



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



A Permit Is Hereby Issued To
Columbia Packing Co., Inc.
Authorizing the Construction and Operation of
Smokehouse
Located at Dallas, Dallas County, Texas
Latitude 32° 44' 50" Longitude -96° 47' 24"

Permit: 106009

Issuance Date : _____

Expiration Date: _____

For the Commission

- 1. Facilities covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. Voiding of Permit. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. Construction Progress. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. Start-up Notification. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. Sampling Requirements. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

Special Conditions

Permit Number 106009

Emission Limitations

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission rates and other conditions specified in the table. In addition, this permit authorizes all emissions from planned startup and shutdown activities associated with facilities or groups of facilities that are authorized by this permit.

Fuel Specifications

2. Fuel for the boilers (Emission Point Nos. [EPNs] B1 and B2, respectively) shall be pipeline-quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
3. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Opacity/Visible Emission Limitations

4. Opacity of particulate matter (PM) emissions from the Batch Smokehouse 1 Stack (EPN S1) and the Batch Smokehouse 2 Stack (EPN S2) shall not exceed 20 percent averaged over a six-minute period.

Operational Limitations, Work Practices, and Plant Design

5. Emission rates are based on and the facilities shall be limited to a maximum hourly usage rate of 8.58 pounds of sawdust per hour and a maximum annual usage rate of 75,160.80 pounds of sawdust per year.
6. The boilers (EPNs B1 and B2) shall not operate simultaneously.
7. Spillage of any raw products, finished products, or waste products shall be cleaned up on a daily basis.
8. All in-plant roads, truck loading and unloading areas, parking areas, and other traffic areas shall be sprinkled with water, and/or be paved (with a cohesive hard surface) and cleaned as necessary to maintain compliance with all applicable TCEQ rules and regulations.

Recordkeeping Requirements

9. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 24-month period, and include the following:
 - A. Daily and annual sawdust usage rates in pounds per day and pounds per year, respectively; and
 - B. Daily and annual hours of smoking time.

Date:

DRAFT

Emission Sources - Maximum Allowable Emission Rates

Permit Number 106009

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (5)	
			lbs/hour	TPY (4)
S1	Batch Smokehouse 1 Stack	PM	0.23	0.99
		PM ₁₀	0.23	0.99
		PM _{2.5}	0.23	0.99
		VOC	0.19	0.83
		CH ₂ O (6)	<0.01	0.02
		CH ₃ COOH	0.02	0.08
S2	Batch Smokehouse 2 Stack	PM	0.23	0.99
		PM ₁₀	0.23	0.99
		PM _{2.5}	0.23	0.99
		VOC	0.19	0.83
		CH ₂ O (6)	<0.01	0.02
		CH ₃ COOH	0.02	0.08
	Total Batch Smokehouse Operations (Batch Smokehouse 1 Stack & Batch Smokehouse 2 Stack)	PM	0.23	0.99
		PM ₁₀	0.23	0.99
		PM _{2.5}	0.23	0.99
		VOC	0.19	0.83
		CH ₂ O (6)	<0.01	0.02
		CH ₃ COOH	0.02	0.08

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (5)	
			lbs/hour	TPY (4)
B1	Boiler 1 Stack (2.929 MMBtu/hr natural gas-fired)	PM	0.02	0.10
		PM ₁₀	0.02	0.10
		PM _{2.5}	0.02	0.10
		NO _x	0.29	1.25
		VOC	0.02	0.07
		CO	0.24	1.05
		SO ₂	<0.01	0.01
B2	Boiler 2 Stack (5.234 MMBtu/hr natural gas-fired)	PM	0.04	0.18
		PM ₁₀	0.04	0.18
		PM _{2.5}	0.04	0.18
		NO _x	0.51	2.23
		VOC	0.03	0.12
		CO	0.43	1.88
		SO ₂	<0.01	0.01
	Total Boiler Operations (Boiler 1 Stack & Boiler 2 Stack)	PM	0.04	0.18
		PM ₁₀	0.04	0.18
		PM _{2.5}	0.04	0.18
		NO _x	0.51	2.23
		VOC	0.03	0.12
		CO	0.43	1.88
		SO ₂	<0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

Emission Sources - Maximum Allowable Emission Rates

NO _x	- total oxides of nitrogen
SO ₂	- sulfur dioxide
CO	- carbon monoxide
PM	- total particulate matter, suspended in the atmosphere, including PM ₁₀ and PM _{2.5} , as represented
PM ₁₀	- total particulate matter equal to or less than 10 microns in diameter, including PM _{2.5} , as represented
PM _{2.5}	- particulate matter equal to or less than 2.5 microns in diameter
CH ₂ O	- formaldehyde
CH ₃ COOH	- acetic acid

- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.
- (6) Hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C.

