



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
HAMILTON COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 14-05674**

**Fac ID: 1431392213**

**DATE: 3/10/2005**

The Procter and Gamble Company  
Greg Patterson  
5299 Spring Grove Avenue  
Cincinnati, OH 45217

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

HCDES



---

**Permit To Install  
Terms and Conditions**

**Issue Date: 3/10/2005  
Effective Date: 3/10/2005**

---

**FINAL PERMIT TO INSTALL 14-05674**

Application Number: 14-05674  
Facility ID: 1431392213  
Permit Fee: **\$500**  
Name of Facility: The Procter and Gamble Company  
Person to Contact: Greg Patterson  
Address: 5299 Spring Grove Avenue  
Cincinnati, OH 45217

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**5299 Spring Grove Ave  
Cincinnati, Ohio**

Description of proposed emissions unit(s):  
**Granules Spray Drying Pilot Plant.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**The Procter and Gamble Company**  
**PTI Application: 14-05674**  
**Issued: 3/10/2005**

**Facility ID: 1431392213**

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE/PM10	7.96
OC	6.23

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P101 - Granules Spray Drying Pilot Plant including 10 ft. spray drying tower with cyclone, airlift system with cyclone, dry materials dump station vented to a bag house, 4 dry materials storage bins vented to a bag house and a paste mixing crutcher vented to a bag house	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 6.12 pounds per hour and 7.96 tons per year.
		Particulate matter 10 microns and less (PM10) shall not exceed 6.12 pounds per hour and 7.96 tons per year.
		Volatile Organic Compound (VOC) emissions shall not exceed 4.79 pounds per hour and 6.23 tons per year.
		See terms and conditions B.1 through B.4.
	OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-11(B)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
		The emission limitation specified by

this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

## **2. Additional Terms and Conditions**

- 2.a** The hourly emission limitations outlined in term A.1. are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, production limitations and the use of a baghouse and cyclone to control particulate emissions.

## **B. Operational Restrictions**

1. Particulate emissions from the paste making operation shall be vented to a baghouse with a control efficiency of 98%.
2. The pressure drop across the baghouse shall be maintained within the range of 3-10 inches of water, or as specified as the normal operating range by the manufacturer, whichever is more stringent, while the emissions unit is in operation.
3. Particulate emissions from the spray dryer and airlift system shall be vented to a cyclone with a control efficiency of 96.6%.
4. The maximum amount of product produced in this emissions unit shall be limited to 8,320,000 pounds per year.

## **C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the total product produced for this emissions unit.
2. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse on a daily basis.

#### **D. Reporting Requirements**

1. The permittee shall submit an annual report to the Hamilton County Department of Environmental Services which includes the following information:
  - a. The total weight, in pounds per year, of the product produced in this emission unit during the calendar year; and
  - b. The total volatile organic compound and particulate emissions from this emission unit for the calendar year.

The annual report shall be submitted by January 31 of each year and shall cover the previous calendar year.

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of all periods of time during which the pressure drop across each baghouse did not comply with the allowable range specified in term and condition B.2. A copy of such record [pressure drop deviation (excursion report)] shall be sent to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.

#### **E. Testing Requirements**

1. Compliance with the emission limitation in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:

6.12 pounds PE per hour  
7.96 tons per year  
6.12 pounds PM10 per hour  
7.96 tons PM10 per year

Applicable Compliance Method:

- i. The maximum hourly tower cyclone particulate emissions shall be determined by multiplying 3.06 pounds of particulate per ton of product by the maximum hourly production rate in tons of production per hour and dividing by 2000 pounds per ton, as provided in PTI application 14-05674 as submitted on January 31, 2005.

Emissions Unit ID: **P101**

- ii. The maximum hourly airlift cyclone particulate emissions shall be determined by multiplying 0.404 pounds of particulate per ton of product by the maximum hourly tons of production per hour and dividing by 2000 pounds per ton, as provided in PTI application 14-05674 as submitted on January 31, 2005.
  - iii. The maximum hourly particulate emissions from the dump station shall be determined by multiplying the product throughput by the percent of dry raw materials in the product then by the percentage of material that goes to the baghouse then by  $(1 - \text{control efficiency}/100)$ , as provided in PTI application 14-05674 as submitted on January 31, 2005.
  - iv. The maximum hourly particulate emissions from the dry materials bins shall be determined by multiplying the product throughput by the percent of dry raw materials in the product then by the percentage of material that goes to the baghouse then by  $(1 - \text{control efficiency}/100)$ , as provided in PTI application 14-05674 as submitted on January 31, 2005.
  - v. The maximum hourly particulate emissions from the crutcher shall be determined by multiplying the product throughput by the percent of dry raw materials in the product then by the percentage of material that goes to the baghouse then by  $(1 - \text{control efficiency}/100)$ , as provided in PTI application 14-05674 as submitted on January 31, 2005.
  - vi. Total hourly particulate emissions shall be determined by the summation of methods i. through v. above. PM10 emissions are assumed to equal the PE emission rate.
  - vii. Annual emissions shall be determined by utilizing the annual production amount and the methods described in i. through v. above. The emissions factors were provided in PTI application 14-05674 submitted January 31, 2005.
- b. Emission Limitation:
- 4.79 pounds per hour OC  
6.23 tons per year OC

