

**COMMONWEALTH OF VIRGINIA
STATE IMPLEMENTATION PLAN REVISION
FOR
RICHMOND NONATTAINMENT AREA

STATE OPERATING PERMIT
FOR
REYNOLDS CONSUMER PRODUCTS COMPANY
RICHMOND, VIRGINIA**

The federal Clean Air Act requires that Virginia adopt and enforce a plan, known as the State Implementation Plan (SIP), to attain and maintain the national ambient air quality standards (NAAQS) throughout the state. In 1985, a plan to attain and maintain the ozone air quality standard in the Richmond Nonattainment Area was adopted which demonstrated attainment of the national ozone standard by the end of 1987. The 1985 plan provided that the State Air Pollution Control Board must, on case-by-case basis, determine whether there is a reasonably available control technology (RACT) to reduce volatile organic compound (VOC) emissions from major sources for which the Environmental Protection Agency (EPA) has not issued a control technology guideline (CTG).

Under the 1-hour ozone standard requirements established by the Clean Air Act Amendments of 1990, the Richmond area was designated as a moderate nonattainment area. The area's air quality improved, and a redesignation request and maintenance plan were sent to EPA and approved on November 17, 1997 (62 FR 61237). On July 18, 1997, EPA promulgated a new 8-hour NAAQS for ozone. Under this new standard, the Richmond area was classified as a moderate nonattainment area. On September 22, 2004, the Richmond area was reclassified as a marginal nonattainment area. On September 20, 2006, the department formally submitted a request to redesignate the Richmond area from nonattainment to attainment of the 8-hour NAAQS for ozone, and on September 25, 2006, the department submitted a maintenance plan for the Richmond area as a SIP revision to ensure continued attainment. The redesignation request and maintenance plan were approved on June 1, 2007 (72 FR 30485).

Section 107(d)(3)(E) of the federal Clean Air Act stipulates that for an area to be redesignated, EPA must approve a maintenance plan that meets the requirements of Section 175A. All applicable nonattainment area requirements remain in place. The maintenance plan constitutes a SIP revision, and must provide for maintenance of the relevant NAAQS in the area for at least 10 years after redesignation. Virginia developed a maintenance plan that meets all EPA requirements and demonstrates that, because of permanent and enforceable measures, emissions will remain within the regional emissions budget while allowing for growth in population and vehicle miles traveled. The plan includes a demonstration that emissions will remain within the 2005 levels for a 10-year period by keeping in place key elements of the current federal and state regulatory programs, including case-by-case RACT requirements for the area.

RACT is the lowest emission limit that a particular source is capable of meeting by the

application of control technology that is reasonably available considering technological and economic feasibility. Section 182(b) requires stationary sources in moderate nonattainment areas to comply with the requirements for sources in marginal nonattainment areas. The additional, more comprehensive control measures in §182(b)(2)(B) require that existing stationary sources emitting VOC for which a CTG existed prior to adoption of the 1990 Amendments also use RACT. Section 182(b)(2)(C) requires RACT controls on major VOC stationary sources not covered by an existing CTG. A major source in a nonattainment area is defined in §302(j) to be a stationary source emitting or having the potential to emit 100 tons per year (tpy) or more of a pollutant.

When the Richmond area was originally designated as an ozone nonattainment area, it was classified as "moderate" and thereby had to meet the non-CTG RACT requirements of §182. As part of the original attainment plan, one of the sources located in the area identified as being subject to non-CTG RACT was Reynolds Metals Company. The company's Richmond Foil Plant produces aluminum foil by rolling aluminum into very thin sheets. VOC emissions at this plant come from lubricants used on 16 foil rolling mills.

The facility underwent RACT analysis, and a consent order was issued to the facility on December 18, 1987. The order was then submitted to EPA as a SIP revision, and approved into the Commonwealth's SIP on August 20, 1990 (55 FR 33904). Because the Richmond area in which this facility is located has continuously been classified as either a nonattainment or a maintenance area, the RACT requirements remain in effect, and a change to the facility's RACT requirements necessitates a change to the SIP.

