



Complying with Rules on Surface Preparation: Buffing, Blasting, Water Jetting, etc.

Introduction

This guide gives the basics on rules that apply to surface-preparation facilities. These facilities conduct activities such as buffing, dry abrasive blasting, and water jetting, which prepare the surface of metal, wood, plastic, porcelain, and other materials for coating with primer, paint, and rust-prevention agents.

In this guide you will read about air permits and authorizations, paint and paint-related waste, and storm water. Information about pollution prevention, best management practices, and obtaining technical assistance from the Texas Commission on Environmental Quality is also included. This information does not take the place of any laws or regulations.

Rules on Air Emissions

Surface-preparation processes emit inhalable particulate matter. These fine particles are one of the six criteria pollutants affecting air quality and public health that are monitored by the TCEQ and the U.S. Environmental Protection Agency.

TCEQ regional offices frequently receive nuisance complaints against facilities that use surface-preparation processes. Because of the potential impact on human health and the environment, the TCEQ requires facilities with activities or operations that emit pollutants, such as PM and volatile organic compounds, to comply with the *de minimis* rule or be covered under a permit by rule (formerly “standard exemption”) or a new source review permit (air quality permit).

Depending on the type of operation, the facility may also have to comply with requirements in 30 TAC Chapter 111 for water-storage tanks and Chapter 115 for control of VOCs.

De Minimis Rule

The *de minimis* rule establishes a level of air contaminants below which a TCEQ air permit is not required. If the operation or activity meets the

ABBREVIATIONS

BMPs	best management practices
CO	carbon monoxide
EPA	U.S. Environmental Protection Agency
ESL	effects screening level
MSGP	multi-sector general permit
NOx	nitrogen oxides
NSR	new source review
PBR	permit by rule
PM	particulate matter
PPRW	paint and paint-related waste
SIC	standard industrial classification
SO ₂	sulfur dioxide
TAC	Texas Administrative Code
tpy	tons per year
TCEQ	Texas Commission on Environmental Quality
UW	universal waste
VOCs	volatile organic compounds

requirements of the *de minimis* rule and can provide proof that it qualifies, then no other TCEQ air registration or authorization for the facility is required.

What types of facilities qualify for *de minimis* status?

A facility can qualify for *de minimis* status in four ways:

- If the type of operation is on the TCEQ’s list of approved *de minimis* facilities, then it qualifies. The list includes modular self-contained blasting cabinets that clean parts. View the list at www.tceq.state.tx.us/files/demlist06.pdf_4008244.pdf. Copies may be requested by calling the Air Permits Division (see “Get More Information” at the end of this publication).
- If certain amounts and types of materials are used at or below specific thresholds, the facility may qualify under the *de minimis* rule—for example, less than 50 gallons of solvents and less than 100 gallons of coatings used per year.

- If the facility is located inside a building, and the site meets both the emission rate caps and effects screening levels as prescribed on the table in the rule, then the facility may qualify to operate under the *de minimis* rule.
- Case-by-case review

Where is the *de minimis* rule?

More information about *de minimis* requirements may be found in 30 TAC 116.119, *De Minimis* Facilities and Sources, available at <www.tceq.state.tx.us/goto/rules/>.

Permit by Rule

A permit by rule, as described under 30 TAC 106.1, covers facilities or sources that do not significantly contribute air contaminants to the atmosphere. PBRs authorize air emissions from specific types of processes, and have specific, nonnegotiable conditions the facility must meet.

Total actual emissions from a facility authorized by a PBR should not exceed the following limits:

- 250 tons per year of carbon monoxide,
- 250 tpy of nitrogen oxides,
- 25 tpy of volatile organic compounds,
- 25 tpy of sulfur dioxide,
- 25 tpy of inhalable particulate matter, or
- 25 tpy of any other contaminant, with few exceptions.

Depending on which PBR is being claimed, the facility may be required to obtain a TCEQ registration and have the site reviewed by a TCEQ regional investigator. A facility must meet all criteria to qualify for the PBR, and each PBR is process-specific, equipment-specific, or both.

Where is the PBR rule?

View PBR regulations at <http://www.tceq.state.tx.us/goto/download_rules/>. (Choose the first bulleted link, then click on “106.”)

