

Air Permit Review

Permit Issue Date: **date, 2011**

Region: Fayetteville Regional Office
County: Robeson
NC Facility ID: 7800203
Inspector's Name: Maureen Matroni-Rakes
Date of Last Inspection: 07/21/2010
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Silgan Can Company</p> <p>Facility Address: Silgan Can Company 2120 NC 71 Highway North Maxton, NC 28364</p> <p>SIC: 3411 / Metal Cans NAICS: 332431 / Metal Can Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>			<p>SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:</p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 7800203.07A and 7800203.08A Date Received: 10/18/2007 and 03/27/2008 Application Type: TV Significant and TV Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 08693/T04 Existing Permit Issue Date: 10/17/2006 Existing Permit Expiration Date: 12/31/2008</p>
<p>Bill Ninnemann Production Manager (910) 844-4141 2120 NC 71 Hwy North Maxton, NC 28364</p>	<p>Michael Penland Plant Manager (910) 844-4141 2120 NC 71 Highway North Maxton, NC 28364</p>	<p>Michael Huff Environmental Engineer (903) 782-1263 P O Box 40 Paris, TX 75461</p>	
<p>Review Engineer: Mark Cuilla</p> <p>Review Engineer's Signature: Date: date, 2011</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 08693/T05 Permit Issue Date: date, 2011 Permit Expiration Date: date, 2016</p>	

I. Purpose of Application

This permitting action is a combination of two permit applications and one applicability determination:

1. For 501(c)(2) Part II Title V Significant modification to incorporate avoidance conditions for MACT. The Permittee requested a two-step modification in order to avoid applicability of 40 CFR 63, Subpart KKKK "National Emission Standards for Hazardous Air Pollutants from the Surface Coating of Metal Cans." Permit **08693T04** was issued to incorporate the permit condition as the first step. It also included a requirement that the Permittee submit a complete Title V application within 12 months of permit receipt. This second step application completes that process.

2. For renewal of the existing Title V permit pursuant to 2Q .0513. The existing Title V permit (**08693T04**) was issued on **October 17, 2006**, with an expiration date of **December 31, 2008**. The renewal application was received on **March 27, 2008** or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

3. Applicability determination No. 1222. The Permittee submitted a notification of its intent to install a new Pulsar Frequency Converter on its three piece can assembly line No. 8 (**ID No. ES-006**). The Permittee indicated that this modification will not violate any applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring, recordkeeping, reporting, or compliance certification requirements. An additional claim that this change was not a modification under Title I of the Federal Clean Air Act was made. The new Pulsar converter will operate at a higher weld speed resulting in a net potential increase of volatile organic compound emissions and particulate matter. This source does not have an individual VOC emission limit but rather is part of a facility-wide VOC PSD avoidance limit of 250 tons per year. Because of this facility-wide emission limit, the potential increased VOC emissions from the replacement of this frequency converter is allowed without a permit modification. The renewed permit will not be affected as the frequency converters are not specifically listed as parts of the emission sources (**ID Nos. ES-003 through ES-007**).

II. Facility Description

The facility is a food product can manufacturer.

III. History/Background/Application Chronology

January 21, 2004 – Permit **08693T03** issued as a Title V permit renewal.

October 16, 2006 – Permit **08693T04** issued as a Part I of 501(c)(2) Title V Significant modification to incorporate a MACT avoidance condition in order to avoid 40 CFR 63, Subpart KKKK, Surface Coating of Metal Cans.

October 18, 2007 – Permit application **7800203.07A** received as a Part II of 501(c)(2) Title V Significant modification as required by Permit No. **08693T04**. [Application eventually consolidated into Title V renewal application **7800203.08A**.]

March 27, 2008 – Permit application **7800203.08A** received as Title V renewal application and assigned to Wallace Pitts for processing. Application deemed complete for processing.

April 18, 2008 – Applicability determination No. 1222 was received for the installation of a Pulsar Frequency Converter on the three piece can assembly line No. 8 (**ID No. ES-006**). [See discussion above.]

March 13, 2009 – Combined permit applications **7800203.07A** and **.08A** transferred from Wallace Pitts to Michael Benson for processing.

June 15, 2009 - Combined permit applications **7800203.07A** and **.08A** transferred from Michael Benson to David Putney for processing.

July 21, 2010 – Ms. Maureen Matroni-Rakes of the FRO completed annual facility inspection.