Under the original analysis, Reynolds determined that the use of a linear paraffin with twelve or more carbon atoms and maintaining oil temperature below 150°F was RACT. Recently, due to cost and availability of linear paraffin, Reynolds seeks the option of using less-expensive and more readily available substitutes, should the need arise.

This document presents the RACT determination and analysis for the control of VOC emissions from Reynolds Consumer Products Company, Richmond Foil Plant South, located in Richmond, Virginia. A legally enforceable mechanism (federally enforceable state operating permit) has been drafted to ensure compliance with the non-CTG RACT requirements of Article 51 of 9VAC5-40 (Existing Stationary Sources) and is included as Attachment A. Attachment B contains the demonstration of how the terms and conditions of the permit meet the RACT requirements.

TEMPLATES\SOURCE-SPECIFIC\PLN01
RACT\REYNOLDS\RCP-SIP1-PRO.DOC

**LEGALLY ENFORCEABLE MECHANISM (PERMIT)
TO ENSURE COMPLIANCE WITH
REASONABLY AVAILABLE CONTROL TECHNOLOGY REQUIREMENTS
FOR**

Reynolds Consumer Products Company
Richmond Foil Plant South
Richmond, Virginia
Registration No. 50534

Under the authority provided in 9VAC5-170-180 and Section II of Agency Policy Statement No. 3-2006 (dated October 20, 2006), the Director of the Piedmont Regional Office approved and issued the permit on October 1, 2008, to be effective that same day. The permit was approved and issued following the procedural requirements of Virginia's federally enforceable state operating permit program, Article 5 of Part II of 9VAC5-80 (Permits for Stationary Sources).



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Gerard Seeley, Jr.
Regional Director

STATIONARY SOURCE PERMIT TO OPERATE

This permit implements the requirements for Reasonably Available Control Technology (RACT) for Volatile Organic Compounds (VOC) in the Richmond, Virginia Emissions Control Area.

This permit (i) is for the purpose of implementing the "reasonably available control technology" (RACT) requirements of 9 VAC 5-40-7390 of the Regulations of the Board and (ii) establishes control technology and other requirements for the control of volatile organic compound (VOC) emissions from Reynolds Foil, Inc., Reynolds Consumer Products Company (Richmond Foil Plant South) in the Richmond, Virginia Ozone Maintenance Area. These RACT requirements shall be the legal and regulatory basis for control of VOC emissions from this facility. This permit shall be effective upon approval by the U. S. Environmental Protection Agency following the requirements of 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Reynolds Foil, Inc.
Reynolds Consumer Products Company
PO Box 24688
Richmond, VA 23224
Registration No.: 50534
State-County-Plant ID No.: 51-760-0002

is authorized to operate

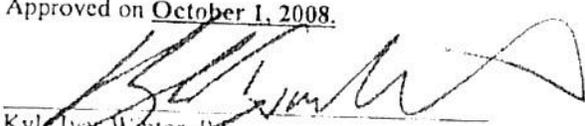
an aluminum foil plant

located at

7th and Bainbridge Streets
Richmond, VA 23224

in accordance with the Conditions of this permit.

Approved on October 1, 2008.



Kyle Ivar Winter, P.E.
Deputy Regional Director, Virginia Department of Environmental Quality

Permit consists of 6 pages.

Permit Conditions 1 to 20.

PERMIT CONDITIONS - The regulatory reference or authority for each condition is listed in parentheses after each condition.

