HAZARDOUS WASTE SECTION - COMPLIANCE BRANCH
FILE TRANSMITTAL & DATA ENTRY FORM

Your Name: Bobby Nelms

Facility ID Number: NCS000002306

Facility Name: S&W Ready Mix Concrete

Document Group: Inspection/Investigation (I)

Document Type: I - Compliance Evaluation Inspection (CEI)

File Description/Comments: Multimedia, No Violations

Date of Document: 4/13/2016

Author(s) of Document: Bobby Nelms

Inspector ID #: NC036

Suborganization: Eastern Region

County (if not on report): Brunswick

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE SECTION

COMPLIANCE EVALUATION INSPECTION REPORT

1. **FACILITY INFORMATION:**
   Facility Name: S&W Ready Mix Concrete

   EPA ID Number: NCS000002306

   Status of Facility: CESQG

   Facility Location: 1619 N. Howe Street, Southport, NC 28461
   County: Brunswick

   Telephone Number: (910) 457-7532

2. **FACILITY CONTACT:** Hank Gay

3. **INSPECTION PARTICIPANTS:** Hank Gay - S&W, Trentt James and Brian Lambe - DEMLR, Scott Sanders - DAQ, Tom Tharrington - DWR, and Bobby Nelms - DWM

4. **DATE OF INSPECTION:** April 13, 2016

5. **DATE OF LAST INSPECTION:** Never inspected by DWM

6. **PURPOSE OF INSPECTION:** Announced audit to determine compliance with regulations described at 40 CFR 261, 262, 265, 268, 273 and 279.

7. **FACILITY DESCRIPTION:** The Southport plant has the ability to produce 65 yards of concrete per day and runs one truck.

   Distance to closest residence: Approximately 20 meters from the property line
   Distance to closest off-site well(s): Unknown
   Water supply: Municipal
   Description of wells on-site: None
   Sewage: Municipal
   Operating shifts: One shift five days/week
   Number of employees: Two
   Size of facility:

7. **WASTE STREAMS INCLUDE:**
   Hazardous waste streams include – None

   Non-hazardous waste streams include – Universal waste lamps

   Non-RCRA regulated waste streams include – None

8. AREAS OF REVIEW AND INSPECTION:

- **Manifests**: N/A
- **Satellite Accumulation Areas:** N/A
- **Storage Areas:** N/A
- **Universal Waste:** The facility occasionally generates used lamps. There were none on site during the inspection but I informed Mr. Gay of the rules regarding containerizing, labeling, and dating of the used lamps. Mr. Gay said that in the past lamps had been properly sent off for recycling and that they were not disposed.
- **Used Oil:** None. All maintenance is done at the central facility in Clinton.

9. ACTION ITEMS: During the inspection I observed seven small containers near the concrete barrier form area. Two of the containers contained cleaners (muriatic acid and an industrial cleaner) which were being used to clean trucks. The other containers held a petroleum ingredient used as a release agent for the concrete forms. Mr. Gay stated he would deal with the material (i.e put it in its appropriate storage area), none of which was waste.

10. RECOMMENDATIONS/COMMENTS/ACTION ITEMS: None

Date: April 21, 2016

Robert K. Nelms
Environmental Senior Specialist, NCDEQ

Environmental Quality

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

April 18, 2016

MR. HANK GAY
S & W READY MIX
PO BOX 872
CLINTON, NC 28329

Subject: **Multimedia Compliance Inspection**
S & W Ready Mix – Southport Plant
Brunswick County

Dear Permittee:

Department of Environment and Natural Resources staff conducted a multimedia compliance inspection of S & W Ready Mix – Southport Plant on April 13, 2016 for permitted and/or other activities administered by the following Divisions:

Division of Air Quality(DAQ)	**Division of Energy, Mineral, and Land Resources (DEMLR)** **NCG140186**	**Division of Water Resources (DWR)**	**Division of Waste Management (DWM)**

We hope that you have enjoyed the benefit of our initiative to provide a single inspector capable of handling multiple areas of environmental compliance at your facility. The results of each applicable inspection area and any associated response actions or necessary corrective measures are detailed in the Division specific areas of the attached report. If there are no notes or comments under each Division header, you may assume compliance with that particular Division's rules and regulations at the time of inspection. Should violations be noted in the attached report, you may receive separate enforcement related correspondence in addition to this report.

