**Texas Commission on Environmental Quality**

**Degreasing Units**

**Air Permits by Rule (PBR) Checklist**

**Title 30 Texas Administrative Code § 106.454**

| 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 rule number. The permit by rule (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.texas.gov/permitting/air/nav/air\_pbr.html](http://www.tceq.texas.gov/permitting/air/nav/air_pbr.html).This PBR ([§ 106.454](http://texreg.sos.state.tx.us/public/readtac%24ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=106&rl=454)) requires registration with the commission’s Office of Air in Austin before construction begins The facility can be registered by completing [Form PI-7](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html), “Registration for Permits by Rule,” or [Form PI-7-CERT](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html), “Registration and Certification for Permits by Rule.” This checklist should accompany the registration form.For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: [www.TexasEnviroHelp.org](http://www.TexasEnviroHelp.org) |
| --- |
| **Rule** | **Questions/Description and Response** |
| **(1)** | **All Degreasers** |
| (1)(A)(i) | Are you registering a **remote reservoir cleaner**? | [ ]  YES [ ]  NO |
| *If “YES,” registration is NOT required. If registering voluntarily, complete parts (1), (2), and (6) of this checklist and submit* [*Form PI-7*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html) *or* [*Form PI-7-CERT*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html) *to register the degreaser.* |
| (1)(A)(i) | Are you registering a **cold solvent cleaner**? | [ ]  YES [ ]  NO |
| *If “YES,” registration is NOT required if the total solvent makeup (gross usage minus waste disposal) does not exceed 110 gallons per year. If registering, complete parts (1), (3), and (6) of this checklist and submit* [*Form PI-7*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html) *or* [*Form PI-7-CERT*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html) *to register the degreaser.* |
| (1)(A)(i) | Are you registering an **open top solvent vapor degreaser**? | [ ]  YES [ ]  NO |
| *If “YES,” complete parts (1), (4), and (6) of this checklist and submit* [*Form PI-7*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html) *or* [*Form PI-7-CERT*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html) *to register the degreaser.* |
| (1)(A)(i) | Are you registering a **conveyorized degreaser**? | [ ]  YES [ ]  NO |
| *If “YES,” complete parts (1), (5), and (6) of this checklist and submit* [*Form PI-7*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html) *or* [*Form PI-7-CERT*](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html) *to register the degreaser.* |
| (1)(A)(ii) | Will records be kept on a monthly basis of the total solvent makeup (gross usage minus waste disposal)? | [ ]  YES [ ]  NO |
| (1)(B) | Will waste solvent from all degreasing operations be stored in covered containers, and be removed by a licensed disposal service or until emptying into an authorized on-site waste management facility? | [ ]  YES [ ]  NO |
| (1)(C) | Will porous or absorbent materials, such as cloth, leather, wood, or rope be degreased? | [ ]  YES [ ]  NO |
| (1)(D) | Will leaks be repaired immediately? | [ ]  YES [ ]  NO |