Date: _____

Construction Permit Source Analysis & Technical Review

Company	Columbia Packing Co., Inc.	Permit Number	106009
City	Dallas	Project Number	205185
County	Dallas	Account Number	N/A
Project Type	Initial	Regulated Entity Number	RN104007802
Project Reviewer	Joel Stanford	Customer Reference Number	CN602495046
Site Name	Smokehouse		

Project Overview

The company has proposed an initial permit for an existing smokehouse facility, which includes two boilers and two identically sized smokehouses. The boilers will not be authorized to operate simultaneously. The total annual allowable emissions for boiler operations are based on the larger of the two boilers (Emission Point Number [EPN] B2) operating 8,760 hours per year. The two smokehouses will be permitted to operate simultaneously; with total allowable emissions limitations for each smokehouse based on total sawdust usage.

The company also requests the inclusion of the representation of startup and shutdown emissions. Language in Special Condition number one and a footnote (5) on the Maximum Allowable Emission Rates Table (MAERT) have been added to the permit. Maintenance activities will be authorized either under Permit by Rule or claimed under 30 Texas Administrative Code § 116.119, De Minimis Facilities or Sources. Emissions from planned startup and shutdown activities will be authorized by this permit.

Emission Summary Table 1: Allowable Rates

Air Contaminant	Proposed Allowable Emission Rates (tpy)
PM	1.17
PM ₁₀	1.17
PM _{2.5}	1.17
VOC	0.95
NO _x	2.23
CO	1.88
SO ₂	0.01
CH ₂ O	0.02
CH ₃ COOH	0.08

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	01/21/15
Compliance period:	01/23/09-01/23/14
Site rating & classification:	27.78 Satisfactory
Company rating & classification:	27.78 Satisfactory
Has the permit changed on the basis of the compliance history or rating?	No

Public Notice Information - 30 TAC Chapter 39 Rules

Rule Citation	Requirement	
39.403	Date Application Received:	01/23/14
	Date Administratively Complete:	02/05/14
	Small Business Source?	No
	Date Leg Letters mailed:	02/05/14
39.603	Date Published:	02/12/14
	Publication Name:	Dallas Morning News

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Rule Citation	Requirement	
	Pollutants:	PM, PM₁₀, PM_{2.5}, VOC, NO_x, CO, SO₂, HAPs
	Date Affidavits/Copies Received:	02/24/14
	Is bilingual notice required?	Yes
	Language:	Spanish
	Date Published:	02/15/14
	Publication Name:	Al Dia
	Date Affidavits/Copies Received:	02/24/14
	Date Certification of Sign Posting / Application Availability Received:	03/28/14
39.604	Public Comments Received?	Yes
	Hearing Requested?	Yes
	Meeting Request?	Yes
	Date Meeting Held:	11/13/14
	Is 2nd Public Notice required?	Yes
39.419	Date 2nd Public Notice/Preliminary Decision Letter Mailed:	09/24/14
39.603	Date Published:	10/11/14
	Publication Name:	Dallas Morning News
	Pollutants:	PM, PM₁₀, PM_{2.5}, VOC, NO_x, CO, SO₂, HAPs
	Date Affidavits/Copies Received:	10/20/14
	Is bilingual notice required?	Yes
	Language:	Spanish
	Date Published:	10/12/14
	Publication Name:	Al Dia
	Date Affidavits/Copies Received:	10/20/14
	Date Certification of Sign Posting / Application Availability Received:	11/17/14
	Public Comments Received?	No
	Meeting Request?	No
	Date Meeting Held:	N/A
	Hearing Request?	No
39.421	Date RTC, Technical Review & Draft Permit Conditions sent to OCC:	05/04/15
	Request for Reconsideration Received?	TBD
	Final Action:	TBD
	Are letters Enclosed?	TBD

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Construction Permit & Amendment Requirements - 30 TAC Chapter 116 Rules