November 1, 2010 - Combined permit applications **7800203.07A** and **.08A** transferred from David Putney to Mark Cuilla for processing.

January 10, 2011 – DRAFT permit sent to Permittee and Fayetteville Regional Office for comment prior to public notice and EPA review. [The Permittee provided comments to the draft permit and associated review via January 14, 2011 email from Mike Huff of Silgan Can \(see Section IX of this Document for a discussion\).](#)

Date, 2011 – DRAFT permit sent to public notice and EPA review.

IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section(s)	Description of Change(s)
Attachment	Insignificant activities	-updated insignificant activity page per current shell and incorporated sources listed in ESM
Cover	-	-amended all dates and permit revision numbers
3	Equipment table	-updated table per current ESM listing
4	2.1 A (table)	-added reference to 15A NCAC 2D .1111, MACT Avoidance, and removed reference to 15A NCAC 2D .0918
	2.1 A.1.a	-added ID numbers
5	2.1 A.1.b	-corrected testing rule cross reference
	2.1 A.1.c	-updated shell language
	2.1 A.1.d	-added “no reporting” language
	2.1 A.2.a	-added ID numbers
	2.1 A.2.b	-corrected testing rule cross reference
	2.1 A.2.c	-added ID numbers
	2.1 A.3.a	-added ID numbers
	2.1 A.3.b	-corrected testing rule cross reference
5-6	2.1 A.3.c	-updated shell language
6	2.1 A.3.e	-updated shell language
	2.1 B	-updated equipment descriptions
	2.1 B (table)	-added reference to 15A NCAC 2D .1111 MACT Avoidance and removed reference to 15A NCAC 2D .0918
7	2.1 B.1.a	-added ID numbers
	2.1 B.1.b	-corrected testing rule cross reference
	2.1 B.1.c	-updated shell language
	2.1 B.1.d	-added “no reporting” language
	2.1 B.2.a	-added ID numbers
	2.1 B.2.b	-corrected testing rule cross reference
7-8	2.1 B.2.c	-updated shell language
8	2.1 B.2.e	-updated shell language
	2.2 A	-updated equipment descriptions
	2.2 A (table)	-added reference to 15A NCAC 2D .1111 MACT Avoidance and removed reference to 15A NCAC 2D .0918
9	2.2 A.1.e	-corrected testing rule cross reference and updated testing date
9-10	2.2 A.1.h	-amended monitoring/recordkeeping language per Permittee comments on draft permit

Page(s)	Section(s)	Description of Change(s)
11	2.2 A.2.c	-corrected cross reference
12	2.2 A.2.e 2.2 A.4.b 2.2 A.4.c	-updated shell language -corrected testing rule cross reference -updated shell language
12-13	2.2 A.4.d	-amended monitoring/recordkeeping language per Permittee comments on draft permit
14	2.2 A.4.e	-corrected cross reference
14-24	General Conditions	-updated shell conditions (v3.3)
25	List of Acronyms	-added acronyms for CAIR, NAA, and RACT per current shell

It should be noted that each emission source and control device description were updated according to current ESM practices.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes
15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .0918, Can Coating
15A NCAC 2D .0958, Work Practices for Sources of Volatile Organic Compounds
15A NCAC 2D .1100, Control of Toxic Air Pollutants
15A NCAC 2Q .0317, Avoidance Conditions (for 15A NCAC 2D .0530, Prevention of Significant Deterioration and 15A NCAC 2D .1111, Maximum Achievable Control Technology)

Except for 15A NCAC 2D .0918, a regulatory review for these existing requirements will not be included in this document. As part of this permit renewal, the applicability of 15A NCAC 2D .0918 was evaluated. The current permit requires that emission sources be limited to using coatings with a VOC-content dependent on the type of coating operation. This requirement is described in paragraphs (d)(1) through (d)(4) of the rule which states:

“Any source which has chosen to control emissions of volatile organic compounds under Rule 0518(e) of this Subchapter and which has installed air pollution control equipment in accordance with an air quality permit in order to comply with this Rule before December 1, 1989, may comply with the limits contained in this Paragraph instead of those in Paragraph (c) of this Rule...”