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| **Rule** | **Questions/Description and Response** |
| **(1)** | **All Degreasers *(continued)*** |
| (1)(D) | When leakage occurs, will the degreaser be shut down until repairs are completed? | [ ]  YES [ ]  NO |
| (1)(E) | Will a permanent and conspicuous label summarizing proper operating procedures to minimize emissions be posted on or near the degreaser? | **[ ]**  YES **[ ]**  NO |
| (1)(F) | Will each degreasing unit, regardless of the county in which it is located, meet the requirements of [30 TAC § 115.412](http://texreg.sos.state.tx.us/public/readtac%24ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=115&rl=412) and [§ 115.415](http://texreg.sos.state.tx.us/public/readtac%24ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=115&rl=415) (relating to Control Requirements and Testing Requirements)? | [ ]  YES [ ]  NO |
| **(2)** | **Remote Reservoir Cleaners** |
| (2)(A) | Will the cleaner be designed to prevent exposure of the solvent reservoir to the atmosphere except for the drain openings? | [ ]  YES [ ]  NO |
| (2)(A) | What is the total area of the drain openings? square inches |
| *Note: The total area of the drain openings is the radius of the drain (r) in inches squared and multiplied by 3.14 (π), Area = (πr2). If there is more than one drain opening, calculate the area of each drain and sum the total.* |
| (2)(A) | Will the total area of the drain openings be less than or equal to 16 square inches? | [ ]  YES [ ]  NO |
| (2)(A) | What is the total cleaner open area? square inches |
| *Note: The total cleaner open area is the open area length in inches multiplied by the open area width in inches.* |
| (2)(A) | Will the total area of the drain openings be less than or equal to 3% of the total cleaner open area? | [ ]  YES [ ]  NO |
| *Note: Divide the total area of the drain openings by the total cleaner open area and multiply by 100 to get the requested percent (%) value.* |
| (2)(B) | Will all solvent sprays be a solid fluid stream (not a fine, atomized, or shower type spray) and at a minimal operating pressure that is necessary to prevent splashing? | [ ]  YES [ ]  NO |
| (2)(B) | What is the maximum operating pressure of all solvent sprays? psig |
| (2)(C) | What is the true vapor pressure of the solvent at 100 degrees Fahrenheit? psia |
| (2)(D) | Will the solvent be heated? | [ ]  YES [ ]  NO |

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| **Rule** | **Questions/Description and Response** |
| **(3)** | **Cold Solvent Degreasers**  |
| (3)(A) | What is the depth of the water cover? inches | [ ]  NA |
| (3)(A) | Will the solvent be insoluble in and heavier than water? | [ ]  YES [ ]  NO |
| (3)(A) | What is the freeboard ratio of the cleaner?  | [ ]  NA |
| *Note: The freeboard ratio of the cleaner is the distance from top of the solvent level to the top edge of the degreasing tank in inches divided by the degreaser width in inches.**Note: If the cleaner has a water cover, mark this “NA” and skip the next question.* |
| (3)(B) | Will the unit be equipped with a cover which is closed whenever parts are not being handled in the cleaner? | [ ]  YES [ ]  NO |
| (3)(B) | Will the cover be designed for easy one-handed operation? | [ ]  YES [ ]  NO |
| *Note: This requirement must be met if you answer “YES,” to one or more of questions (3)(B)(i), (3)(B)(ii), or (3)(B)(iii) below.* |
| (3)(B)(i) | What is the true vapor pressure of the solvent at 100 degrees Fahrenheit? psia |
| (3)(B)(ii) | Will the solvent be agitated? | [ ]  YES [ ]  NO |
| (3)(B)(iii) | Will the solvent be heated? | [ ]  YES [ ]  NO |
| (3)(C) | Will a solvent spray be used? | [ ]  YES [ ]  NO |
| *Note: If a solvent spray is used, it must be a solid fluid stream (not a fine, atomized, or shower-type spray) with a minimal operating pressure to prevent splashing.* |
| (3)(C) | What is the operating pressure of the solvent spray? psig | [ ]  NA |
| *Note: If a solvent spray is not used, mark this “NA” and skip the next question.* |
| (3)(C) | Will the operating pressure of the solvent spray be 10 psig or less? | [ ]  YES [ ]  NO |
| (3)(D) | Will parts be drained for at least 15 seconds or until dripping ceases? | [ ]  YES [ ]  NO |
| (3)(D) | Will an internal cleaned parts drainage rack or facility, for enclosed draining under a cover, be provided? | [ ]  YES [ ]  NO |
| (3)(D) | Will an external cleaned parts drainage rack or facility, for enclosed draining under a cover, be used? | [ ]  YES [ ]  NO |
| *Note: An external cleaned parts drainage rack or facility may be used if the true solvent vapor pressure is less than 0.6 psia.* |
| (3)(D) | What is the true vapor pressure of the solvent at 100 degrees Fahrenheit? | [ ]  NA |
|  psia |