Rule Citation	Requirement	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	Yes
116.111(a)(2)(A)(i)	Are emissions from this facility expected to comply with all TCEQ air quality Rules & Regulations, and the intent of the Texas Clean Air Act?	Yes
116.111(a)(2)(B)	Emissions will be measured using the following method:	Records of sawdust usage rates, smoking time, and hours of smokehouse operation.
116.111(a)(2)(D)	Subject to NSPS?	No NSPS applies to smokehouse facilities.
116.111(a)(2)(E)	Subject to NESHAP?	No NESHAP applies due to the facility not emitting any air contaminants regulated under 40 CFR 61.
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories?	No, this facility is not subject since the facility is not one of the listed source categories regulated under 40 CFR 63.
116.111(a)(2)(H)	Is nonattainment review required?	No
	Is the site located in a nonattainment area?	Yes
	Is the site a federal major source for a nonattainment pollutant?	No
	Is the project a federal major source for a nonattainment pollutant by itself?	No
	Is the project a federal major modification for a nonattainment pollutant?	No
116.111(a)(2)(I)	Is PSD applicable?	No
	Is the site a federal major source (100/250 tons/yr)?	No, the site is not a named source and does not emit 250 tons per year or more of any regulated NSR pollutant.
	Is the project a federal major source by itself?	No
116.111(a)(2)(L)	Is the project a federal major modification?	No
	Is Mass Emissions Cap and Trade applicable to the new or modified facilities?	No, this facility is not located in the Houston-Galveston-Brazoria ozone nonattainment area.
116.140 - 141	Permit Fee: \$1982.35	Fee certification: Yes

Title V Applicability - 30 TAC Chapter 122 Rules

Rule Citation	Requirement	
122.10(13)(A)	Is the site a major source under FCAA Section 112(b)?	No
	Does the site emit 10 tons or more of any single HAP?	No
	Does the site emit 25 tons or more of a combination?	No
122.10(13)(C)	Does the site emit 100 tons or more of any air pollutant?	No
122.10(13)(D)	Is the site a non-attainment major source?	No
122.602	Periodic Monitoring (PM) applicability: N/A, this facility is not subject to Title V.	
122.604	Compliance Assurance Monitoring (CAM) applicability: N/A, this facility is not subject to Title V.	

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Request for Comments

Received From	Program/Area Name	Reviewed By/Date	Comments
Region:	4	Kimberli Fowler	No objections
City:	Dallas	N/A	No comment received by deadline
County:	Dallas	N/A	No comment received by deadline

Process/Project Description

The Columbia packing facility is a batch smokehouse facility, which is used to add flavor, color, and aroma to pork. The meat is dried, smoked, cooked, and later chilled. The system circulates air at the desired process conditions (temperature, humidity, and smoke density) over the surface of the meat. The facility pyrolyzes sawdust using smoke generators to make smoke for the smokehouse. A handheld torch is used to ignite the sawdust, which then continues to produce smoke in a low oxygen chamber. The smoke is ducted by a smoke tube into the air recirculation system in the smokehouse. Meats are smoked in a batch process. The boilers will provide heat for the smokehouse rooms.

Pollution Prevention, Sources, Controls and BACT- [30 TAC 116.111(a)(2)(C)]

Emissions from this facility are generated from the two smokehouse units and the two boilers. The boilers are limited to the use of pipeline-quality natural gas. The smokehouses are uncontrolled.

Startup and shutdown emissions are virtually indistinguishable from production emissions. Although there may be minor emissions associated with startup and shutdown, emission factors used to quantify production emissions are considered to have enough conservatism to include any incidental increases that may be attributed to startup and shutdown. In addition, emissions from planned startup and shutdown of combustion units should not result in any quantifiable hourly emissions change for products of combustion. Although there may be transitional and incidental spikes before units stabilize during startups (5 to 15 minutes), overall products of combustion are expected to be within hourly range limits for normal loads during production operations.

The special conditions address housekeeping procedures which concern the maintenance of roads and parking areas to minimize road dust emissions. The represented controls meet BACT for smokehouse facilities.