What are some common PBRs that apply to surface preparation activities?

This guide summarizes only the PBRs for operations using wet or dry abrasive cleaning materials. It does not cover operations using volatile organic compounds (as described in 30 TAC 106.433) or other cleaning solvents used to prepare surfaces before they are coated (as described in 30 TAC 106.454).

The facility may qualify for one of the PBRs discussed in the following sections.

What PBR applies to immovable structures?

Permit by Rule 106.263 applies to activities involving repairs and maintenance on immovable or nonmobile structures, such as large storage vessels. Notifying the TCEQ may be required for the repair and maintenance of water-storage tanks (see “Notification for Abrasive Blasting of Water-Storage Tanks”).

What PBR applies to wet blast cleaning?

Permit by Rule 106.451 authorizes wet blast-cleaning activities, including use of blast-cleaning equipment that suspends abrasives in water. This type of surface preparation reduces air emissions as compared to dry abrasive cleaning, but generally results in industrial wastewater that must be disposed of properly. For information concerning the proper disposal of wastewater, contact the TCEQ Wastewater Section (see “Find Out More”).

What PBR applies to dry abrasive cleaning?

Permit by Rule 106.452 addresses both enclosed and outdoor dry abrasive cleaning.

Enclosed dry abrasive cleaning. If you are operating an enclosed abrasive cleaning facility, no visible emissions can leave the facility. Particulate emissions must be withdrawn (or “evacuated”) from the enclosed area through a fabric filter with a maximum filtering velocity dependent on the type of cleaning equipment used:

- for mechanical cleaning equipment, 4.0 feet per minute
- for air cleaning equipment, 7.0 feet per minute

Outdoor dry abrasive cleaning. If conducting dry abrasive cleaning activities outdoors, the facility must:

- Register with the TCEQ by submitting a completed Form TCEQ-10228, Registration for Permits by Rule (PI-7). After receiving the form, the TCEQ needs approximately 45 days to approve a site.
- Obtain written TCEQ approval of the site before construction.

Usage of abrasive materials must not exceed 150 tpy, 15 tons per month, or 1 ton per day. These activities must be conducted at least 500 feet from any receptor, which includes recreational areas, residences, or other structures not occupied by the owner of the facility or property

Keep records of the hours when cleaning operations are conducted, along with the usage rate (quantity, in pounds per day, of abrasive material used).

New Source Review Permits

If the surface preparation activities do not meet *de minimis* or PBR requirements, a new source review permit may be required. Obtaining an NSR permit requires a detailed application, Best Available Control Technology (BACT), air dispersion modeling, a toxicology review, public notice of the permit request, and an extensive review—taking up to a year to complete.

Facilities seeking authorization under an NSR permit will need to complete Form TCEQ-10252, Air Preconstruction Permit and Amendments (PI-1). Most surface-preparation facilities do not need to apply for this permit unless they are using more than one ton per day of dry abrasive material and working on large movable objects, such as surface cleaning activities at shipbuilding and ship-repair yards.

View the surface preparation BACT requirements at <www.tceq.state.tx.us/goto/coating_bact>.

Where can I find guidance about NSR permits?

View NSR permit information at <www.tceq.state.tx.us/goto/nsr>.

Notification for Abrasive Blasting of Water-Storage Tanks

If the surface-preparation activities comprise portable operations on immovable water-storage tanks, notifying the TCEQ may be required, but only if the lead concentration of the coating being removed is 1 percent or greater as described in 30 TAC 111.131–39.

If notification is required, it must include:

- the location of the tank,
- the name of the abrasive-blasting company,
- the percentage by weight of lead in the coating,
- control methods to be used, and
- the expected hours of operation and a schedule of start and finish dates.

Submit the notification in writing to the local TCEQ regional office. Notification is due at least 10 days, but no more than 30 working days, before abrasive blasting begins.

Specific control requirements must be met if the abrasive activity is conducted in a residential or public area. View the water storage tank rules at <www.tceq.state.tx.us/goto/rules>. (Choose the first bulleted link, then click on “111.”)

Universal Waste Rule for Paint and Paint-Related Waste

Universal waste is a specific type of hazardous waste that is subject to relatively relaxed regulatory requirements regarding accumulation, record keeping, and shipping. UW does not count toward a facility’s status as a hazardous-waste generator, and is not subject to end-of-year fees imposed on hazardous-waste generation.