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| **Rule** | **Questions/Description and Response** |
| **(3)** | **Cold Solvent Degreasers *(continued)*** |
| (3)(E) | Are you registering the cleaner using [Form PI-7](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_PI7_forms.html) or [Form PI-7-CERT](http://www.tceq.texas.gov/permitting/air/forms/permitbyrule/pbr_pi7cert_forms.html)? | [ ]  YES | [ ]  NO |
| *Note: Registration is not required if the total solvent makeup (gross usage minus waste disposal) is 110 gallons per year or less.* |
| (3)(F)(i) | What will be the total solvent makeup (gross usage minus waste disposal) for chlorinated solvents? gallons per year |
| (3)(F)(ii) | What will be the total solvent makeup (gross usage minus waste disposal) for all other solvents? gallons per year |
| **(4)** | **Open Top Solvent Degreasers** |
| (4)(A) | What is the surface area of the solvent? square feet |
| (4)(B) | Will the unit be equipped with a cover that can be opened and closed easily without disturbing the vapor zone? | [ ]  YES [ ]  NO |
| (4)(B) | What is the area of the degreaser opening? square feet |
| (4)(B) | Will the unit be equipped with a powered cover? | [ ]  YES [ ]  NO |
| (4)(C) | Will the cover be closed at all times except when parts are moved into and out of the degreaser? | [ ]  YES [ ]  NO |
| (4)(D) | Will the unit be equipped with a properly sized refrigerated chiller? | [ ]  YES [ ]  NO |
| *If “NO,” the degreaser must meet the freeboard ratio requirement below.* |
| (4)(D) | What is the freeboard ratio of the unit?  | [ ]  NA |
| *Note: The freeboard ratio of the cleaner is the distance from top of the solvent level to the top edge of the degreasing tank in inches divided by the degreaser width in inches.* |
| *Note: If the unit has a properly sized refrigerated chiller, mark “NA” and skip the next question.* |
| (4)(E) | What is the total cleaner open area? square feet |
| *Note: The total cleaner open area in square feet is the open area length in inches multiplied by the open area width in inches divided by 144 square inches.* |
| (4)(E) | Will exhaust ventilation for the unit operate between 50 and 65 cubic feet per minute (cfm) per square foot of degreaser open area? | [ ]  YES [ ]  NO |
| *If “NO,” attach a description explaining how this requirement conflicts with Occupational Safety and Health Administration (OSHA) requirements.* |

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| **Rule** | **Questions/Description and Response** |
| **(4)** | **Open Top Solvent Degreasers *(continued)*** |
| (4)(E) | Will ventilation fans or other sources of air agitation be operated near the degreaser opening? | [ ]  YES [ ]  NO |
| (4)(F) | Will exhaust stacks discharge vertically with no restrictions or obstructions to flow? | [ ]  YES [ ]  NO |
| (4)(F) | What is the stack height as measured from ground level? feet |
| (4)(F) | What is the building height as measured from ground level? feet |
| (4)(F) | Is the ratio of the stack height to the building height at least 1.3? | [ ]  YES [ ]  NO |
| *Note: To determine the stack height ratio, divide the stack height in feet by the building height in feet.* |
| (4)(G)(i) | What will be the total solvent makeup (gross usage minus waste disposal) for chlorinated solvents? gallons per year |
| (4)(G)(ii) | What will be the total solvent makeup (gross usage minus waste disposal) for all other solvents? |
|  gallons per year |
| **(5)** | **Conveyorized Degreasers** |
| (5)(A) | Will inlet and outlet openings be closed at all times except when processing work through the degreaser? | [ ]  YES [ ]  NO |
| (5)(B) | What will be the volatile organic compound (VOC) removal efficiency of the unit’s refrigerated chiller? percent | [ ]  NA |
| *Note: If the unit has no refrigerated chiller, mark this “NA” and skip the next question.* |
| (5)(B) | Is the refrigerated chiller VOC removal efficiency at least 85%? | [ ]  YES [ ]  NO |
| *Note: If the answer to this question is “NO,” the freeboard ratio requirement below must be met.* |
| (5)(B) | What is the freeboard ratio of the unit?  | [ ]  NA |
| *Note: The freeboard ratio of the cleaner is the distance from top of the solvent level to the top edge of the degreasing tank in inches divided by the degreaser width in inches.**Note: If the unit has a properly sized refrigerated chiller, mark this “NA.”* |
| (5)(C) | Will a drying tunnel or other means of control be used to limit liquid or vapor carry-out? | [ ]  YES [ ]  NO |
| (5)(D) | Will entrances and exits to the degreaser be designed to silhouette work loads? | [ ]  YES [ ]  NO |

