



West Texas A&M University™

ACADEMIC RESEARCH ENVIRONMENTAL HEALTH AND SAFETY

STANDARD OPERATING PROCEDURES

SOP No. 24.01.01.W1.11AR Ventilation Control and Atmospheric Release Procedure

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Environmental Health and Safety at WTAMU is composed of two distinct but integrated environmental safety departments that report to the Vice President of Research and Compliance. Academic and Research Environmental Health and Safety (AR-EHS) is responsible for research and academic related compliance, which includes laboratory and academic research and the associated compliance committees. Fire and Life Safety (FLS-EHS) is responsible for fire related compliance and conducts fire and life safety inspections of campus buildings and assists with the testing of all fire detection and suppression systems.

Supplements [TAMUS Regulation 24.01.01](#)

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1. Purpose

This procedure is written to ensure air quality is conducive to a productive environment for faculty, staff, students, and visitors. This procedure advises and provides guidance for compliance with regulations that apply to all public buildings on the West Texas A&M University (WTAMU) campus and all WTAMU facilities. This will help prevent occupational exposures to potentially harmful air contaminants, heat, and microbiological hazards.

2. Scope

This procedure applies to all buildings and structures owned by WTAMU, to all employees and students of the University, to all occupants of University buildings, and the external organizations who work in or use any WTAMU facility.

3. Procedures

3.1 Yearly inspections

Yearly inspections and evaluations of ventilation systems, laboratory hoods, and related equipment should be performed by EHS to ensure safe operation, cleanliness, and effective performance of the ventilation systems, laboratory hoods, and related equipment. This will reduce the risk of potentially harmful exposure to faculty, staff, students, and visitors. Records will be kept and maintained by EHS documenting all investigations, evaluations, and maintenance operations.

3.2 Indoor Air Quality (IAQ) Investigation Protocol

EHS will conduct inspections following the IAQ Investigation Protocol in accordance with the A&M standard titled Industrial Hygiene: Monitoring and Evaluation of Occupational/Environmental Exposure.

IAQ Investigation Protocol:

- Investigating complaints from building occupants;
- Performing visual assessments of the workplace; for example, water stained ceiling tiles, dust accumulation on horizontal surfaces, poor lighting, etc.;
- Conducting appropriate environmental monitoring;
- Recommending appropriate corrective measures; and
- Recordkeeping and retention for IAQ investigations and evaluations.

4. Responsibilities

4.1 Paint Booth De Minimis Status

According to the Texas Administrative Code, Title 30, Part 1, Chapter 116, Subchapter B, Division 1, Rule 116.119 De Minimis Facilities or Sources, WTAMU qualifies for De Minimis status for the paint booth at the physical plant. The TAC 116.119 can be found in Appendix A.

In order for WTAMU to retain its De Minimis status, the following materials cannot be used at more than the rate prescribed below:

- Cleaning and stripping solvents, 50 gallons per year.
- Coatings (excluding plating materials), 100 gallons per year.
- Dyes, 1,000 pounds per year.
- Bleaches, 1,000 gallons per year
- Fragrances (excluding odorants), 250 gallons per year.

- Water-based surfactants/detergents, 2,500 gallons per year.

If, for any reason, you feel that any of the above materials will be or has already been used at a quantity more than used in normal operation and may put the university at risk of violating the stated De Minimis levels, notify AR-EHS immediately. AR-EHS will evaluate the situation and determine what actions need to be taken.

The staff working at the paint booth must maintain a monthly report documenting coatings used in pounds per hour.

4.2 Boilers, Heaters, and Other Combustion Devices

The boilers, heaters, and other combustion devices are permitted by rule according to TAC 106.183, which can be found in Appendix B.

4.3 Manufacturing, Refinishing, and Restoring Wood Products

Manufacturing, refinishing, and restoring wood products are permitted by rule according to TAC 106.231, which can be found in Appendix C.

4.4 Hand-held and Manually Operated Machines

Hand-held and manually operated machines are permitted by rule according to TAC 106.265, which can be found in Appendix D.

4.5 Degreasing Units

Degreasing units that satisfy any of the conditions found in TAC 106.454 are permitted by rule. TAC 106.454 can be found in Appendix E.

5. Record Retention

No official state records may be destroyed without permission from the Texas State Library as outlined in [Texas Government Code, Section 441.187](#) and [13 Texas Administrative Code, Title 13, Part 1, Chapter 6, Subchapter A, Rule 6.7](#). The Texas State Library certifies Agency retention schedules as a means of granting permission to destroy official state records.