Where Is the UW Rule?

The UW rule can be found in 30 TAC 335.261–62. The Texas rule applies to hazardous used and unused paint and hazardous paint-related waste as defined in 30 TAC 335.1(63) and 335.504. Paint-related waste also includes any material that results from painting activities.

For example, spent dry abrasive blasting material (such as silica sand and coal slag) would be PPRW if the material is produced as a result of painting activities, including removing paint or preparing an object for painting.

For more information on PPRW and the Universal Waste Rule, refer to *Managing Paint and Paint-Related Waste under the Universal Waste Rule*, TCEQ publication RG-370.

What Are the Advantages of the UW Rule?

- No manifest is required when transporting PPRW;
- notification to the TCEQ is not required if you are a small-quantity handler;
- a registered transporter is not required;
- the waste does not count toward the total hazardous-waste-generator status;
- the waste is exempt from year-end fees; and
- the waste may be accumulated for up to a year.

Industrial Multi-Sector General Permit for Storm Water

If the primary standard industrial classification code or activity code for the facility is included in the multi-sector general permit, the facility will need to get proper authorization to discharge storm water into bodies of water in Texas or into a municipal separate storm sewer system.

The following surface preparation SIC codes and descriptions are included in the MSGP and require facilities to submit a “no exposure exclusion certification” or to develop and implement a storm water pollution prevention plan and submit a notice of intent:

- SIC Code 3291—manufacturing of abrasive cleaning products.
- SIC Code 3441—fabricating of structural metal.
- SIC Code 3471—sandblasting of metal parts.
- SIC Code 3479—coating of metals.
- SIC Code 3731/3732—ship and boat building and repair yards.
- SIC Code 4493—boatyard storage and incidental repair yards.

Get more information about applying for the MSGP (General Permit TXR050000) at www.tceq.state.tx.us/goto/iswgp or by contacting the TCEQ’s Small Business and Local Government Assistance Section (see “Find Out More”).

Pollution Prevention Techniques

Try these techniques that help reduce and eliminate waste and emissions during surface preparation:

- Remove spent blasting material from the site as soon as possible, or store such material in containers or on top of ground that has been covered with impermeable tarpaulins. Then cover spent material with another layer of impermeable tarpaulins to help reduce the amount of contaminated storm water runoff that could leave the site, and to help prevent wind from blowing the blast media off-site.
- When wet blasting or water jetting, recycle or properly dispose of spent water.
- Use a mesh or fabric shroud having a filtering factor of 95 percent or better to prevent PM from leaving the property.

Best Management Practices

Here are some best management practices—suggested methods, tools, and techniques that can be used to control pollution from surface-preparation activities:

- Blast only when the wind direction and speed will minimize adverse effects on humans, animals, and plants.
- Take all reasonable precautions to prevent particulate matter from becoming airborne.
- Store, handle, and manage abrasives and spent material in a manner that prevents or minimizes

their blowing off-site or otherwise creating a nuisance.

- Handle and move spent material in ways that prevent extraneous dust and loss of material until it is disposed of properly.
- Maintain and keep all emission-control equipment in proper working condition.
- When using dry-abrasive blasting materials, make every effort to prevent the materials from reaching any nearby waterway. Contain and collect all visible floating solids that reach the water.

Find Out More

Contact the TCEQ for further assistance:

- Air Permits Division, 512-239-1250
- Wastewater Section, 512-239-4671
- Small Business and Local Government Assistance Section. Call (toll-free) 800-447-2827 for confidential help with questions on air, water, waste, or pollution prevention issues.
- Compliance-assistance specialists: Go to www.sblga.info and click on “Find the nearest Compliance Assistance Specialist” for a regional specialist who can give confidential help to small businesses and local governments.
- Surface coating. For surface-preparation facilities that are also involved in surface coating, view www.tceq.state.tx.us/goto/coating.
- TCEQ publications and forms. Call 512-239-0028 to request copies. You can also view or print publications by going to www.tceq.state.tx.us/goto/publications and forms by going to www.tceq.state.tx.us/goto/forms.
- Rules. For rules in PDF, visit www.tceq.state.tx.us/goto/rules.