


**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Inspection Report
Date: 03/29/2017

Fayetteville Regional Office
Mountaire Farms Inc Lumber Bridge
NC Facility ID 7800226
County/FIPS: Robeson/155

Facility Data			Permit Data				
Mountaire Farms Inc Lumber Bridge 17269 NC Hwy 71 North Lumber Bridge, NC 28357 Lat: 34d 52.0500m Long: 79d 6.2400m SIC: 2015 / Poultry Slaughtering & Processing NAICS: 311615 / Poultry Processing			Permit 09925 / R02 Issued 4/10/2013 Expires 3/31/2018 Classification Small Permit Status Active Current Permit Application(s) None				
Contact Data			Program Applicability				
Facility Contact	Authorized Contact	Technical Contact	SIP / 112r MACT Part 63: Subpart ZZZZ NSPS: Subpart Dc, Subpart IIII				
Brian Fletcher Project Engineer (910) 987-8261	Joe Moran Chief Operating Officer (302) 934-3000	Beth Sise Environmental Manager (302) 934-3094					
Comments:			Compliance Data				
Inspector's Signature:  Date of Signature: 03/29/2017			Inspection Date 03/16/2017 Inspector's Name Gregory Reeves Operating Status Operating Compliance Code Compliance - inspection Action Code FCE On-Site Inspection Result Violation				
Total Actual emissions in TONS/YEAR:							
	TSP	SO2	NOX	VOC	CO	PM10	* HAP
2012	0.8500	0.0500	3.25	0.4500	6.63	0.4600	---
* Highest HAP Emitted (in pounds)							
Five Year Violation History:							
<u>Date</u>	<u>Letter Type</u>	<u>Rule Violated</u>				<u>Violation Resolution Date</u>	
04/18/2016	NOV	Avoidance 2D .2100 Risk Management Program				05/02/2016	
Performed Stack Tests since last FCE: None							
<u>Date</u>	<u>Test Results</u>	<u>Test Method(s)</u>				<u>Source(s) Tested</u>	

1. DIRECTIONS TO FACILITY:

From FRO, take Gillespie Street south to US Hwy 301. Follow Hwy 301 approximately 9.5 miles south, then turn right on NC 71. Follow NC 71 approximately 8.8 miles, through Parkton and Lumber Bridge. The facility is on the right side of the road.

2. SAFETY CONSIDERATIONS:

Standard FRO safety gear, including hard hat, safety shoes, safety glasses, and hearing protection. There are numerous moving conveyors, and most areas are very wet and slippery. There are also several fairly noisy areas, including compressor rooms and boiler area. Outside the building there are trucks, forklifts, and other traffic hazards. Maintenance activities include grinding, cutting, and welding. The facility utilizes anhydrous ammonia in their refrigeration systems, so potential leaks of anhydrous ammonia could pose a substantial chemical hazard.

3. FACILITY DESCRIPTION:

Mountaire – Lumber Bridge is one of the largest chicken processing facilities in the world. They produce more chicken by weight than any other facility in the US. The facility processes about 2.5 million chickens per week, and has almost 3,000 employees. The facility processes chickens on two shifts each day, 7 days per week. Although there are numerous automated processes, and more automation is planned, this remains a highly labor intensive operation, with lots of hand cutting, trimming, and sorting. The third shift of each day is devoted solely to cleanup and sterilization of the equipment and preventative maintenance in preparation for the next day's processing. Live chickens are trucked to the facility from local farms. The live chickens are hung on overhead conveyors, stunned, killed, de-feathered, chilled, eviscerated, and then dismembered. Products from the plant include deboned breasts and breast tenders, wings, drumsticks, gizzards, livers, and feet (the feet, or "paws", are marketed to the Asian countries). The products are packaged into plastic bags, then boxed for shipment. Waste products are sent to rendering plants for use as animal feed. Waste water is treated in dissolved air flotation (DAF) units to remove solids, and sent to a large aeration pond. Wastewater from the aeration pond is pumped to numerous spray fields, where it is sprayed onto the fields for disposal. Hydrogen peroxide is added as needed to the wastewater prior to spraying on the fields for control of odor. The amount of waste water that can be sprayed onto a field is limited by permit, based on overall liquid loading and nitrogen content on an annual basis.

The facility is classified as Small. The facility operates one small packaged natural gas/#2 fuel oil-fired boiler with no controls (they are permitted for two boilers, but the second has yet to be installed) and a Live Hang Area Ventilation System with Venturi scrubber control. They also have 2 natural gas-fired hot water heaters, a natural gas-fired 1.67 mmBtu/hr boiler, a group of rooftop evaporative condenser units, and three (3) emergency generators (all insignificant activities).

