

## APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)

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Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within five days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.

4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.

2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.

3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.

4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

**TABLE 297.310-1 CALIBRATION SCHEDULE**

[Note: This table is referenced in Rule 62-297.310, F.A.C.]

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass Thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent, or thermometric points	+/-2%
Bimetallic Thermometer	Quarterly	Calib. liq. In glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of at least three readings Max. deviation between readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually 2. One Point: Semiannually 3. Check after each test series	Spirometer or calibrated wet test or dry gas test meter  Comparison check	2%  5%



GAC Contractors, Inc.



4116 Highway 231 North  
Panama City, FL 32404  
Facility ID No. 0050008

PLANT OPERATIONS  
AND  
MAINTENANCE PLAN (O&M)



## **Introduction**

This plan provides information demonstrating GAC's commitment to operating our facility in compliance with DEP Operation Permit requirements and provides assurance that the operation of this facility will be in accordance with all applicable laws and rules.

This plan was developed in accordance with specific requirements of this facility and provides our management and operator(s) with adequate information and description regarding the design, operation and maintenance features of our facility. It is used in conjunction with plant operation/maintenance manuals supplied by the equipment manufacturers to train new plant operators) and provide continuous education.

## **Corporate Commitment**

GAC Contractors, Inc. adheres to a strong company-wide environmental program. The company relies on our past experience to assure quality plant operation and employee training, as well as protection of the surrounding environment.

It is GAC Contractors, Inc.'s belief that a strong environmental commitment from all team members, especially top management, is what gets the job done.



## Operator Training

Our existing plant operators have been with the company for many years. In addition, we have experienced back-up operators who can operate the plant if necessary.

Besides periodic reviewing of Compliance Plan with plant operator(s), management also periodically reviews our DEP Operation Permit with plant operators. Although every detail of operation permit is important, following details stand out:

1. Plant is permitted to operate at maximum hourly rate of 189 TPH.
2. Both, dryer burner and AC heater are allowed to use either No. 2 fuel oil with maximum sulfur content of 1% or natural gas. Sulfur content in fuel oil must be determined using ASTM methods ASTM D4057-88 and ASTM D129-91, ASTM D2622-94 or ASTM D4-294-90.
3. Compliance tests will be conducted yearly between January 1<sup>st</sup> and March 30<sup>th</sup>.
4. Maximum yearly asphalt production is limited to 500,000 tons per year.
5. Maximum fuel usage is limited to 1,200,000 gal. /yr. of #2 fuel oil.
6. Annual Operating Report is due by April 1<sup>st</sup> of each year.

To insure compliance, one of our plant operators completes the attached checklist monthly.

Yearly training sessions are held to cover plant operations, safety, compliance with DEP Operation Permit and other environmental issues such as prevention of fugitive dust emissions and prevention of material spills throughout plant property.



## Plant Monitoring

This section establishes the use of parameters to monitor plant operation such as pressure differentials and visible emissions. GAC conducts reasonable monitoring to assure continued compliance with the terms and conditions of the permit. Monitoring is carried out in the manner prescribed in this procedure.

The performance parameters include such physical, chemical or electrical characteristics as are applicable to the particular emissions unit, and which are indicators of the condition, operating rates and efficiencies. Such parameters include the following

*Bag pressure drop*

*Exhaust airflow rate (established during EPA Method 5 compliance test)*

*Air to cloth ratio*

*Bag weave*

*Bag material*

*Bag cleaning conditions*

*Pulsing sequence and air pressure*

The operating protocol addresses the physical steps and procedures to be followed by the operator when monitored parameters are outside the typical operating range established for this facility since initial startup. A magnetic differential pressures gauge monitor's proper operation of baghouse dust collector. Sudden decrease in pressure across filtering medium (bags) represents a system leak, a sudden rise in pressure represents plugging problems. Magnetic gauge indicates the pressure differential across the filter elements in inches of water.