Applicable Compliance Method:

The hourly emission limitation is based on stack test data provided by the permittee. Annual emissions shall be determined by multiplying the emissions factor by the annual

production amount and dividing by 2000 lbs/ton. The emissions factors were provided in PTI application 14-05674 submitted January 31, 2005.

c. Emission Limitation

Visible particulate emission from the following stacks associated with emissions unit P101 shall not exceed twenty percent opacity as a six-minute average, except as specified by rule:

spray drying tower and airlift system cyclone outlet; dry materials dump station and paste mixing crutcher baghouse outlet; and storage bin filter vents.

Applicable Compliance Method

Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

3. Compliance with the operational limitation in term and condition B.2. shall be determined by the monitoring and records maintained pursuant to term and condition C.2.
4. If required, compliance with the particulate control efficiency limitations in terms and conditions B.1 and B.3 shall be determined in accordance with Test Methods 1-5 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.
5. Compliance with the production limitation in term and condition B.4. shall be determined by the monitoring and records maintained pursuant to term and condition C.1.

**F. Miscellaneous Requirements**

None

**The Procter and Gamble Company**  
**PTI Application: 14-05674**  
**Issued: 3/10/2005**

**Facility ID: 1431392213**

Emissions Unit ID: **P101**

SIC CODE 2841 SCC CODE 30100901 EMISSIONS UNIT ID P101

EMISSIONS UNIT DESCRIPTION Granules Spray Drying Pilot Plant

DATE INSTALLED 1945

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	3.33 lbs/hr	0.36	6.12 lbs/hr	7.96
PM <sub>10</sub>		3.33 lbs/hr	0.36	6.12 lbs/hr	7.96
Sulfur Dioxide					
Organic Compounds	non-attainment	0.47 lb/hr	4.66	4.79 lbs/hr	6.23
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? \_\_\_\_\_ NESHAP? \_\_\_\_\_ PSD? \_\_\_\_\_ OFFSET POLICY? \_\_\_\_\_

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, production limitations and use of a baghouse and cyclones to control particulate emissions.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \_\_\_\_\_

\$ \_\_\_\_\_

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? \_\_\_\_\_ YES x NO

IDENTIFY THE AIR CONTAMINANTS: NA

**The Procter and Gamble Company**  
**PTI Application: 14-05674**  
**Issued: 3/10/2005**

**Facility ID: 1431392213**

Emissions Unit ID: **P101**

**Ohio EPA Permit to Install Information Form** Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to [airpti@epa.state.oh.us](mailto:airpti@epa.state.oh.us)

Please fill out the following. If the checkbox does not work, replace it with an 'X'

<u>Electronic</u>	<u>Additional information</u>	<u>File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<input type="checkbox"/>		0000000c.wpd	<input checked="" type="checkbox"/>	
<input type="checkbox"/>		0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>		0000000a.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>		0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

**NSR Discussion**

14-05674

Procter & Gamble Ivorydale Technical Center  
 5299 Spring Grove Avenue  
 Cincinnati, OH 45217  
 PN: 1431392213

This PTI is a modification for existing emissions unit P101, Granules Spray Drying Pilot Plant at the Procter & Gamble Ivorydale Technical Center. The source was installed in 1945 so a PTI has not been issued for this source. The facility removed source P102 and will add the paste making operations from P102 to P101 which will increase emissions. The facility also removed the sulfonation process from P101. The source produces detergent granules and is strictly used for Research and Development. The raw products are added to a crutcher which mixes the products into a paste. A baghouse controls particulate emissions from the dry material dump station, storage bins and crutcher. The paste is then pumped to the spray dryer where it is applied to the product. The product is then separated by gravity and screened into collection bins. The emissions from this source are vented through either a tower cyclone or an airlift cyclone before being emitted to the atmosphere. The facility is located in Hamilton County which is attainment for all pollutants except ozone.

BAT has been determined to be compliance with all applicable rules, emissions limitations, production limitations and the use of a baghouse and cyclone to control particulate emissions.

PTI Fee: Process weight of 1001-5,000 lbs/hr = **\$500**

**The Procter and Gamble Company**  
**PTI Application: 14-05674**  
**Issued: 3/10/2005**

**Facility ID: 1431392213**

Emissions Unit ID: **P101**

This permit is recommended for approval.

Prepared by: Tom Wittekind  
 Date: February 9, 2005

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

**Synthetic Minor Determination and/or**  **Netting Determination**  
 Permit To Install **ENTER PTI NUMBER HERE**

- A. Source Description
- B. Facility Emissions and Attainment Status
- C. Source Emissions
- D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:  
 NONE

Please complete:

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE/PM10	7.96
OC	6.23