a standard authorize emissions fro	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? If "YES," this PBR cannot be used to authorize emissions from the project.			☑ NO	□ N/A
or authorized under a semissions from the pro-		nnot be used to authorize	☐ YES	☑ NO	□ N/A
If "YES," subsection ( chemicals at the facilit		ed to qualify the use of other	☐ YES	☑ NO	□ N/A
or other structure not				□ NO	□ N/A
tons per year or in a qu Table 262 Figures 1 a				□ NO	□ N/A
Chemical: Methyl Hyd	<u>razine</u> L value: <u>0.019</u>	D: <u>2,896 ft</u>	K	: <u>8.624</u>	
a3. Is this checklist attached to a Form PI-7 within ten days following the installation or modification of the facilities? If "YES," the notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, and a description of pollution control equipment, if any.			☑ YES*	□NO	□ N/A
a4. Are one or more of the			☑ YES	□NO	□ N/A
acrolein allyl chloride ammonia (anhydrous) arsine boron trifluoride bromine carbon disulfide chlorine chlorine dioxide chlorine trifluoride chloroacetaldehyde chloropicrin chloroprene	diazomethane diborane diglycidyl ether dimethylhydrazine ethyleneimine ethyl mercaptan fluorine formaldehyde (anhydrous) hydrogen bromide hydrogen cyanide hydrogen fluoride hydrogen fluoride hydrogen selenide	hydrogen sulfide ketene methylamine methyl bromide methyl hydrazine methyl isocyanate methyl mercaptan nickel carbonyl nitric acid nitric oxide nitrogen dioxide oxygen difluoride	ozone pentaborne perchloromethyl mercan perchloryl fluoride phosgene phosphine phosphorus trichloride selenium hexafluoride stibine liquefied sulfur dioxide sulfur pentafluorid tellurium hexafluoride		e oride ne oxide

<sup>\*</sup>This PBR is to authorize decontamination and off-loading activities that occur at existing infrastructure.







## Title 30 Texas Administrative Code § 106.262 Permit by Rule (PBR) Checklist Facilities (Emission and Distance Limitations)

	CHECK THE MOST APPROPRIATE ANSWER					
	Are all facilities are located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor?				□ NO	□ N/A
	Are the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) less than or equal to 500 pounds on the plant property?				□NO	□ N/A
	Are all listed chemicals handled only in unheated containers operated in compliance with the United States Department of Transportation regulation (49 Code of Federal Regulation, Parts 171-178)?				□ NO	□ N/A
	Are any changes	s to or add	litions of any existing air pollution abatement equipment?	☐ YES	☑ NO	□ N/A
a5.	Are there any ch	nanges to	or additions of any existing air pollution abatement equipment?	☐ YES	☑ NO	□ N/A
аб.	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater that 5.0% opacity in any six-minute period?			□ YES	☑ NO	□ N/A
	D, Feet	K				
	100	326	E=maximum allowable hourly emission, and never to exceed 6	pounds per	hour.	
	200	200				
	300	139				
	400	104				
	600	65				
	700	54				
	800	46	K=value from the table on this page. (interpolate intermediate	values)		
	900	39				
1	,000	34				
2	,000	14	D=distance to the nearest off-plant receptor			
3	,000 or more	8				

#### TABLE 262 LIMIT VALUES (L) FOR USE WITH EXEMPTIONS FROM PERMITTING § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound Acetone	Limit (L) Milligrams Per Cubic Meter 590.
Acetaldehyde	9,
Acetone	4.
Acetonitrile	34.
Acetylene	2662.
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluride, as HF	0.5
Butyl Alcohol,	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptain	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.
Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6





Compound	Limit (L) Milligrams Per Cubic Meter
Dipropylamine	8.4
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene 2-norbornene, 5-	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16.
Heptane	350.
Hexanediamine, 1, 6-	0.32
Hydrogen Chloride	1.
Hydrogen Fluoride	0.5
Hydrogen Sulfide	1.1
Isoamyl Acetate	133.
Isoamyl Alcohol	15.
Isobutyronitrile	22.
Kepone	0.001
Kerosene	100.
Malononitrile	8.
Mesityl Oxide	40.
Methyl Acrylate	5.8
Methyl Amyl Ketone	9.4
Methyl-T-Butyl Ether	45.
Methyl Butyl Ketone	4.
Methyl Disulfide	2.2
Methylenebis (2-chloroaniline) (MOCA)	0.003
Methylene Chloride	26.
Methyl Isoamyl Ketone	5.6
Methyl Mercaptan	0.2
Merthyl Methacrylate	34.
Methyl Propyl Ketone	530.
Methyl Sulfide	0.3
Mineral Spirits	350.
Naphtha	350.
Nickel, Inorganic Compounds	0.015
Nitroglycerine	0.1

Compound	Limit (L) Milligrams Per Cubic Meter
Nitropropane	5,
Octane	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350.
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous-precipitated, silica gel	4.
Silicon Carbide	4.
Stoddard Solvent	350.
Styrene	21.
Succiononitrile	20.
Tolidin	0.02
Trichloroethylene	135.
Trinethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.