If you have any questions regarding this multimedia inspection, please contact the Wilmington Regional Office at (910) 796-7215 and ask to speak with the appropriate staff. Thank you for your cooperation.

Encl: NPDES Stormwater Inspection Report

cc: All applicable Division Supervisors

DAQ WIRO Files
DEMLR WIRO Files
DWR WIRO Files
DWM WIRO Files

NORTH CAROLINA DIVISION OF AIR QUALITY

Inspection Report
Date: 04/21/2016

Wilmington Regional Office
S & W Ready Mix Concrete - Southport
NC Facility ID 1000003
County/FIPS: Brunswick/019

Facility Data

S & W Ready Mix Concrete - Southport
1619 North Howe Street
Southport, NC 28461
Lat: 33d 56.3793m **Long:** 78d 1.7317m
SIC: 3273 / Ready-Mixed Concrete
NAICS: 32732 / Ready-Mix Concrete Manufacturing

Permit Data

Permit 04368 / R10
Issued 8/14/2015
Expires 7/31/2023
Classification Small
Permit Status Active
Current Permit Application(s) None

Program Applicability

SIP

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Dan Edens Area Manager (910) 443-1272 Steven Naylor Plant Manager (910) 457-7533	Hank Gay Environmental Director (910) 284-2664	Hank Gay Environmental Director (910) 284-2664

Comments:
Inspect facility as scheduled.

Inspector's Signature:
Scott Sanders

Date of Signature:
4/21/16

Compliance Data

Inspection Date 04/13/2016
Inspector's Name Scott Sanders
Operating Status Operating
Compliance Code Compliance - inspection
Action Code FCE
On-Site Inspection Result Compliance

Total Actual emissions in TONS/YEAR:

	TSP	SO2	NOX	VOC	CO	PM10	* HAP
2014	0.4300	---	---	---	---	0.2100	---
2009	6.78	---	---	---	---	1/97	---

***** Highest HAP Emitted (in pounds)

Five Year Violation History: None

Date	Letter Type	Rule Violated	Violation Resolution Date

Performed Stack Tests since last FCE: None

Date	Test Results	Test Method(s)	Source(s) Tested

Directions

Turn right onto Cardinal Drive Extension as you leave the WiRO and continue for 0.2 miles. Turn left onto Market Street and continue for 0.4 miles and then turn right onto Martin Luther King Jr. Parkway (US-74). Continue on the parkway for 5.4 miles. Take ramp onto Isabelle Holmes Bridge (US-74 W) toward Whiteville/NC-133 S. Turn left onto US Highway 421 N (US-17/US-74/US-421). Continue for approximately one mile and then turn slightly right and take ramp onto US-76 W (Andrew Jackson Hwy.) toward US-17 S/US-74 W/NC-133 S/Brunswick County Beaches. Continue for approximately two miles and take the first Leland exit toward NC-133 S/Southport/Oak Island. Turn left onto River Road SE (NC-133) at the stoplight located at the bottom of the exit ramp and follow for approximately twenty-three (23) miles to Southport. Note that NC-133 eventually merges with NC-87 near Southport. Turn right onto North Howe Street (NC-211). The concrete plant is located 0.1 miles on the left.

Compliance History

This plant has a history of operating in compliance with DAQ rules. This assessment is based on a review of the office file documents and IBEAM module data associated with this source. The review revealed that no (zero) NOD's or NOV's have been issued during the past 5 years (time period reviewed).

Inspection Contact

Scott Sanders of NCDAQ WiRO contacted Hank Gay, Environmental Director, who provided escort and documentation during the onsite inspection. The purpose of the inspection was to perform a multi-media inspection. Team members assisting with the inspection included Trentt James (DEMLR), Brian Lambe (DEMLR), Robert Nelms (DWM), and Tom Tharrington (DWR).