The facility is subject to the Clean Air Act Section 112(r) written RMP requirements due to the amount of anhydrous ammonia in their four (4) refrigeration systems. In 2009, an employee fatality resulted from an anhydrous ammonia leak during maintenance operations.

4. PERMITTED EQUIPMENT:

The permitted equipment and control devices are as follows:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-1 (NSPS)	Natural Gas / No. 2 Fuel Oil-Fired Boiler (21 mmBtu/hr maximum heat input) OPERATING, 0 VE		N/A
ES-2 (NSPS)	Natural Gas / No. 2 Fuel Oil-Fired Boiler (21 mmBtu/hr maximum heat input) NOT YET INSTALLED		
ES-3	Live Hang Area Ventilation System OPERATING, 0 VE	CD-1	Venturi-type scrubber, 25,000 acfm air flow

The Insignificant/Exempt Activities at this facility are as follows:

Source	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
IES-2 Natural Gas-Fired Kemcos T100 Water Heater (30 mmBtu/hr) NOT OPERATING	2Q .0102 (c)(2)(B)(ii)	Yes	Yes
IES-3 Natural Gas-Fired Kemcos T100 Water Heater (30 mmBtu/hr) NOT OBSERVED	2Q .0102 (c)(2)(B)(ii)	Yes	Yes
IES-4 237 HP Diesel-fired Emergency Generator (155 KW Electrical Output) NSPS Subpart III NESHAP Subpart ZZZZ NOT OPERATING	2Q .0102 (c)(2)(B)(v)(III)	Yes	Yes
IES-5 Group of Rooftop Evaporative Cooling Tower/Condenser units used in the Refrigeration Systems OPERATING	2Q .0102 (c)(2)(E)(i)	No	Yes
IES-6 158 HP Diesel-fired Emergency Generator (100 KW Electrical Output) NSPS Subpart III NESHAP Subpart ZZZZ NOT OPERATING	2Q .0102 (c)(2)(B)(v)(III)	Yes	Yes
IES-7 Natural gas-fired boiler 1.67 mmBtu/hr maximum heat input (40 HP) NOT OPERATING	2Q .0102 (c)(2)(B)(ii)	Yes	Yes

5. INSPECTION SUMMARY:

On 03/16/2017 Jeff Cole and I, Greg Reeves, of FRO visited the facility to conduct an air permit compliance inspection.

We met initially with Robert Jackson, Wastewater Manager. We noted some fairly intense odors as we approached the waste treatment retention pond area. We discussed briefly the recent Objectionable Odor Determination letter sent to the facility from RCO. Mr. Jackson stated that the corporate engineers were reviewing the letter and investigating options for compliance with the odor rules, but stated that he did not know what types of changes the corporate personnel were leaning toward. However, in the meantime, the plant has increased the amount of hydrogen peroxide injected into the wastewater from 3,500 lbs per day to 5,600 lbs per day to help alleviate the odors.

We met the new Utilities Manager, Roderick Wilkins, at the wastewater system and proceeded to the maintenance offices. We explained that the reason for the visit was an air quality compliance inspection and a brief follow-up inspection for the 112(r) program requirements. Facility contacts have changed. We requested that Mr. Wilkins send an email to Greg Reeves with the new contact information. This will be incorporated into the IBEAM facility database when received. We reviewed the air permit with Mr. Wilkins, noting the operations, recordkeeping, and reporting requirements. Mr. Wilkins then led us on a tour of the boiler area, the rooftop scrubber operation, the rooftop anhydrous ammonia piping areas, and the emergency generator operations.

It was noted during the inspection tour that the facility has replaced one of the rooftop ammonia condensers. This unit has been placed into operation, but the installation is not yet completed. An access platform for overhead piping and valves has not yet been installed, and ammonia piping painting and labeling has not been completed. This unit should not yet be in operation unless all items of the installation have been completed. Mr. Wilkins stated that both an MOC and a PSSR had been completed on this installation prior to operation.

6. SPECIFIC PERMIT CONDITIONS:

- A. 15A NCAC 2D .0202: PERMIT RENEWAL AND EMISSION INVENTORY REQUIREMENT.** This requires the facility to submit a permit renewal application and a completed facility emission inventory at least 90 days prior to the expiration date of the permit.

APPEARS IN COMPLIANCE – The latest renewal application and emission inventory was submitted on 04/01/13, which was more than 90 days prior to the expiration date of 06/30/13. The current permit was issued on 04/10/2013 and expires on 03/31/2018. The next permit renewal and emission inventory will be due no later than 12/31/17.

- B. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS.** This limits the particulate emissions from the NSPS-subject boilers to no more than 0.41 lb/mmBtu of heat input.