The requirement to comply with this VOC RACT rule stemmed from the requirement to comply with the now repealed 15A NCAC 2D .0518(e) “Miscellaneous Volatile Organic Compound Emissions” rather than because of the facility being located in an ozone non-attainment county. 2D .0518 was replaced with 15A NCAC 2D .0958 “Work Practices for Sources of Volatile Organic Compounds.” The appendix to the rules discusses the following option of eliminating the control requirement as follows:

“2D .0958(e) requires sources with control devices that were installed to comply with 2D .0518 to continue to maintain and operate the control device unless the Director determines that removal of the control device does not cause or contribute to a violation of the ozone ambient air quality standard. No determination has yet been made. The most convincing way to make this determination is through modeling. However, modeling may not be the only way. A demonstration that shows that the increase in VOC emissions is insignificant may also suffice. In any event, if the control device is being used to avoid PSD or some other requirement, then the control device must continue to be used to avoid these other requirements. Furthermore, a source with a control device is still subject to the requirements of 2D .0958(c) and (d).”

The same sources are interlocked with PSD avoidance requirements to operate and maintain these control devices. Therefore, DAQ has determined that there should be no substantial increase in VOC emissions and no resulting ozone degradation as a result of the change to remove 2D .0918 applicability from this facility.

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The facility is not currently subject to any New Source Performance Standards under 40 CFR 60. This permit renewal does not affect this status.

NESHAPS/MACT – The facility currently operates under one facility-wide MACT Avoidance condition limiting hazardous air pollutant emissions to less than 10 tons per year of each individual HAP and less than 25 tons per year of all HAPs combined. The permit condition stipulates that the testing requirements for VOC in Section 2.2 A.1.e will also satisfy any testing requirements for this condition. Additional monitoring, recordkeeping, and reporting requirements including the specific equations for calculating HAP emissions are all specified in the current permit. This permit renewal does not affect this status.

PSD – The facility currently operates under one facility-wide PSD Avoidance condition limiting volatile organic compound emissions to less than 250 tons per consecutive 12 month period. The permit condition stipulates that VOC emissions from ES-001, ES-016, ES-017, and ES-018 shall be controlled by thermal oxidizers and that these oxidizers be tested for before and after control emissions, combustion temperature, and destruction efficiencies once per permit term. Additional monitoring, recordkeeping, and reporting requirements including the specific equations for calculating VOC emissions are all specified in the current permit. This permit renewal does not affect this status.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The following equipment/control device relationships exist:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-001	One can enameling operation consisting of an enamel curing oven utilizing waste heat from the thermal oxidizer	CD-001	One natural gas-fired thermal oxidizer (22.5 million Btu per hour heat input capacity)
ES-003 through ES-007	Five bodymaker lines Nos. 5 through 9 (each with one or two air atomized spray guns)	CD-002 through CD-006	Five fabric filters (12.5 square feet of filter area, each)
ES-016	One wash coat application station	CD-011	One natural gas-fired thermal oxidizer (1.2 million Btu per hour heat input capacity)
ES-017	One natural gas-fired wash coat oven (3.0 million Btu per hour heat input capacity)	CD-011	One natural gas-fired thermal oxidizer (1.2 million Btu per hour heat input capacity)
ES-018.1	One natural gas-fired enamel bake oven (20 million Btu per hour heat input capacity)	CD-011	One natural gas-fired thermal oxidizer (1.2 million Btu per hour heat input capacity)
ES-018.2 through ES-018.10	Nine spray stations for enamel inside (One tenth spray station for change out maintenance only)	CD-011	One natural gas-fired thermal oxidizer (1.2 million Btu per hour heat input capacity)

The following table outlines the specific permit conditions for each source/control device arrangement and if the control device is installed to comply with that requirement:

Emission Source ID No(s).	Control Device ID No(s).	Permit Condition(s)*	Control Equipment Installed to Meet Permit Limit?
ES-001	CD-001	15A NCAC 2D .0515 15A NCAC 2D .0516 15A NCAC 2Q .0317 (PSD Avoidance) 15A NCAC 2Q .0317 (MACT Avoidance)	Particulate matter; No Sulfur dioxide; No Volatile organic compounds; Yes Hazardous air pollutants; No
ES-016 ES-017 ES-018.1 ES-018.2 through ES-018.10	CD-011	15A NCAC 2D .0515 15A NCAC 2D .0516 15A NCAC 2Q .0317 (PSD Avoidance) 15A NCAC 2Q .0317 (MACT Avoidance)	Particulate matter; No Sulfur dioxide; No Volatile organic compounds; Yes Hazardous air pollutants; No