NOTE: The time weighted average (TWA) threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (AGGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.





#### **Matthew Thompson**

From:

steers@tceq.texas.gov

Sent:

Monday, October 15, 2012 4:40 PM

To:

**Christy Noble** 

Subject:

TCEQ ePay Receipt for 582EA000128925

This is an automated message from the TCEQ ePay system. Please do not reply.

Trace Number: 582EA000128925 Date: 10/15/2012 04:43 PM

Payment Method: CC - Authorization 0000092151 Amount Paid: \$450.00

**Actor: Christy Noble** 

Email: cnoble@spacex.com

Payment Contact: Christy Noble

Phone: 254-840-5700 Company: Spacex

Address: 8550 Case Rd, Mcgregor, TX 76657

Fees Paid:

Fee Description AR Number Amount

PERMIT BY RULE - NOT SMALL BUSINESS, CITY OR ISD \$450.00

Total Fees For Transaction: \$450.00

Voucher: 163173

Trace Number: 582EA000128925 Date: 10/15/2012 04:43 PM

Payment Method: CC - Authorization 0000092151 Amount Paid: \$450.00 Fee Paid: PERMIT BY RULE - NOT SMALL BUSINESS, CITY OR ISD RN Number: RN105505556 Site Name: SPACE EXPLORATION TECHNOLOGIES Site Address: 1

ROCKET RD, MCGREGOR, TX 76657 Site Location:

CN Number: CN602867657

Customer Name: SPACE EXPLORATION TECHNOLOGIES Customer Address: 1 ROCKET RD, MCGREGOR, TX 76657

To print out a copy of the receipt and vouchers for this transaction either click on or copy and paste the following url

into your browser:

https://www3.tceq.texas.gov/epay/index.cfm?fuseaction=cor.search&trace\_num\_txt=582EA000128925.

This e-mail transmission and any attachments are believed to have been sent free of any virus or other defect that might affect any computer system into which it is received and opened. It is, however, the recipient's responsibility to ensure that the e-mail transmission and any attachments are virus free, and the sender accepts no responsibility for any damage that may in any way arise from their use.

# Appendix B Emission Calculations (Confidential)

This section is considered confidential and is provided under separate cover.

# Appendix C Copy of Current Rule Texts





<< Prev Rule</p>
Texas Administrative Code

Next Rule>>

TITLE 30

**ENVIRONMENTAL QUALITY** 

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 106

PERMITS BY RULE

**SUBCHAPTER A** 

GENERAL REQUIREMENTS

**RULE §106.4** 

**Requirements for Permitting by Rule** 

- (a) To qualify for a permit by rule, the following general requirements must be met.
- (1) Total actual emissions authorized under permit by rule from the facility shall not exceed 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO<sub>X</sub>); or 25 tpy of volatile organic compounds (VOC) or sulfur dioxide (SO<sub>2</sub>) or inhalable particulate matter (PM); or 15 tpy of particulate matter with diameters of 10 microns or less (PM<sub>10</sub>); or 10 tpy of particulate matter with diameters of 2.5 microns or less (PM<sub>2.5</sub>); or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.
- (2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.
- (3) Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter.
- (4) Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or  $NO_X$ ; or 25 tpy of VOC or  $SO_2$  or PM; or 15 tpy of  $PM_{10}$ ; or 10 tpy of  $PM_{2.5}$ ; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.
- (5) Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.
- (6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source



0

Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

- (7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.
- (8) The proposed facility or group of facilities shall obtain allowances for NO<sub>X</sub> if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).
- (b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).
- (c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.
- (d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with TCAA, §382.113 and any other applicable law.

**Source Note:** The provisions of this §106.4 adopted to be effective November 15, 1996, 21 TexReg 10881; amended to be effective April 7, 1998, 23 TexReg 3502; amended to be effective September 4, 2000, 25 TexReg 8653; amended to be effective March 29, 2001, 26 TexReg 2396; amended to be effective May 15, 2011, 36 TexReg 2852

Next Page Previous Page

List of Titles Back to List

HOME | TEXAS REGISTER | TEXAS ADMINISTRATIVE CODE | OPEN MEETINGS | HELP |





<< Prev Rule

#### **Texas Administrative Code**

Next Rule>>

TITLE 30

**ENVIRONMENTAL QUALITY** 

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**CHAPTER 106** 

PERMITS BY RULE

**SUBCHAPTER K** 

GENERAL

**RULE §106.261** 

**Facilities (Emission Limitations)** 

- (a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.
- (1) The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.
- (2) Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.
- (3) Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m³) as listed and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m³ are not allowed under this section.
- (4) For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.
- (5) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.
- (6) For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.
- (7) For emission increases of less than five tons per year, notification must be provided using either:
- (A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical





names, limit values, and a description of pollution control equipment, if any; or