All asphalt plants create particulate emissions while aggregate and sand are dried in a dryer. In order to meet Federal and State air quality codes, emission control equipment consisting of exhaust hood(s), ductwork, baghouse and exhaust blower are employed. As air laden with dust is captured at points of emissions, it is conveyed through a system of ductwork to the baghouse, which filters particulate from the air. Clean air is then exhausted by exhaust blower and released into atmosphere. During dust filtering operation, particulate matter is collected by filtering bags causing a reduction in dust emissions. In order to keep dust from building up on filter bags, a cyclic timer periodically actuates the solenoid valves that deliver momentary surges of high-pressure air.



These surges are discharged through orifices located above each bag causing a reverse flow of air through the bag for cleaning purposes. Cleaning (blowing) of bags is done in sequence controlled by a timer so that not all bags are blown at the same time. Instead, timer is sequenced to deliver bursts to one or several bags at one time. This assures that baghouse continues to operate uninterrupted without disrupting filtering process.

The operating parameters of the baghouse type pollution control equipment to be monitored are as follows:

*Pressure drop (Delta P) across baghouse*

*Visible emissions*

Pressure drop across the baghouse at this facility during normal operation and during emissions test are typically around 4.75 WG.

A pressure drop lower than 4 WG could indicate:

*New bags, which have not developed a filter cake*

*Bag failure*

*Baghouse or ductwork structural failure*

A pressure drop higher than 6 could indicate:

*Plugged bags or ductwork*

*Blocked stack*

*Fan malfunction*



## Operation and Maintenance Plan

Our Operation and Maintenance (O & M) Plan provides reasonable assurance that the facility can be effectively operated and maintained, through reasonable provisions of the operation and maintenance of the facility. Routine maintenance of equipment is performed as needed to assure optimal operation. The facility is operated to control objectionable odors in accordance with Rule 62-296.320(2), F.A.C. Fuels, solvents, lubricants and other maintenance materials are stored in approved areas.

The O & M Plan includes procedure for start-up, daily monitoring and inspection of the baghouse and dust collection system, weekly, monthly and annual maintenance required for the above.

### Start-up of Baghouse:

*Start all electric drive components to ensure, proper rotation.*

*Start air compressor to ensure proper air pressure is reached for cleaning cycle.*

*Start exhaust fan and check differential pressure magnehelic gauge.*

*Preheat baghouse to 250-300 degrees F before aggregate is discharged into dryer. This should be done first thing in the morning and then again only after prolonged shutdowns during the day (30 minutes or more).*

*Minimum inlet temperature to baghouse should never be allowed to fall below 220 degrees F or condensation may occur inside the baghouse causing bag mudding or blinding with a result of very high static pressures and loss of adequate draft for proper dryer operation.*

*At shutdown, always keep timer and augers operating after dryer shutdown to clean out baghouse. This will prevent a cold slug of dust from reaching the plant at next start-up. Also, the dust auger could be stalled if slugged with cold, wet dust.*



**Daily monitoring and checks of baghouse and auxiliary equipment:**

*Record baghouse differential pressure reading, differential pressure reading should read around 4.75 inches water gauge.*

*If readings exceed 6 inches water gauge, operator needs to rectify the problem immediately by determining the reason for high reading and take corrective actions after checking the accuracy of the gauge.*

**First determine that the gauge is not malfunctioning by performing the following:**

*Disconnect both lines leading to gauge and see if gauge reads "0". If not, use set screw to reset gauge to "0".*

*While lines are still disconnected, blow both lines with compressed air (pressures no higher than 30 PSIG)*

*Reconnect lines and check reading.*

*If reading is still high, the problem is in the baghouse or ductwork as described in Plant Monitoring section.*

*If the gauge reading is lower than 4 inches water gauge, check gauge as described above. If readings are still low, the problem is in the baghouse or ductwork as described in Plant Monitoring section.*

Perform visual inspection of the plume from the baghouse stack. If at any time a constant stream of dust is observed from fan stack check for a mechanical leak or worn or torn bags. If a leak develops, the area can usually be easily spotted from the clean air side by a large deposit of dust around the leak area. Should a leak develop, clean dust from area and reseal both sides of leak with high temperature silicone sealant. Our plant operator knows how to distinguish between vapor/moisture plume and actually opacity which represents dust in plume. Vapor will be present on cold days, when moisture in the plume is condensing.