The contents of the air permit (4368R10), applicable rules, and maintenance procedures were discussed in detail and Mr. Hank Gay provided requested documentation including the onsite copy of the air permit for reference.

The facility contact information in IBEAM (listed in this report header) was verified during the inspection.

GACT/RICE Generators/Engines Status

No stationary emergency or non-emergency generators are located onsite; therefore, NSPS Subpart IIII and JJJJ, and NESHAP Subpart ZZZZ are not applicable.

Concrete-Batch Process Description

This plant produces what is defined as ready-mix concrete mixture through a batch process at this site.

The maximum rated production capacity for this plant is 65 cubic yards per hour, which is documented in the permit (4368R10). According to records, typical production levels are approximately thirty (30) yards of cement per day. Operations begin as early as 7:00 am and typically conclude no later than 6:00 pm five (5) days per week.

The majority of the concrete produced at this plant goes to the Sunny Point Terminal, the Duke Energy Brunswick Nuclear Power Plant, and to local DOT bridge work sites. This facility doesn't produce concrete for many residential customers, although it would like to.

Typical production equipment consists of dozers, front end loaders, aggregate bins, conveyors, cement storage silos, fly ash storage silos, weigh hopper, and transport trucks equipped with mixers. This facility operates two (2) trucks out of this site.

Concrete batch plant operations primarily consist of silo loading, weigh hopper loading (cement and flyash), aggregate transfer by conveyors, and mixer (truck loading activities) loading.

A concrete batch plant stores, conveys, measures, and discharges the ingredients for making concrete according to a set recipe.

This involves the transfer of sand, aggregates, cement, and flyash into transit-mix trucks.

Cement and flyash are transferred from silos to the weigh hopper as a conveyor transfers sand and aggregates into a discharge area located below the weigh hopper.

The ingredients for making concrete (sand, aggregates, cement, flyash, etc.) are discharged into a transit mixer truck by gravity through the discharge area, which is partially enclosed.

The discharge area is equipped with a flexible boot (hose or chute) that transfers the ingredients into the truck mixer.

The ingredients are then mixed with water to form concrete as the trucks travel to construction sites.

Process Pollutants and Emissions

The primary air pollutant associated with concrete batch plants is particulate matter (PM-10 and TSP).

Onsite vehicle and equipment movement and wind erosion from stockpiled materials can generate non-process fugitive dust emissions during dry weather conditions. Sprinklers will operate on the aggregate stockpiles during dry weather. The entry road was observed somewhat wet upon arriving at the facility. Mr. Hank Gay indicated that the facility waters the plant driveway during the day using mixer trucks. The yard is watered daily with a front end loader.

Particulate emissions are generated during the pneumatic transfer of material (cement and flyash) from transport truck to storage silo. The emissions occur as the silo fills and air is displaced through the bagfilter.

Fugitive dust emissions are generated as sand and aggregates are conveyed from storage into transit-mix trucks and as flyash and cement are transferred from silo to weigh hopper into transit-mix trucks.

When the materials (aggregates, cement, and flyash, etc.) are discharged into the truck mixer, fugitive dust is generated from what this writer describes as blowback emissions. The mixer is rotated slowly and is designed with metal flights for mixing purposes. This creates an environment (air movement) that basically blows or forces dust out of the truck mixer into the ambient air around the unsealed edge of the line (hose, chute, or boot) that is used to transfer cement, flyash, and aggregates into the mixer.

The fugitive dust emissions associated with blowback phenomena appear to be much heavier during periods of moderate to heavy winds. Visible emissions can be excessive unless the mixer truck is equipped with a hooded or partial enclosure of some type with a vacuum point, which is the case for this plant. Even with an enclosure, visible emissions in the form of fugitive dust will still occur to some degree during periods of moderate and heavy wind.