- (B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.
- (b) The following are not authorized under this section:
- (1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
- (2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

**Source Note:** The provisions of this §106.261 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective December 24, 1998, 23 TexReg 12925; amended to be effective September 4, 2000, 25 TexReg 8653; amended to be effective November 1, 2003, 28 TexReg 9279

Next Page

Previous Page

**List of Titles** 

Back to List

HOME LITEXAS REGISTER LITEXAS ADMINISTRATIVE CODE LI OPEN MEETINGS LIHELP L





<< Prev Rule

#### **Texas Administrative Code**

Next Rule>>

TITLE 30

**ENVIRONMENTAL QUALITY** 

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**CHAPTER 106** 

PERMITS BY RULE

**SUBCHAPTER K** 

**GENERAL** 

**RULE §106.262** 

**Facilities (Emission and Distance Limitations)** 

- (a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.
- (1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.
- (2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K and the following table.

#### Attached Graphic

#### **Attached Graphic**

- (3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any.
- (4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.
- (5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.





- (6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.
- (b) The following are not authorized under this section except as noted in subsection (c) of this section:
- (1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
- (2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.
- (c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.

**Source Note:** The provisions of this §106.262 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective December 24, 1998, 23 TexReg 12925; amended to be effective September 4, 2000, 25 TexReg 8653; amended to be effective November 1, 2003, 28 TexReg 9279

Next Page

Previous Page

List of Titles

Back to List

HOME LITEXAS REGISTER LITEXAS ADHINISTRATIVE CODE LIOPEN MEETINGS LIHELP L



D, Fe	<u>et</u> <u>K</u>	
100	326	E = maximum allowable hourly emission, and
200	200	never to exceed 6 pounds per hour.
300	139	
400	104	
500	81	L = value as listed or referenced in Table 262
600	65	
700	0 54	
800	46	K = value from the table on this page.
900	39	(interpolate intermediate values)
1,000	34	
2,000	14	D = distance to the nearest off-plant receptor.
3,000 or more	8	



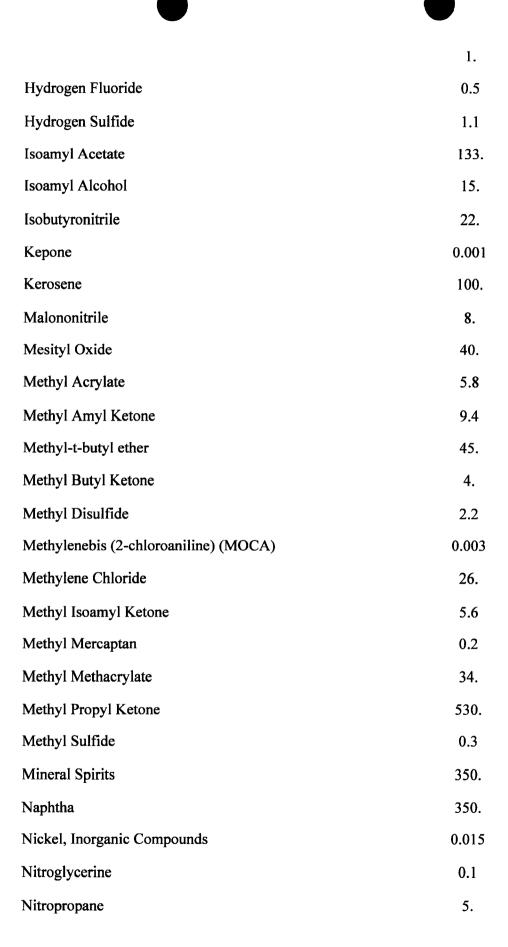
#### TABLE 262 LIMIT VALUES (L) FOR USE WITH EXEMPTIONS FROM PERMITTING §106.262

The values are not to be interpreted as acceptable health effects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Acetone	590.
Acetaldehyde	9.
Acetone Cyanohydrin	4.
Acetonitrile	34.
Acetylene	2662.
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluoride, as HF	0.5
Butyl Alcohol, -	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptan	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.



Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6
Dipropylamine	8.4
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene-2-norbornene, 5-	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16
Heptane	350.
Hexanediamine, 1,6-	0.32



	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous- precipitated, silica gel	4.
Silicon Carbide	4.
Stoddard Solvent	350.
Styrene	21.
Succinonitrile	20.
Tolidine	0.02
Trichloroethylene	135.
Trimethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.

NOTE: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.