Impacts Evaluation - 30 TAC 116.111(a)(2)(J)

Was modeling conducted?	Yes	Type of Modeling:	AERMOD
Will GLC of any air contaminant cause violation of NAAQS?			No
Is this a sensitive location with respect to nuisance?			Moderate
[§116.111(a)(2)(A)(ii)] Is the site within 3000 feet of any school?			Yes
Additional site/land use information: The area surrounding the facility is a mixture of vacant, residential, and commercial. The area to the north and east is vacant land, directly to the land is primarily residential, with some commercial properties to the east and south east. The nearest receptor is a commercial building located about 400 feet to the west of the facility, immediately adjacent the property line.			

Summary of Modeling Results

The air quality analysis was determined to be acceptable by the TCEQ Air Dispersion Modeling Team for all review types and pollutants. The results are summarized below.

Minor Source NSR and Air Toxics Analysis

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Table 2. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	0.07	1021

Table 3. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	0.07	7.8
SO ₂	3-hr	0.05	25
SO ₂	24-hr	0.03	5
SO ₂	Annual	0.003	1
PM ₁₀	24-hr	4.3	5
PM _{2.5}	24-hr	4.3	1.2
PM _{2.5}	Annual	0.6	0.3
NO ₂	1-hr	9.5	7.5
NO ₂	Annual	0.4	1
CO	1-hr	10	2000
CO	8-hr	5.2	500

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The justification for selecting the EPA's interim 1-hr NO₂ and 1-hr SO₂ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO₂ and 1-hr SO₂ De Minimis levels. As explained in EPA guidance memoranda, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO₂ and 1-hr SO₂ National Ambient Air Quality Standards (NAAQS).

The applicant provided an evaluation of ambient PM_{2.5} monitoring data, consistent with draft EPA guidance for PM_{2.5}, for using the PM_{2.5} De Minimis levels. If background monitoring data shows that the difference between the PM_{2.5} NAAQS and the monitored PM_{2.5} background concentrations in the area is greater than the EPA's PM_{2.5} De Minimis level, then a proposed source with predicted impacts below the PM_{2.5} De Minimis level would not cause or contribute to a violation of the PM_{2.5} NAAQS and does not require a full impacts analysis for PM_{2.5}.

Table 4. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total Conc. = [Background + GLCmax] ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
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Pollutant	Averaging Time	GLCmax (µg/m³)	Background (µg/m³)	Total Conc. = [Background + GLCmax] (µg/m³)	Standard (µg/m³)
PM _{2.5}	24-hr	5.3	23	28.3	35
PM _{2.5}	Annual	1.18	10.8	11.98	12
NO ₂	1-hr	9.5	94.7	104.2	188

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The background concentrations for PM_{2.5} were obtained from the Dallas Convention Center monitor (EPA AIRS monitor 481130050) located at 717 South Akard, Dallas, Dallas County. The applicant used a three-year average (2011-2013) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value. The three-year average (2011-2013) of the annual concentrations was used for the annual value. This monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and the modeling included an inventory of off-property sources.

The background concentrations for NO₂ were obtained from the Dallas Hinton monitor (EPA AIRS monitor 481130069) located at 1415 Hinton Street, Dallas, Dallas County. The applicant used a three-year average (2011-2013) of the 98th percentile of the annual distribution of daily maximum 1-hr concentrations for the 1-hr value. The use of the Hinton monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and the modeling included an inventory of off-property sources.

Table 5. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m³)	ESL (µg/m³)
Acetic Acid 64-19-7	1-hr	1.3	15
Formaldehyde 50-00-0	1-hr	0.4	15

The GLCmax are located along the property line.

In summary, no violations of the NAAQS or adverse health effects are expected.

Permit Concurrence and Related Authorization Actions

Is the applicant in agreement with special conditions?

Yes

Company representative(s):

Lori Madrid

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Contacted Via:	E-mail
Date of contact:	09/23/14
Other permit(s) or permits by rule affected by this action:	No

Project Reviewer	Date	Team Leader/Section Manager/Backup	Date
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TCEQ Interoffice Memorandum

To: Joel Stanford
Mechanical/Agricultural/Construction Section

Thru: Daniel Menendez, Team Leader
Air Dispersion Modeling Team (ADMT)

From: Jeff Eads
ADMT

Date: July 22, 2014

Subject: Fourth Air Quality Analysis Audit – Columbia Packing Company Inc. (RN104007802)

1. Project Identification Information

Permit Application Number: 106009

NSR Project Number: 205185

ADMT Project Number: 4315

NSRP Document Number: 507677

County: Dallas

ArcReader Published Map: <\\\\tceq4apmgisdata\GISWRK\APD\MODEL\PROJECTS\4315\4315.pmf>

Air Quality Analysis: Submitted by Contek Solutions, June 2014, on behalf of Columbia Packing Company Inc. Additional information was received June and July, 2014.