Although not listed in the permit, the facility has installed an enclosure, which partially covers the truck mixer when loading sand, aggregates, cement, and flyash. This enclosure appears to be well designed and is equipped with two vacuum lines that are associated with the CD-1 bagfilter (central dust collection system). This results in higher control efficiency for collecting the fugitive dust generated during truck load-out activities.

Permit Information

Permit No. 4368R10 was issued to S&W Ready Mix Concrete for the operation of the following:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
One Truck Mix Plant; 65 cubic yard/hr. maximum capacity.			
ES-1	one flyash storage silo	CD-1	one ground level central dust collector (1,099 square feet of filter area)
ES-2	one cement storage silo	CD-1	one ground level central dust collector (1,099 square feet of filter area)
ES-3	One weigh hopper/batcher	CD-1	one ground level central dust collector (1,099 square feet of filter area)

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-4	one truck load-out process	CD-1	one ground level central dust collector (1,099 square feet of filter area)

Insignificant/Exempt Sources

There are no insignificant and/or exempt sources listed in Permit No. 4368R10 by table or page. None were observed onsite during the inspection.

Recent Permit Activity

Hank Gay with S&W Ready Mix Concrete Company recently requested a permit renewal for this facility. The Permittee did not request any changes or modifications for the renewed permit. The application was accompanied by the Emissions Inventory Report for calendar year 2014 (attached). The receipt of the application was July 3, 2015. An acknowledgement letter was sent to Hank Gay on July 7, 2015 by Dean Carroll indicating the application package was complete and on time. The air permit was then renewed on August 14, 2015.

DAQ Rules

Permit No. 4368R10 references the following rules.

15A NCAC 2D .0202, "PERMIT RENEWAL AND EMISSION INVENTORY REQUIREMENT"
15A NCAC 2D .0515, "PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES"
15A NCAC 2D .0521, "CONTROL OF VISIBLE EMISSIONS"
15A NCAC 2D .0535, "EXCESS EMISSIONS REPORTING AND MALFUNCTIONS"
15A NCAC 2D .0540, "PARTICULATES FROM FUGITIVE DUST EMISSION SOURCES"
15A NCAC 2D .0611, "MONITORING EMISSIONS FROM OTHER SOURCES (FABRIC FILTER REQUIREMENTS)"

Control System Maintenance

Bagfilter maintenance and recordkeeping requirements are addressed in Condition No A (7) of Permit No. 4368R10.

The facility is required to conduct one annual internal inspection of the central dust collector system (bagfilter) in addition to performing the periodic inspections and maintenance as recommended by the equipment manufacturer along with maintaining a record of all maintenance work. The facility has created an internal inspection log. Internal inspections are being conducted at least annually, but more importantly when problems are noted.

The bagfilter is monitored visually on a daily basis when operating and a log of the opacity and magnehelic gauge reading is recorded in a logbook each day. A bagfilter maintenance inspection is conducted monthly. The March 2016 inspection checklist is attached. The checklist was compared to the manufactures recommendations contained in the bagfilter manual (also kept on site) and appeared sufficient to accomplish the manufactures recommended maintenance/inspection schedule. A copy of the most recent monthly inspection checklists are also attached.

Repairs are made when and if necessary. There is a small filter inventory that is kept onsite. Complete bagfilter equipment inventories are accessible to the facility overnight through the Clinton and Wilmington corporate offices.

The CD-1 central dust collection system, which is relatively new, was placed into operation on December 14, 2010. The facility reported that 33 bags were changed in the dust collector on February 27, 2015. The dust collector contains three (3) rows of bags, twelve (12) bags per row – for a total of 36 bags. The facility also reported that it removed all build up inside the duct work for the entire system on January 20, 2016.

The dust collector is set to automatically clean when the magnehelic gauge reaches 4 inches using a pulse jet set at 90-100 psi. Each pulse lasts 100 milliseconds and the entire cleaning cycle takes 10-12 seconds.

No trucks were observed loading during the inspection. The dust collector was operating however. The magnehelic gauge was observed and indicated 4 inches of water, which is within the manufactures recommended range. The automatic cleaning cycle was heard pulsing (operating) during the inspection.