*Check baghouse pulsating system and determine if it functions correctly.*

*Check baghouse dust hopper and auger conveying system to make sure it operates properly.*

*Record dryer burner start-up and shutdown times.*

*Record total production.*



All above checks and data will be recorded on plant daily log. Sample of daily log attached.

### **Other Inspections**

To insure that the asphalt plant equipment is functioning in accordance with all of the permit requirements, the attached monthly maintenance report will be completed.

### **Facility Inspection**

This section describes the use of periodic facility "walk-through inspections" by plant staff with specific inspection guidelines. The condition of facility is noted and compared to its condition during the initial survey and during subsequent inspections. Copy of monthly maintenance report is attached.

Inspection of the baghouse and dust collection equipment is conducted by a fully trained team member with direct access to senior management. Inspections are conducted weekly, monthly, semi-annually, and annually as shown on the attached report.

### **Records**

Records of monitoring, inspections and maintenance data of baghouse and auxiliary equipment are stored in either the plant operator's control room or at our Company's Main Office for a minimum of two years and shall be made available to DEP upon request.

Following documents are on file:

*Copy of current DEP operations permit.*

*Logs of daily recordings as listed in O & M Plan.*

*Copy of fuel analysis stating percentage of sulfur.*

*Copy of this Compliance Plan.*

*Notes taken during training sessions.*

*Records of weekly, monthly, semi-annual and annual plant inspections.*

*Copy of Manufacturer Operation and Maintenance Manuals.*

*Maintenance records on the baghouse and associated equipment, structural*



GAC Contractors, Inc.



*repairs, gabs and motor replacements.*

*Records of malfunctions or failures of the above and corrective actions taken.*

*Results of last compliance test.*



## Periodic Plan Review

This Environmental Compliance Plan will be reviewed at least annually. This review includes evaluation of the effectiveness of the plan and incorporates changes necessary for the plan to be continuously administered.

The Operation Plan shall be updated as operations change but no less frequently than upon renewal of DEP Operations Permit. DEP shall be notified of changes to the Operation Plan other than those required for routine maintenance. The Operation Plan shall be revised when operational procedures change. The Plan shall be revised to reflect any facility alterations performed or to reflect experience resulting from facility operation. GAC Contractors, Inc. will periodically review and revise the operation protocol, as appropriate to ensure satisfactory system performance.

## Abnormal Events

In the event GAC Contractors, Inc. is temporarily unable to comply with any of the conditions of their DEP permit due to breakdown of equipment, power outages, and destruction by hazard of fire, wind, or other cause, they will notify DEP. Notifications shall be made in person, by telephone, or by other means within 24 hours of breakdown or malfunction to the Pensacola office of Florida Department of Environmental Protection. Phone numbers: (850) 595-0578, or (850) 595- 8300 day or night.

A written report of any noncompliance referenced above shall be submitted to the Pensacola office of DEP (160 Governmental Center, Pensacola, FL 32501-5794) within 30 days after its occurrence. The report shall describe the nature and cause of the breakdown or malfunction, steps being taken or planned to be taken to correct the problem and prevent its reoccurrence, emergency procedures in use pending correction of problems and the time when facility will again be operating in accordance with permit conditions.