APPEARS IN COMPLIANCE – The boiler (ES-1) is currently combusting natural gas, and has not yet been operated with #2 fuel oil. The AP-42 emission factor for natural gas is 0.007 lb/mmBtu and for #2 fuel oil is 0.0236 lb/mmBtu. Therefore, as long as the facility only combusts natural gas or #2 fuel oil, they should remain in compliance. I observed zero (0) VE from the ES-1 boiler stack emissions. Boiler ES-2 has not yet been installed.

- C. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES.** This limits the particulate emissions from the processes to no more than the following calculations:

$$E = 4.10 * (P)^{0.67} \text{ for } P \leq 30 \text{ tons/hr, or}$$
$$E = 55 * (P)^{0.11} - 40 \text{ for } P > 30 \text{ tons/hr}$$

APPEARS IN COMPLIANCE – The particulate emissions from the facility processes are inherently extremely low. The original permit application review indicated expected compliance with this limit assuming operation as originally permitted. The operation of the facility has not been changed since the original permit.

- D. 15A NCAC 2D .0516: SULFUR DIOXIDE CONTROL REQUIREMENT.** Limits SO₂ emissions to no more than 2.3 lbs/mmBtu heat input to the fluid bed dryers.

APPEARS IN COMPLIANCE – The facility is permitted to combust only natural gas and #2 fuel oil. The facility currently uses natural gas, and has not yet fired the boiler with #2 fuel oil. The AP-42 emission factor for natural gas is 0.001 lb/mmBtu and for #2 fuel oil with a sulfur content of 0.5% by weight is 0.51 lb/mmBtu. Therefore, as long as the facility combusts only these fuels, it should remain in compliance.

- E. 15A NCAC 2D .0521: VISIBLE EMISSIONS CONTROL REQUIREMENT.** This is a facility-wide limit of no more than 20% opacity from any source.

APPEARS IN COMPLIANCE – During the inspection, I observed no visible emissions at the boiler stack or the live hang area ventilation system scrubber exhaust. The emergency generators, hot water heaters, and exempt boiler were not operating during the inspection.

- F. 15A 2D .0524 NEW SOURCE PERFORMANCE STANDARDS** – The boiler is subject to NSPS Subpart Dc., which limits sulfur content in the #2 fuel oil to no more than 0.5% by weight. Notifications are required for construction commencement and source startup. Amounts of fuels combusted are required to be recorded, and fuel oil supplier certifications are required to be kept on site. A semi-annual report is required.

APPEARS IN COMPLIANCE - Construction and startup notifications have been received by FRO for boiler #1 (ES-1). Construction commencement was 07/24/08, and source startup was 12/11/08. The second boiler (ES-2) has not yet been constructed. No #2 fuel oil has been combusted as yet, therefore no fuel oil supplier certifications are required for the boiler fuel oil. Records of natural gas usage were available and current. The latest semi-annual report was received at FRO on 01/12/17.

- G. 15A NCAC 2D .0535: NOTIFICATION REQUIREMENT.** This is a requirement to notify DAQ if any excess emissions occur.

APPEARS IN COMPLIANCE – Mr. Wilkins stated that no excess emission events have occurred, and thus no notification has been necessary.

- H. 15A NCAC 2D .0540: FUGITIVE DUST CONTROL REQUIREMENT.** This is a facility-wide requirement for no dust complaints or excessive fugitive dust emissions beyond the facility boundaries.

APPEARS IN COMPLIANCE – Mr. Wilkins stated that the facility has not received any fugitive dust complaints. Almost all of the access and haul roads and entrance roads are paved, so there should be no difficulty in complying with this stipulation. We observed no excess visible emissions beyond the property boundaries and no dust accumulations beyond the property boundaries.

- I. 15A NCAC 2D .0611: SCRUBBER REQUIREMENTS.** Requires that the facility conduct inspection and maintenance per the manufacturer's recommendations, and an annual internal inspection of the scrubber. In addition, two weeks following initial startup and startup following major maintenance, shutdown for checking nozzle plugging is required.

APPEARS IN COMPLIANCE – The scrubber is inspected monthly, and all parts of the scrubber that are accessible are inspected during each of these inspections. Therefore, each of these inspections is the equivalent of an annual internal inspection. Facility records indicated that the latest internal inspection of the scrubber was conducted on 03/12/17.

- J. 15A 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS** – The facility is required to prevent objectionable odorous emissions beyond the property boundaries.

COMPLIANCE NOT DETERMINED – The facility has a history of numerous odor complaints from the neighboring community, and was recently issued a letter denoting an Objectionable Odor Determination from RCO. We detected some fairly high-intensity odors near the wastewater retention pond during the inspection.

NOTE: On 02/15/17 the facility was issued a Determination of Objectionable Odor, which requires the facility to implement maximum feasible controls (MFCT) for the control of odorous emissions. The facility is required to complete the determination process and submit the determination process along with a permit application for MFCT and a compliance schedule to DAQ within 180 days of receipt of the notification. Within 18 months after receiving the notification the company is required to install and begin operation of the controls.