Mr. Hank Gay, Environmental Director, also indicated that the facility greases the two fittings on the dust collector once per week.

Compliance with the annual internal inspection, maintenance, and recordkeeping requirements is being achieved.

Line Delivery Pressure Monitoring - Cement and Flyash

S&W monitors the line pressure associated with the pneumatic transfer of cement and flyash from a tanker truck.

Excess delivery pressure (above 12 psi for cement and 10 psi for flyash) can result in filter failure due to the increased line velocity. Typical pressures during loading are 7 psi.

Excessive velocity or delivery pressure can result in silo overfilling which allows the stored material to be pulled or vacuumed into the associated control device damaging the unit and reducing efficiency.

Delivery pressure, if excessive, also has the potential to damage the silo product supply line because such pressure can have a sandblasting affect that creates holes and leaks.

S&W utilizes their own drivers to deliver cement and flyash. Each delivery takes approximately one (1) hour to transfer 25 tons. In addition to the other safeguards, overfill alarms can automatically shut down the loading process. Cement is currently delivered approximately one (1) time per week and flyash is delivered approximately three (3) times per month. Neither silo was being loaded during the inspection.

Fugitive Dust Control Requirements

15A NCAC 2D .0540, "Particulates from Fugitive Dust Emissions Sources" is applicable to concrete batch plants and this rule is in Permit No. 4368R10 (Condition A 6). The rule definition of a substantive complaint for fugitive dust has been discussed with plant personnel.

Dust control of the plant entrance area (access road) is maintained by water application with a mixer truck and the yard is maintained by water application with a front end loader during dry weather conditions and at a minimum of once per day.

The facility is also using 57 stone instead of crush and run on the main plant entrance road in an effort to further reduce fugitive dust. 57 stone is much harder than crush and run and has a much larger surface area, which makes its less dusty.

DAQ staff cannot apply the requirements of 2D .0540 unless substantive fugitive dust complaints are received, which has not occurred.

It should be noted that a new subdivision has recently been developed immediately behind the facility. The roof of a new home can be seen directly behind the rear fence line of the facility. The facility constructed a new concrete wall in March 2015 along the back of the property to provide more privacy from the nearby houses.

Miscellaneous Information

The facility monitors silo inventories through computer on a continuous basis.

In addition, silo product measurements are also conducted monthly. This prevents silo overfilling and damage that can result as a result of computer product tracking error.

The fly ash silo has a product capacity of 100,000 pounds. 80,000 pounds is never exceeded.

The cement silo has a product capacity of 200,000 pounds. 180,000 pounds is never exceeded.

Emissions Summary

Facility Total CY *2014* Emission Summary recorded in IBEAM is as follows:

PM (TSP) 0.4300 Tons
PM10 0.2100 Tons

The facility produced 15,633 cubic yards of concrete in CY 2014.

Inspection Summary

A central dust collection system (CD-1 bagfilter), as previously described, controls the particulate emissions generated in this concrete plant batching process as follows:

- The emissions generated during cement and flyash silo loading.
- The emissions generated during the transfer of cement and flyash into the weigh hopper.
- The emissions generated during the transfer of sand, aggregates, cement and flyash from the weigh hopper and conveyor discharge area into the mixer truck.

CD-1 and the entire plant appeared to be well maintained. All required inspection and maintenance logs were being maintained.

I did not observe any fugitive dust emissions migrating beyond the property line from non-process dust emission sources (primarily the movement of equipment across the premise) during the inspection.

The air permit does not require quarterly, semi-annual, or annual reporting.

S&W Ready Mix Concrete – Southport was operating in compliance with Air Quality regulations at the time of the inspection.