**If an emergency arises or there is any condition, which prevents the continued operation of the emission control components or results in non-compliance with applicable regulations, the operator will:**

**Stop production immediately.**

**Notify main office.**

**Ensure that the emission control components are in good working order before resuming production.**



**HIGHWAY 231 GAC ASPHALT PLANT  
MONTHLY PLANT MAINTENANCE REPORT**

Month: \_\_\_\_\_

(Write in the actual date that the following were accomplished)

**Weekly Checklist**

1. Check equipment guards.
2. Inspect all tanks in tank farm area for leaks.
3. Inspect all conveyors, beatings, idlers, guards and no flow switches on cold feed bins.
4. Clean strainers and filters in fuel system.

**Bi-weekly Checklist**

5. Check fugitive dust return lines to baghouse for blockage.
6. Check burner valves and linkages to insure that they are operating freely.

**Monthly Checklist**

7. Check valves on pulse jets.
8. Check all connectors (hose, clamps, etc.) and blow pipe holes for wear.
9. Check the flights inside the dryer for wear.
10. Check trunnions & dryer chain for wear.
11. Inspect screens for wear in shaker deck.
12. Check oil in all gear boxes.
13. Check AC pumps & hot oil system.
14. Check for wear on all braided hoses both hot oil & AC.
15. Check wastewater equipment, steam cleaner & track hydrogen peroxide inventory.



**Bi-monthly Checklist**

16. Clean burner nozzle & tube
17. Inspect pug mill for paddle, shafts & linear wear. All tips shall be within 1" of liner.
18. Inspect chain wear & bearings on hot elevator.

**Periodic Inspections**

19. Review the amount of fugitive dust from the plant and also from the plant yard daily. Take appropriate action as necessary.
20. Pump out & remove soils from water storage area of the water recycling unit. (3 months).
21. Change oil in pug mill gear box. (4 months)
22. Change oil in gear box. (once a year).
23. Replace check valves on pulse jets. (five years).

**Misc.**

24. Monthly fuel usage as shown by the attached.
25. Tons of asphalt produced in month.
26. Cumulative tonnage for year.
27. Quality factor for month (goal is 95.0).
28. Cumulative Quality factor for year (goal is 95.0).
29. Date that truck scale certification elapses.
30. Date that plant scale certification elapses.
31. Liquid asphalt factor for the month as shown by attached.
32. Landfill - Is there any debris stockpiled that is not in accordance with FDEP requirements?
33. Write any general comments, items which need attention or suggestions for improvements.



34. Baghouse test must be performed between, August 1<sup>st</sup>  
and September 30<sup>th</sup>.
35. FDEP annual report is due April 1<sup>st</sup> of each year.
36. FDEP Air Permit expires August 11, 2014 and must be  
updated by April 12, 2014.

CC: Richard, Josh, John

## **Time Sensitive Action Chart**

If any of the time deadlines in the Time Sensitive Action Chart are inconsistent with the time deadlines in the permit conditions, the time deadline in the permit condition shall be followed.

### **2014**

April 1	Annual Operating Report
15 days prior to test	Test Notification for *VE and *PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports

### **2015**

April 1	Annual Operating Report
15 days prior to test	Test Notification for VE and PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports

### **2016**

April 1	Annual Operating Report
15 days prior to test	Test Notification for VE and PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports

### **2017**

April 1	Annual Operating Report
15 days prior to test	Test Notification for VE and PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports

### **2018**

April 1	Annual Operating Report
15 days prior to test	Test Notification for VE and PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports
Renewal application due 60 days prior to the expiration of the current permit	

### **2019**

April 1	Annual Operating Report
15 days prior to test	Test Notification for VE and PM
September 30	Annual VE and PM Tests Deadline
45 days after test	VE and PM test reports

### **EU 003 Lime Silo**

A VE test must be performed for this emissions unit. Prior to placing the emissions unit in operation, the permittee shall:

- a. Advise the Department within seven days of startup.
- b. Conduct a one-time initial test for visible emissions within 30 days after achieving permitted capacity.

*\*VE = Visible Emissions*

*\*PM = Particulate Matter*