PROCESS REQUIREMENTS - VOC Equipment List

1. **Equipment List** – In accordance with 9 VAC 5-40-7370, the facility shall meet either the presumptive RACT requirements of 9 VAC 5-40-7390 or the RACT requirements determined by a RACT determination in accordance with 9 VAC 5-40-7370 for the following equipment which are sources of VOC emissions and implemented through the remaining conditions of this permit:

Unit Ref. No.	Equipment/Operation Description	Maximum Rated Capacity
005-005	"202" mill aluminum foil rolling mill	2,535 ft/minute
	"203" mill aluminum foil rolling mill	1,815 ft/minute
	"204" mill aluminum foil rolling mill	2,215 ft/minute
	"206" mill aluminum foil rolling mill	3,380 ft/minute
	"207" mill aluminum foil rolling mill	1,995 ft/minute
	"208" mill aluminum foil rolling mill	1,610 ft/minute
	"209" mill aluminum foil rolling mill	2,255 ft/minute
	"211" mill aluminum foil rolling mill	2,255 ft/minute
	"E" mill aluminum foil rolling mill	2,860 ft/minute
	"F" mill aluminum foil rolling mill	2,535 ft/minute
	"G" mill aluminum foil rolling mill	3,000 ft/minute
	"H" mill aluminum foil rolling mill	2,485 ft/minute
	"J" mill aluminum foil rolling mill	4,660 ft/minute
	"K" mill aluminum foil rolling mill	4,470 ft/minute
020-07	"L" mill aluminum foil rolling mill	7,500 ft/minute

(9 VAC 5-80-850)

PROCESS REQUIREMENTS – VOC Emission Controls

2. **VOC Control** - Volatile organic compound emissions from the rolling mills at the facility shall be controlled and reduced as outlined in this permit.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)
3. **RACT Requirements** - RACT for VOC emissions from rolling shall be defined as the use of rolling fluid as specified in Conditions 4 through 7 and limiting flood temperature as specified in Condition 9.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)
4. **RACT Requirements** - The material used as a rolling fluid shall be either:

- a. A normal paraffin lubricant containing a minimum of 88 percent saturated aliphatic compounds of a carbon number C12 or higher, or
 - b. Any other material, as approved by DEQ, that can be demonstrated to emit no more VOC than a normal paraffin, as described above, per unit production. This demonstration shall be conducted as per conditions 5 through 7 below.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)
5. **RACT Requirements** - Richmond Foil Plant South shall demonstrate to DEQ the acceptability of alternative rolling fluids as follows:
- a. Richmond Foil Plant South shall submit information sufficient to demonstrate the alternative rolling fluid has the same or lower organic vapor pressure than the linear paraffin currently used, or
 - b. Richmond Foil Plant South shall demonstrate by reference test method (or other alternative testing approved by DEQ) that the emissions per unit production for the alternative fluid are equal to or lower than those for the linear paraffin currently used.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)
6. **RACT Requirements** - Data demonstrating the acceptability of any alternative rolling fluid to be used shall be provided to DEQ prior to use of the alternative material.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)
7. **RACT Requirements** - Richmond Foil Plant South will not use any alternative rolling fluid (other than for experimental purposes as specified in Condition 11) until DEQ has approved its use.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)

PROCESS REQUIREMENTS - Operational Limitations

8. **SAPCB Regulations** - Reynolds Foil, Inc., Reynolds Consumer Products Company shall comply with all applicable SAPCB Regulations including the requirements for monitoring, notification, recordkeeping, reporting, maintenance, and malfunction. Reynolds Foil, Inc., Reynolds Consumer Products Company agrees that this permit is not construed to mean that its operation is automatically in compliance with all aspects of the SAPCB Regulations. Compliance with all air pollution regulations must be a continuing, full time effort.
(9 VAC 5-80-850)
9. **Flood Oil Temperature** - Flood oil temperatures for normal paraffin lubricant shall be kept at 150°F or lower in the lubricant spray manifold at each mill. A flood oil temperature limit for alternate rolling fluids shall be specified, if appropriate, in the approval referenced in Condition 7. The flood oil temperature at each mill shall be recorded at least once each day.
(9 VAC 5-80-850)

TESTING

10. **Monthly Testing** - In any month during which linear paraffins are used as rolling fluid, a grab sample from at least one mill in operation shall be taken and analyzed for carbon number distribution. Gas chromatography shall be an acceptable method for determining carbon number distribution.
(9 VAC 5-80-850)