Emission Source ID No(s).	Control Device ID No(s).	Permit Condition(s)*	Control Equipment Installed to Meet Permit Limit?
ES-003 through ES-007	CD-002 through CD-006	15A NCAC 2D .0515 15A NCAC 2Q .0317 (PSD Avoidance) 15A NCAC 2Q .0317 (MACT Avoidance)	Particulate matter; Yes Volatile organic compounds; No Hazardous air pollutants; No

* The following permit conditions are not included in the CAM analysis:

1. 15A NCAC 2D .0521 – This regulation limits visible emissions to specific opacity levels based on equipment manufacture date. Visible emissions are not criteria pollutants subject to CAM analysis.
2. 15A NCAC 2D .0958 – This regulation defines work practice standards for sources of volatile organic compounds. Work practice standards are not emission limits subject to CAM analysis.
3. 15A NCAC 2D .1100 – This regulation defines State-enforceable emission limits for toxic air pollutants. These emission limits are not criteria pollutants subject to CAM analysis.

As indicated above, a CAM analysis must be provided for: (1) volatile organic compounds from the equipment being controlled by thermal oxidizers for permit condition 15A NCAC 2Q .0317 (PSD Avoidance) and (2) particulate matter emissions from the equipment being controlled by fabric filters for permit condition 15A NCAC 2D .0515. The following address each permit condition:

1. 15A NCAC 2Q .0317 (PSD Avoidance) – The facility is subject to an emission limit of less than 250 tons per consecutive 12 month period for volatile organic compounds. Per 15A NCAC 2D .0614(b)(1)(E) a CAM demonstration is not needed for sources subject to “an emissions cap that is approved under the rules of this Subchapter and Subchapter 15A NCAC 2Q and incorporated in a permit issued under 15A NCAC 2Q .0500.” This PSD avoidance condition constitutes as an approved emissions cap; therefore, CAM is not necessary for this pollutant specific emission limit.
2. 15A NCAC 2D .0515 (Particulate Matter Emissions) – The facility is subject to particulate matter emission limit as calculated taking into account the total process rate. The Permittee estimates particulate emissions from the inside spray coating process (**ID Nos. ES-003 through ES-007**) based on maximum coating application rates, maximum solids content, transfer efficiency of the spray application equipment, filter efficiency of the ventilation system filters, and particulate matter fallout within the spray application areas. The following equation has been presented:

$$\text{Annual PM emissions (tpy)} = \text{AR} \times \text{SC} \times (1-\text{TE}) \times (1-\text{FE}) \times (1-\text{FO})/2000 \text{ lbs/ton}$$

Where:

- AR = maximum annual coating application rate (gal/yr) = 2540.0 gal/yr
- SC = maximum solids content (lbs solid/gal) = 3.62 lbs solid/gal
- TE = transfer efficiency (%/100) = 80%
- FE = filter efficiency (%/100) = 99.60%
- FO = fallout fraction (%/100) = 70%

The transfer efficiencies for the inside spray coating operation are obtained from testing required by Section 2.2 A.1.e of the current permit. Filter efficiencies are obtained from the manufacturer of the filters.

Uncontrolled PM emissions from each line is estimated using the above equation while removing the filter efficiency as follows:

$$\text{Annual PM emissions (tpy)} = \text{AR} \times \text{SC} \times (1-\text{TE}) \times (1-\text{FO})/2000 \text{ lbs/ton}$$

Where: AR = maximum annual coating application rate (gal/yr) = 2540.0 gal/yr
 SC = maximum solids content (lbs solid/gal) = 3.62 lbs solid/gal
 TE = transfer efficiency (%/100) = 80%
 FO = fallout fraction (%/100) = 70%

Calculated emissions from each line are **0.275 tons per year**. This amount is well below CAM thresholds; therefore, CAM is not required for particulate emissions from these sources.

VII. Facility Wide Air Toxics

The facility currently operates under facility-wide modeled emission rate of 0.035 pounds per hour of formaldehyde. This limit was established in a combined modeling demonstration for both Campbell Soup and Silgan Can. To ensure compliance, the Permittee is required to maintain production records of operation information necessary to determine total formaldehyde emissions. This permit renewal does not affect this status.

VIII. Facility Emissions Review

There is no change in emissions for this renewal.