K. 40 CFR Part 68 “ACCIDENTAL RELEASE PREVENTION REQUIREMENTS: RISK MANAGEMENT PROGRAMS UNDER THE CLEAN AIR ACT, SECTION 112(r)”:

APPEARS IN VIOLATION - The facility appears to have done a large amount of work on the rooftop anhydrous ammonia piping, including labeling of piping and replacement of pipe insulation and insulation covers since the last facility inspection in March of 2016. The deficiencies noted during that 2016 inspection appear to have been addressed.

However, the facility just recently replaced one of the rooftop condenser units and placed the new unit in operation. During this inspection, it was observed that the new condenser piping has not yet been fully painted, nor have the appropriate pipe labels been installed. An access platform for the valves located at the top of the condenser has not yet been completed, so there is no adequate access for personnel to reach the water shutoff valves. While this does not appear to be a major safety concern, all of the mechanical installation, pipe labeling, and valve labeling should have been completed as part of the project PRIOR to ever starting the unit. The Management of Change (MOC) process and Pre-Startup Safety Review (PSSR) process, as required under 40 CFR 68, were not adequately implemented prior to startup of the unit.

On 03/20/17, Mr. Wilkins was requested via email to send copies of the MOC and PSSR for this new condenser to Greg Reeves.

L. 40 CFR 60 Subpart III and 40 CFR 63 Subpart ZZZZ (Applicability to Insignificant Activities IES-4 and IES-6 Emergency Generators): Requires the use of ultra-low sulfur containing fuel oil (< 15 ppm sulfur by weight), records of maintenance, and hours of use and purpose for operation of the emergency engines. Emergency engines may be run for no more than 100 hours per year, of which 50 may be for non-emergency use.

APPEARS IN COMPLIANCE – The facility has an outside maintenance organization conduct the preventative maintenance for this unit. Records of the maintenance are kept in the maintenance offices. The generators are tested once per week on Saturday mornings for a period of 20 minutes. Fuel used in the engine is on-road diesel, ultra-low sulfur content (< 15 ppm sulfur). The nameplates on the engines indicate conformance to EPA emission limits for the engine class and date of manufacture of each engine.

Note that there is a third emergency generator installed at the facility. Mr. Wilkins will email information on all three generators to Greg Reeves for inclusion in the permit, including KW and HP as well as location of each generator. A notation will be entered on the facility pink sheet for the addition of the third generator on the insignificant/exempt activity listing.

M. 15A 2Q .0317: AVOIDANCE CONDITION FOR AREA SOURCES SUBJECT TO 40 CFR 63 SUBPART JJJJJ (6J) – The facility avoids the requirements of Subpart 6J by combusting only gaseous fuel, and using liquid fuels only during periods of gas curtailment, gas supply interruptions, startups, or for periodic testing on liquid fuel (periodic testing not to exceed a combined total of 48 hours during any calendar year.)

APPEARS IN COMPLIANCE – The facility combusts only natural gas in the boiler, and has not combusted any fuel oil since startup of the boiler.

7. NON-COMPLIANCE HISTORY SINCE 2010:

- 04/18/16 NOV issued for deficiencies in the 112(r) RMP for pipe labeling and insulation.
- 02/15/17 Determination of Objectionable Odor issued for numerous objectionable odor complaints.

A number of odor complaints have been received from local residents in the plant vicinity since 2010 due to wastewater spray field activity. An anhydrous ammonia leak in the amount of 91 pounds was reported to EPA on 07/06/11.

8. CONCLUSIONS / RECOMMENDATIONS:

Mountaire Farms Inc Lumber Bridge appeared to be **IN VIOLATION** during the 03/16/17 inspection. See section 6.K above for details.

Pink Sheet Items: A note has been added to the pink sheet to add the third emergency generator to the insignificant/ exempt activity listing.

FOLLOW-UP 03/27/17:

Mr. Wilkins sent an email to Greg Reeves with information on the emergency generators and updated facility contacts. However, further clarification was requested as there was conflicting information regarding the size of the generator engines.

FOLLOW-UP 03/30/17:

Greg Reeves visited the facility and met with facility representatives to review the MOC for the replacement of the condenser. It appeared evident that the replacement of the condenser was a “replacement in kind”, and therefore did not require an MOC or PSSR under the 112r regulations. However, the unit had been placed into operation prior to all required piping labeling and safety access platforms had been installed. Facility personnel indicated that additional work was scheduled for the weekend of 4/1/17 and they expected that all work would be completed to bring the operation into compliance.

RECOMMENDATION:

Issue NOV to Mountaire Farms Inc Lumber Bridge for failure to properly label the anhydrous ammonia piping associated with the new condenser per the facility-adopted recommendations of IAR.