RESEARCH AND DEVELOPMENT

11. **Rolling Mills** - Reynolds Foil, Inc., Reynolds Consumer Products Company may continue to conduct research and development on the affected rolling mills with the goal of potentially reducing VOC emissions.
(9 VAC 5-80-850)
12. **Control Technology** - The use of innovative control technologies, different from that specified in Condition 4, is allowed for experimentation and trial operations as long as emissions do not increase on an hourly basis. Reynolds Foil, Inc., Reynolds Consumer Products Company shall inform the Air Compliance Manager of the Piedmont Regional Office prior to full-scale mill trials of any innovative control technology.
(9 VAC 5-80-850)

RECORDS

13. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:
 - a. Documentation of DEQ's approval of alternative rolling fluids shall be kept on site and shall be made available at any time for inspection by DEQ or EPA.
 - b. Rolling fluid used on each mill at all times. Should one or more alternative materials be used, records will be kept for each mill of which rolling fluid is used on each mill on each date.
 - c. Annual usage of each rolling fluid used, calculated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
 - d. Monthly records showing carbon number of the linear paraffin used.
 - e. Monthly Testing - In any month during which an alternative rolling fluid is used, sufficient records shall be kept to demonstrate the composition of the alternative material. The nature of these records shall be specified in the approval referenced in Condition 7.

- f. Daily flood oil temperature records.

The records required by this permit shall be maintained by Reynolds Foil, Inc., Reynolds Consumer Products Company for a minimum of the most recent five-year period and made available for review and inspection by representatives of the Department.
(9 VAC 5-40-7370 and 9 VAC 5-80-850)

GENERAL CONDITIONS

14. **Relationship to Other Statutory Requirements** - Except to the extent that conditions in this permit may be more stringent, this permit does not supersede or replace any other valid permit, regulatory or statutory requirement. Furthermore, this approval to operate shall not relieve Reynolds Foil, Inc., Reynolds Consumer Products Company of the responsibility to comply with all other local, state and federal regulations, including permit regulations. Once approved by the U.S. Environmental Protection Agency, this permit shall supersede the consent order issued by the department to Reynolds Consumer Products Company (formerly Reynolds Metals Company) dated December 18, 1987.
(9 VAC 5-80-800 D and 9 VAC 5-80-820 F)
15. **Federal Enforceability** - Once this permit is approved by the U.S. Environmental Protection Agency into the Commonwealth of Virginia State Implementation Plan, the permit is enforceable by EPA and citizens under the federal Clean Air Act.
(9 VAC 5-80-800 C.2 and 9 VAC 5-80-820 F)
16. **Permit Modification** - The Board may revise (modify, rewrite, change or amend) or repeal this permit with the consent of Reynolds Foil, Inc., Reynolds Consumer Products Company, for good cause shown by Reynolds Foil, Inc., Reynolds Consumer Products Company, or on its own motion provided approval of the revision or repeal is accomplished in accordance with Regulations of the Board and the Administrative Process Act (§ 2.2-4000 et seq.). Such revision or repeal shall not be effective until the revision or repeal is approved by the U.S. Environmental Protection Agency following the requirements of 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).
(9 VAC 5-80-960 and 9 VAC 5-80-1000)
17. **Failure to Comply** - Failure by Reynolds Foil, Inc., Reynolds Consumer Products Company to comply with any of the conditions of this permit shall constitute a violation of a Permit of the Board. Failure to comply may result in a Notice of Violation and civil penalty. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of orders as appropriate by the Board as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
(9 VAC 5-80-820 F, 9 VAC 5-80-910, and 9 VAC 5-80-1010)
18. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-850)

19. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Piedmont Region of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-940)
20. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-860 D)

~~DEMONSTRATION OF COMPLIANCE WITH
REASONABLY AVAILABLE CONTROL TECHNOLOGY REQUIREMENTS FOR~~

~~Reynolds Consumer Products Company
Richmond Foil Plant South
Richmond, Virginia
Registration No. 50534~~

No IBR