Compliance Inspection Report

Permit: NCG140186 **Effective:** 07/01/11 **Expiration:** 06/30/16 **Owner :** S & W Ready Mix Concrete Company LLC

SOC: **Effective:** **Expiration:** **Facility:** Southport - North Howe Street Facility

1619 N Howe Rd

County: Brunswick

Region: Wilmington

Southport NC 28461

Contact Person: Gary Hall **Title:** **Phone:** 910-254-1331

Directions to Facility:

System Classifications:

Primary ORC: **Certification:** **Phone:**

Secondary ORC(s):

On-Site Representative(s):

Related Permits:

Inspection Date: 04/13/2016 **Entry Time:** 01:30PM **Exit Time:** 02:30PM

Primary Inspector: Elsie C James **Phone:**

Secondary Inspector(s):

Brian P Lambe Phone :

Tom Tharrington Phone :

Reason for Inspection: Routine **Inspection Type:** Compliance Evaluation

Permit Inspection Type: Ready Mix Concrete Stormwater/Wastewater Discharge COC

Facility Status: ■ Compliant ☐ Not Compliant

Question Areas:

■ Storm Water

(See attachment summary)

Inspection Summary:

The inspection team for the multimedia inspection program consisted on Thom Tharrington, DWR, Scott Sanders DAQ, Ashby Armstead DAQ, Robert Nelms DWM, Brain Lambe LQS and Trentt James, LQS. The team with Hank Gay the environemntal representative forr S&W ready Mix Concrete.

The site was well maintained overall. Be sure to store chemicals and bottled materials in the appropiate storage location, such as the on site shed.

Records indicated that sampling results were good and occurred aregularly. It would be benficial for the outfall to have a more defined sampling location such as concrete flume or other means to ensure sampling is representative of your sites stormwater discharge. This would limit potentail from cross contamination from other facilities discharging into the same receiving ditch.

Analytical Monitoring

	Yes	No	NA	NE
Has the facility conducted its Analytical monitoring?	■	☐	☐	☐
# Has the facility conducted its Analytical monitoring from Vehicle Maintenance areas?	☐	☐	■	☐

Comment:

Permit and Outfalls

	Yes	No	NA	NE
# Is a copy of the Permit and the Certificate of Coverage available at the site?	■	☐	☐	☐
# Were all outfalls observed during the inspection?	■	☐	☐	☐
# If the facility has representative outfall status, is it properly documented by the Division?	☐	☐	■	☐
# Has the facility evaluated all illicit (non stormwater) discharges?	■	☐	☐	☐

Comment: It would be benficial for the outfall to have a more defined sampling location such as concrete flume or other means to ensure sampling is representative of your sites stormwater discharge. This would limit potentail from cross contamination from other facilities discharging into the same receiving ditch.

Qualitative Monitoring

	Yes	No	NA	NE
Has the facility conducted its Qualitative Monitoring semi-annually?	■	☐	☐	☐

Comment:

Stormwater Pollution Prevention Plan

	Yes	No	NA	NE
Does the site have a Stormwater Pollution Prevention Plan?	■	☐	☐	☐
# Does the Plan include a General Location (USGS) map?	■	☐	☐	☐
# Does the Plan include a “Narrative Description of Practices”?	■	☐	☐	☐
# Does the Plan include a detailed site map including outfall locations and drainage areas?	■	☐	☐	☐
# Does the Plan include a list of significant spills occurring during the past 3 years?	■	☐	☐	☐
# Has the facility evaluated feasible alternatives to current practices?	■	☐	☐	☐
# Does the facility provide all necessary secondary containment?	■	☐	☐	☐
# Does the Plan include a BMP summary?	■	☐	☐	☐
# Does the Plan include a Spill Prevention and Response Plan (SPRP)?	■	☐	☐	☐
# Does the Plan include a Preventative Maintenance and Good Housekeeping Plan?	■	☐	☐	☐
# Does the facility provide and document Employee Training?	■	☐	☐	☐
# Does the Plan include a list of Responsible Party(s)?	■	☐	☐	☐
# Is the Plan reviewed and updated annually?	■	☐	☐	☐
# Does the Plan include a Stormwater Facility Inspection Program?	■	☐	☐	☐

Stormwater Pollution Prevention Plan

	Yes	No	NA	NE
Has the Stormwater Pollution Prevention Plan been implemented?	■	□	□	□

Comment: Be sure to store bottles and chemicals undercover or storage sheds on site