This is the fourth modeling audit for this project, and the modeling audit was conducted to review modeling submitted to address deficiencies noted in the previous modeling audit memos (NSRP document numbers 458634, 482873, and 487112).

2. Report Summary

The air quality analysis is acceptable for all review types and pollutants. The results are summarized below.

A. Minor Source NSR and Air Toxics Analysis

TCEQ Interoffice Memorandum

Table 1. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	0.07	1021

The applicant did not properly report the GLCmax for the state property line standard in the modeling report. The appropriate value is reported.

Table 2. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	0.07	7.8
SO ₂	3-hr	0.05	25
SO ₂	24-hr	0.03	5
SO ₂	Annual	0.003	1
PM ₁₀	24-hr	4.3	5
PM _{2.5}	24-hr	4.3	1.2
PM _{2.5}	Annual	0.6	0.3
NO ₂	1-hr	9.5	7.5
NO ₂	Annual	0.4	1
CO	1-hr	10	2000
CO	8-hr	5.2	500

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The justification for selecting the EPA's interim 1-hr NO₂ and 1-hr SO₂ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO₂ and 1-hr SO₂ De Minimis levels. As explained in EPA guidance memoranda^{1,2}, the EPA believes it is reasonable as an

¹ www.epa.gov/region07/air/nsr/nsrmemos/appwso2.pdf

² www.epa.gov/nsr/documents/20100629no2guidance.pdf

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interim approach to use a De Minimis level that represents 4% of the 1-hr NO₂ and 1-hr SO₂ NAAQS.

The applicant provided an evaluation of ambient PM_{2.5} monitoring data, consistent with draft EPA guidance for PM_{2.5}³, for using the PM_{2.5} De Minimis levels. If background monitoring data shows that the difference between the PM_{2.5} NAAQS and the monitored PM_{2.5} background concentrations in the area is greater than the EPA's PM_{2.5} De Minimis level, then a proposed source with predicted impacts below the PM_{2.5} De Minimis level would not cause or contribute to a violation of the PM_{2.5} NAAQS and does not require a full impacts analysis for PM_{2.5}. See the discussion below for additional PM_{2.5} monitoring information.

Table 3. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax (µg/m ³)	Background (µg/m ³)	Total Conc. = [Background + GLCmax] (µg/m ³)	Standard (µg/m ³)
PM _{2.5}	24-hr	5.3	23	28.3	35
PM _{2.5}	Annual	1.18	10.8	11.98	12
NO ₂	1-hr	9.5	94.7	104.2	188

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The background concentrations for PM_{2.5} were obtained from the Dallas Convention Center monitor (EPA AIRS monitor 481130050) located at 717 South Akard, Dallas, Dallas County. The applicant used a three-year average (2011-2013) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value. The three-year average (2011-2013) of the annual concentrations was used for the annual value. This monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and the modeling included an inventory of off-property sources.

www.epa.gov/ttn/scram/guidance/guide/Guidance_for_PM25_Permit_Modeling.pdf

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The background concentrations for NO₂ were obtained from the Dallas Hinton monitor (EPA AIRS monitor 481130069) located at 1415 Hinton Street, Dallas, Dallas County. The applicant used a three-year average (2011-2013) of the 98th percentile of the annual distribution of daily maximum 1-hr concentrations for the 1-hr value. The use of the Hinton monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and the modeling included an inventory of off-property sources.

Table 3. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m³)	ESL (µg/m³)
Acetic Acid 64-19-7	1-hr	1.3	15
Formaldehyde 50-00-0	1-hr	0.4	15

The GLCmax are located along the property line.

3. Model Used and Modeling Techniques

AERMOD (Version 14134) was used in a refined screening mode.

The applicant noted that the project site has two boilers and that one boiler is in operation at a time. The applicant evaluated the larger boiler (EPN B2) in the modeling analysis.

A. Land Use

Medium surface roughness and elevated terrain were used in the modeling analysis. The modeled elevations are consistent with the topographic map and DEMs. The applicant ran AERSURFACE with a center point located approximately 28 kilometers northwest of the project site. The ADMT ran AERSURFACE using the center point of the project site and verified that the results would not change. The selection of medium roughness is reasonable.