The following table represents the latest year's emission inventory from the facility:

Pollutant(s)	2008 Actual Emissions (tpy)	2009 Actual Emissions (tpy)
CO	2.39	3.04
NO _x	2.85	3.62
PM ₁₀	0.09	0.10
SO ₂	0.02	0.02
VOC	59.63	56.83
Total HAP/TAP	3.08	2.99

IX. Stipulation Review

The facility was last inspected by Ms. Maureen Matroni-Rakes of the FRO on **July 21, 2010**. Her inspection report indicates that the facility "seemed to be operating in compliance with their permit number **08693T04** but a Compliance Add Info (CAI) letter was being sent to the facility for formaldehyde and VOC emission calculations." She also noted that the next inspection should ensure that better records are being kept.

The Permittee had the following comments on the draft permit and associated review (DAQ's response in italics):

1. The facility location should be 2120 Highway 71 North, Unit A. *Agree, this change will be made to both the permit and IBEAM.*
2. Section 2.2 A.4.c (Compliance Assurance Monitoring) – There is two references to chart recorders. The facility does use paper chart recorders at this time but is moving to electronic recorders. Can this language be changed to simply reference a recorder to minimize the requirement for any permit changes in the future? *Not necessary. CAM is no longer being considered an applicable requirement for this facility as the pollutant specific permit condition is being removed (see Section V of this Document for a discussion of its removal).*
3. Section 2.2 A.1.g (Monitoring/Recordkeeping) – This condition appears to require a separate log of the combustion temperature from the continuous monitor and recorder discussed previously in Item 2 above. It would be duplicative to have the log also document the temperature for each work shift. *No change. The requirement for a log required in the draft CAM language has been removed therefore, there is no duplication as suggested. In addition, this permit requirement is not new to the permit so these records are not an additional requirement.*
- 4/5. Sections 2.2 A.1.h and 2.2 A.5.d (Monitoring/Recordkeeping) – These conditions contain the calculation methodology to be used for compliance determination for emissions of VOCs and HAPs. While these conditions are not new, they do contain efficiency numbers for both capture and destruction as well as the minimum on-line temperatures for the thermal oxidizers. The Permittee believes the permit should not include any actual testing results as a minimum efficiency but rather require that testing be conducted to demonstrate compliance. Additionally the last sentence of the paragraph indicates that these numbers can only be changed via permit modification. The inclusion of actual numbers with the above reference would limit the actual efficiencies and this would not be acceptable given that testing will almost always result in a change in efficiency given the various conditions that affect testing on a given day. The potential effect of this demonstration by the difference in those efficiencies listed and those obtained during the NCDENR approved testing in 2008. Therefore, the Permittee is requesting that specific numbers as well as the statement that these efficiencies can only be changed by permit modification be removed from the final document. *No change. The Permittee is required to comply with those variables currently in the permit which were approved via testing. The Permittee may request via permit modification for modification of these variables following the approval of testing at any time (but at a minimum, testing shall be performed at least once per permit term. The date will be determined through this permit renewal). However, the language of the permit will be modified to allow for modification of these variables through the administrative amendment process.*
6. Section 3.H.1.c (General Conditions) – This section requires that the Permittee report to the Regional Supervisor any changes in the quantity or quality of materials processed that would result in new or increased emissions from the emission sources. The quantity and quality of the materials processed changes frequently with material substitutions as necessitated by customer demands. Each of these changes is evaluated to ensure that all material usage and emission limitations do not have the potential to be exceeded by the proposed changes prior to their implementation. The Permittee does not believe NCDENR involvement is necessary for these type production changes. *No change. The Permittee is correct in that this Condition is written to establish the difference between what is and what is not necessary for a permit modification. The day-to-day changes meeting the established emission limits are not required to be submitted; only those that would require a determination of rule applicability.*
7. The facility contact is being changed to Mr. Bill Ninnemann, the facility's Environmental Focal Point. His contact information is the same. *Agree, change in IBEAM will be made.*

X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit was placed in a newspaper of general circulation in the area where the facility is located. The notice provided for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice were sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant was provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit was provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. South Carolina is an affected State within 50 miles of this facility.

XI. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this renewal.

A consistency determination was not required for this renewal.

FRO recommends issuance of the permit and was presented with a DRAFT permit prior to notice and issuance.

RCO concurs with FRO's recommendation to issue the renewed air permit.