West Texas A&M University Records Retention Schedule is certified by the Texas State Library and Archives Commission. West Texas A&M University Environmental Health and Safety will follow [Texas A&M University Records Retention Schedule](#) as stated in the Standard Operating Procedure [61.99.01.W0.01 Records Management](#). All official state records (paper, microform, electronic, or any other media) must be retained for the minimum period designated.

6. Training

West Texas A&M University Environmental Health and Safety will follow the Texas A&M University System Policy [33.05.02 Required Employee Training](#). Staff and faculty whose required training is delinquent more than 90 days will have their internet access terminated until all trainings are completed. Only Blackboard and Single Sign-on will be accessible. Internet access will be restored once training has been completed. Student workers whose required training is delinquent more than 90 days will need to have their employment terminated by their manager.

Contact Office

WTAMU Environmental Health and Safety

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Appendix A

Texas Administrative Code

TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
CHAPTER 116	CONTROL OF AIR POLLUTION BY PERMITS FOR NEW CONSTRUCTION OR MODIFICATION
SUBCHAPTER B	NEW SOURCE REVIEW PERMITS
DIVISION 1	PERMIT APPLICATION
RULE §116.119	De Minimis Facilities or Sources

- (a) Facilities or sources that meet the conditions of one or more of the paragraphs of this subsection are considered by the commission to be de minimis, which means that registration or authorization prior to construction is not required:
- (1) categories of facilities or sources included on the list entitled "De Minimis Facilities or Sources;"
 - (2) facilities or sources at a site which, in combination, use the following materials at no more than the rate prescribed in subparagraphs (A) - (F) of this paragraph:
 - (A) cleaning and stripping solvents, 50 gallons per year;
 - (B) coatings (excluding plating materials), 100 gallons per year;
 - (C) dyes, 1,000 pounds per year;
 - (D) bleaches, 1,000 gallons per year;
 - (E) fragrances (excluding odorants), 250 gallons per year;
 - (F) water-based surfactants/detergents, 2,500 gallons per year;
 - (3) facilities or sources located inside a building at a site which meet the following sitewide emission rate caps based on the July 19, 2000 Effects Screening Levels (ESL) list without the addition of control devices, as defined in §101.1 of this title (relating to Definitions).
 - (4) any individual facility, source, or group of facilities or sources which the executive director determines to be de minimis based upon:
 - (A) proximity to receptors;
 - (B) rate of emission of air contaminants;
 - (C) engineering judgment and experience; and
 - (D) determination that no adverse toxicological or health effects would occur off property.
- (b) De minimis facilities or sources at a site which are subsequently determined by the executive director to be in violation of any commission rule, permit, order, or statute within the commission's jurisdiction, will no longer be considered de minimis and must obtain registration or authorization under this chapter or Chapter 106 of this title (relating to Permits by Rule).
- (c) The "List of De Minimis Facilities or Sources" will be maintained in the commission's Office of Permitting, Remediation, and Registration in Austin, with copies maintained in the commission's regional offices, and on the commission's home page on the World Wide Web.
- (1) Persons may petition the executive director to amend the "List of De Minimis Facilities or Sources" or the executive director may amend the list as necessary.
- (2) When amending the list to add or delete categories of facilities, sources, or groups of facilities or sources, the executive director will consider, at a minimum, the following:
- (A) typical operating scenarios;
 - (B) typical design and location;
 - (C) the types and rates of air contaminants emitted;
 - (D) engineering judgment and experience; and
 - (E) toxicological or health impacts

When amending the list to add or delete categories of facilities, sources, or groups of facilities or sources, the executive director will publish notice of the proposed amendment on the commission's home page on the World Wide Web and will allow 30 days for comments. If a category of facilities, sources, or groups of facilities or sources is deleted from the list, the owner or operator will have 180 days from the date of publication of the amended list on the commission's home page on the World Wide Web to obtain, register, or apply for authorization under this chapter or Chapter 106 of this title (relating to Permits by Rule)

De Minimis Facilities

Facilities

- Music and Film Studios
- Manual Application (With Brushes or Cloth, Only) of Cleaning or Stripping Solutions or Coatings
- Farm and Ranch Refueling Operations
- Offices
- Modular, Self-contained Sand Blasting Cabinets (Parts Cleaning)
- Deer Block Manufacturing
- Laundromats (Excluding Dry Cleaning)
- Warehouses (Storage of Closed Containers Only)
- Educational Laboratories

Domestic

- Repair of Personal Recreational Equipment
- Ammunition Reloading (Bullet Making)
- Still Photo Film Processing For Personal Use
- Gardening, Composting, and Mulching
- Hot Tub Cleaning and Maintenance
- Water Treatment System Maintenance
- Heating and Cooling Equipment
- Fireplaces and Barbecues
- Water Heaters
- Water Softeners
- Dish and Clothes Washers and Dryers
- Water Treatment Equipment (Well Water)
- Food Preparation