B. Meteorological Data

Surface Station and ID: Dallas, TX (Station #: 3927)
Upper Air Station and ID: Fort Worth, TX (Station #: 3990)
Meteorological Dataset: 2012
Profile Base Elevation: 181.7 meters

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C. Receptor Grid

The grid modeled was sufficient in density and spatial coverage to capture representative maximum ground-level concentrations.

Since the 1-hr NO₂ and 24-hr and annual PM_{2.5} predicted concentrations are greater than de minimis, the applicant conducted a full NAAQS analysis limited to significant receptors. This approach is appropriate; however, the applicant did not evaluate one significant receptor for the 1-hr NO₂, 24-hr PM_{2.5}, and annual PM_{2.5} full NAAQS modeling demonstrations. The inclusion of the missing receptor would not significantly affect the results since the predicted concentrations near the missing receptor are less than half of the GLCmax.

D. Building Wake Effects (Downwash)

Input data to Building Profile Input Program Prime (Version 04274) are consistent with the aerial photography, plot plan, and modeling report.

4. Modeling Emissions Inventory

The modeled emission point and area source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

NO_x to NO₂ conversion factors of 0.75 and 0.8 were applied to the predicted annual and 1-hr NO_x concentrations, respectively, which is consistent with guidance for combustion sources.

Maximum allowable hourly emission rates were used for the short-term and long-term averaging time analyses.



Compliance History Report

PUBLISHED Compliance History Report for CN602495046, RN104007802, Rating Year 2014 which includes Compliance History (CH) components from September 1, 2009, through August 31, 2014.

Customer, Respondent, or Owner/Operator: CN602495046, Columbia Packing Co., Inc. **Classification:** SATISFACTORY **Rating:** 27.78

Regulated Entity: RN104007802, COLUMBIA PACKING **Classification:** SATISFACTORY **Rating:** 27.78

Complexity Points: 9 **Repeat Violator:** NO

CH Group: 14 - Other

Location: 2807 E 11TH ST DALLAS, TX 75203-2010, DALLAS COUNTY

TCEQ Region: REGION 04 - DFW METROPLEX

ID Number(s):

STORMWATER PERMIT TXR05AV65

AIR NEW SOURCE PERMITS ACCOUNT NUMBER DB0189A

AIR NEW SOURCE PERMITS PERMIT 106009

AIR NEW SOURCE PERMITS REGISTRATION 107271

Compliance History Period: September 01, 2009 to August 31, 2014 **Rating Year:** 2014 **Rating Date:** 09/01/2014

Date Compliance History Report Prepared: April 22, 2015

Agency Decision Requiring Compliance History: Enforcement

Component Period Selected: September 01, 2009 to April 22, 2015

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: TCEQ Staff Member

Phone: (512) 239-1000

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? YES
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO
- 3) If **YES** for #2, who is the current owner/operator? N/A
- 4) If **YES** for #2, who was/were the prior owner(s)/operator(s)? N/A
- 5) If **YES**, when did the change(s) in owner or operator occur? N/A

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

1 Conviction Date: 05/06/2014 Type of Action: COURTORDER

Classification: Moderate

Rqmt Prov:

Citation: 2A TWC Chapter 7, SubChapter A 7.147

Description: On December 14, 2011, discharges observed coming from a covert discharge pipe at the back of the facility were of a sufficient amount to discolor the Trinity River as well as the tributary. An investigation by the Texas Environmental Enforcement Task Force determined that this pipe had been constructed by Columbia Packing Co., Inc. as a bypass to circumvent the wastewater monitoring by the City of Dallas.

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

N/A

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

1	Date:	11/12/2014 (1205284)	CN602495046
	Self Report?	NO	Classification: Major
	Citation:	30 TAC Chapter 116, SubChapter B 116.110(a) 5C THSC Chapter 382 382.085(b)	
	Description:	Failure to obtain air quality authorization for a batch smokehouse facility	
	Self Report?	NO	Classification: Minor
	Citation:	30 TAC Chapter 106, SubChapter P 106.373(3)(A) 5C THSC Chapter 382 382.085(b)	
	Description:	Failure to register an ammonia refrigeration system with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 upon start of construction of modifications to the system	

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A