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| **Rule** | **Questions/Description and Response** |
| **(5)** | **Conveyorized Degreasers *(continued)*** |
| (5)(E) | What is the total cleaner open area? square feet |
| *Note: The total cleaner open area in square feet is the open area length in inches multiplied by the open area width in inches divided by 144 square inches.* |
| (5)(E) | Will exhaust ventilation for the unit operate between 50 and 65 cubic feet per minute (cfm) per square foot of degreaser open area? | [ ]  YES [ ]  NO |
| *If “NO,” attach a description explaining how this requirement conflicts with Occupational Safety and Health Administration (OSHA) requirements.* |
| (5)(E) | Will ventilation fans or other sources of air agitation be operated near the degreaser opening? | [ ]  YES [ ]  NO |
| (5)(F) | Will exhaust stacks discharge vertically with no restrictions or obstructions to flow? | [ ]  YES [ ]  NO |
| (5)(F) | What is the stack height as measured from ground level? feet |
| (5)(F) | What is the building height as measured from ground level? feet |
| (5)(F) | Is the ratio of the stack height to the building height at least 1.5? | [ ]  YES [ ]  NO |
| *Note: To determine the stack height ratio, divide the stack height in feet by the building height in feet.* |
| (5)(G)(i) | What will be the total solvent makeup (gross usage minus waste disposal) for chlorinated solvents? |
|  gallons per year |
| (5)(G)(ii) | What will be the total solvent makeup (gross usage minus waste disposal) for all other solvents? |
|  gallons per year |
| **(6)** | **All Degreasers** |
| Is the facility subject to [30 TAC §§ 115.412-419](http://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=5&ti=30&pt=1&ch=115&sch=E&div=1&rl=Y)? | [ ]  YES [ ]  NO |
| Why or Why Not? |
| Is the facility subject to [40 CFR Part 63, MACT Subpart T](http://www.tceq.texas.gov/permitting/air/rules/federal/63/thp.html)? | [ ]  YES [ ]  NO |
| Why or Why Not? |

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**Record Keeping:** There are no additional record keeping requirements other than the general requirements specified in [30 TAC § 106.8](http://texreg.sos.state.tx.us/public/readtac%24ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=106&rl=8). The records must be made available immediately upon request to the commission or any air pollution control program having jurisdiction. If you have any question about the type of records that should be maintained, contact the Air Program in the [TCEQ Regional Office](http://www.tceq.texas.gov/about/directory/region/reglist.html) for the region in which the site is located.

**Recommended Calculation Methods:** In order to demonstrate compliance with this PBR, use the emission factors for each air contaminant listed in the EPA Compilation of Air Pollutant Emission Factors

(AP-42), Fifth Edition, Volume 1, Section 4.6: “Solvent Degreasing” at: [www.epa.gov/ttn/chief/ap42/index.html](http://www.epa.gov/ttn/chief/ap42/index.html). Additional guidance may be found in the TCEQ guidance on Degreasing Operations at: [www.tceq.texas.gov/permitting/air/guidance/newsourcereview/degreasing/nsr\_fac\_degrease.html](http://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/degreasing/nsr_fac_degrease.html).