Retail/Service

- Beauty Shops
- Barber Shops
- Massage Parlors
- Pet Shops
- Pet Groomers
- Swimming Pool Maintenance
- Car Washes
- Food Supermarkets (Excluding Incineration)
- In-store Bakeries, Restaurants, and Other Food Preparation Activities
- Dispensing Pharmacies
- Medical/Dental/Veterinary Facilities Performing Only Out-patient Care
- Mortuary/Cemetery/Funeral Home (Excluding Crematoriums)
- Janitorial and Maid Services
- Landscaping
- Reupholstery Shops
- *in Situ* Carpet Cleaning
- *in Situ* Computer and Office Equipment Maintenance and Cleaning Services
- Food Preparation Activities of Products Intended Exclusively for Direct, Immediate Retail
- Sale for Human or Domestic Animal Consumption
- Retail Activities Not Involving Manufacture or Production of Products
- Taxidermy
- Auto Detailing

Appendix B

106.183. Boilers, Heaters, and Other Combustion Devices

Boilers, heaters, drying or curing ovens, furnaces, or other combustion units, but not including stationary internal combustion engines or turbines, are permitted by rule, provided that the following conditions are met:

- (1) The only emissions shall be products of combustion of the fuel.
- (2) The maximum heat input shall be 40 million British thermal unit (Btu) per hour with the fuel being:
 - (A) Sweet natural gas.
 - (B) Liquid petroleum gas.
 - (C) Fuel gas containing no more than 0.1 grain of total sulfur compounds, calculated as sulfur, per dry standard cubic foot. Or
 - (D) Combinations of the fuels in subparagraphs (A)-(C) of this paragraph.
- (3) Distillate fuel oil shall be fired as a backup fuel only. Firing shall be limited to 720 hours per year. The fuel oil shall contain less than 0.3% sulfur by weight and shall not be blended with waste oils or solvents.
- (4) All gas fired heaters and boilers with a heat input greater than ten million Btu per hour (higher heating value) shall be designed such that the emissions of nitrogen oxides shall not exceed 0.1 pounds per million Btu heat input.
- (5) Records of hours of fuel oil firing and fuel oil purchases shall be maintained onsite on a two-year rolling retention period and made available upon request to the commission or any local air pollution control agency having jurisdiction.

Appendix C

106.231. Manufacturing, Refinishing, and Restoring Wood Products

Facilities, including drying or curing ovens, and hand-held or manually operated equipment, used for manufacturing, refinishing, and/or restoring wood products that meet the following requirements are permitted by rule.

- (1) If a pneumatic sawdust collection system is used, it must be followed by a filter with no visible emissions.
- (2) Waste materials shall be stored and disposed of properly. There shall be no visible emissions leaving the property.
- (3) If the total coatings, solvents, and stripping agents used exceeds six gallons per day (gpd) or one gpd of methylene chloride, the following requirements must be met:
 - (A) The application area must be exhausted using forced air through a stack with an unobstructed vertical discharge above the peak of the roof line, and
 - (B) In addition to the requirements of subparagraph (A) of this paragraph, if application is made by spraying, the application area must also be vented through a filter system with a minimum particulate removal efficiency of 95%.
- (4) Purchase receipts for total coatings, solvents, and stripping agents for the most recent 24 months must be kept on site and be made immediately available upon request of personnel from the agency or any other air pollution control agency having jurisdiction. If the total materials purchased exceeds 550 gallons in any one month, records of the amount of materials used per month must be kept on-site to demonstrate that total emissions do not exceed 25 tons per year in any consecutive 12 months.

Appendix D

106.265. Hand-held and Manually Operated Machines

Hand-held or manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of ceramic art work, ceramic precision parts, leather, metals, plastics, fiber board, masonry, carbon, glass, graphite, or wood is permitted by rule.

Appendix E

106.454. Degreasing Units

Any degreasing unit that satisfies the following conditions of this section is permitted by rule.

- (1) The following general requirements are applicable to all degreasers unless specifically noted by the conditions of this section.
 - (A) Units subject to paragraphs (3)-(5) of this section shall meet the following:
 - (i) register with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 and a Degreasing Unit Checklist.
 - (ii) on a monthly basis, records shall be kept of total solvent makeup (gross usage minus waste disposal).
 - (B) Waste solvent from all degreasing operations shall be stored in covered containers, and be removed by a licensed disposal service or until emptying into an authorized on-site waste management facility.
 - (C) Porous or absorbent materials, such as cloth, leather, wood, or rope shall not be degreased.
 - (D) Leaks shall be repaired immediately, or the degreaser shall be shut down until repairs are completed.
 - (E) A permanent and conspicuous label summarizing proper operating procedures to minimize emissions shall be posted on or near the degreaser.
 - (F) Each unit, regardless of the county in which it is located, shall meet the requirements of 115.412 and 115.415 of this title (relating to Control Requirements and Testing Requirements).
- (2) The following conditions apply only to remote reservoir cleaners.
 - (A) The cleaner shall be designed to prevent exposure of the solvent reservoir to the atmosphere except for the drain openings. The drain openings shall not exceed 3.0% of the total cleaner open area and shall under no conditions exceed 16 square inches.
 - (B) All solvent sprays shall be a solid fluid stream (not a fine, atomized, or shower type spray) and at a minimal operating pressure that is necessary to prevent excessive splashing, but not to exceed ten pounds per square inch gauge (psig).
 - (C) The true vapor pressure of the solvent shall not exceed 0.6 pounds per square inch, absolute (psia) as measured or calculated at an operating temperature of 100 degrees Fahrenheit.
 - (D) The solvent shall not be heated.
- (3) The following conditions apply only to cold solvent cleaners, not including remote reservoirs.
 - (A) The cleaner shall have a freeboard that has a minimum four-inch water cover or provides a freeboard ratio (the distance from top of the solvent level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.7. For water covers, the solvent must be insoluble in and heavier than water.
 - (B) The unit shall be equipped with a cover, which is closed whenever parts are not being handled in the cleaner. Also, the cover must be designed for easy one-handed operation if any of the following conditions are present:
 - (i) the true vapor pressure of the solvent is greater than 0.3 psia as measure or calculated at 100 degrees Fahrenheit;
 - (ii) the solvent is agitated;
 - (iii) the solvent is heated.
 - (C) If a solvent spray is used, it shall be a solid fluid stream (not a fine, atomized, or shower-type spray) with a minimal operating pressure that is necessary to prevent splashing above the acceptable freeboard. The operating pressure shall not exceed ten psig.

- (D) An internal-cleaned parts drainage rack or facility, for enclosed draining under a cover, shall be provided. An external-cleaned parts drainage rack or facility, for enclosed draining under a cover, may be used if the vapor pressure of the solvent is less than 0.6 psia at 100 degrees Fahrenheit. In all cases, parts shall be drained for at least 15 seconds or until dripping ceases.
 - (E) The Form PI-7 registration is not required if total solvent makeup (gross usage minus waste disposal) is 110 gallons per year (gallons/yr) or less.
 - (F) Total solvent makeup shall not exceed the following:
 - (i) chlorinated solvents - 660 gallons/yr;
 - (ii) all other solvents - 1500 gallons/yr.
- (4) The following conditions apply only to open top solvent vapor degreasers.
- (A) The surface area of the solvent shall not exceed 15 square feet.
 - (B) The unit shall be equipped with a cover that can be opened and closed easily without disturbing the vapor zone. If the degreaser opening exceeds ten square feet, a powered cover shall be required.
 - (C) The cover shall be closed at all times except when parts are moved into and out of the degreaser.
 - (D) The unit shall be equipped with a properly sized refrigerated chiller, or the unit shall have a freeboard ratio (the distance from top of the vapor level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.
 - (E) Exhaust ventilation for the unit shall operate between 50 and 65 cubic feet per minute (CFM) per square foot of degreaser open area unless this conflicts with Occupational Safety and Health Administration (OSHA) requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser opening.
 - (F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.3 times the building height as measured from ground level.
 - (G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:
 - (i) chlorinated solvents - 660 gallons/yr;
 - (ii) all other solvents - 1500 gallons/yr.
- (5) The following conditions apply only to conveyORIZED degreasers.
- (A) The inlet and outlet openings shall be closed at all times except when processing work through the degreaser.
 - (B) The unit shall be equipped with a properly sized refrigerated chiller which has a volatile organic compound removal efficiency of at least 85%, or the unit shall have a freeboard ratio (the distance from top of the vapor level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.
 - (C) A drying tunnel or other means of control shall be used to limit liquid or vapor carry-out.
 - (D) Entrances and exits to the degreaser shall be designed to silhouette workloads.
 - (E) Exhaust ventilation for the unit shall operate between 50 and 65 cfm per square foot of degreaser opening unless this conflicts with OSHA requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser openings.
 - (F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.5 times the building height as measured from ground level.
 - (G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:
 - (i) chlorinated solvents - 660 gallons/yr;
 - (ii) all other solvents - 1500 gallons/yr.