

Notwithstanding that the proposed consent order presented March 26 was protective of the National Ambient Air Quality Standards (NAAQS) and was more protective of the environment than EPA's Administrative Compliance Order, the revised proposed Consent Order presented to the Board today contains significant additional concessions by Mirant that further enhance environmental protection. These improvements include:

- The Potomac River Generating Station (the Plant) shall meet SO<sub>2</sub> emission limits of 0.55 lbs/MMBTU heat input on a 24 hour basis and a 0.50 lbs/MMBTU based on a 30 day rolling average.
- The SO<sub>2</sub> emission limits shall be met by the Plant at all times upon the effective date of the Order, including during Line Outage Situations.
- Mirant shall by July 1 submit a study from an independent engineering consultant on feasible and achievable emission control technologies for the reduction of SO<sub>2</sub>, NO<sub>x</sub>, and PM emissions from the Plant. The study will be used in developing the permit that will impose final emission limits and requirements on the Plant.
- Mirant shall by May 1 initiate work with ATSDR to develop a protocol for the collection of five-minute SO<sub>2</sub> ambient monitoring data and how to interpret them.
- Mirant shall by July 15 install and operate four PM<sub>2.5</sub> monitoring sites, three of which are to be speciated monitoring sites. The speciated monitoring sites will enable evaluation of primary PM<sub>2.5</sub> impacts from Plant operations and assist in quantifying the contribution of regional PM<sub>2.5</sub> impacts. Each speciated monitoring site may contain two PM<sub>2.5</sub> monitors (a speciated monitor and an FRM monitor) so Mirant actually may be agreeing to a total of seven PM<sub>2.5</sub> monitors. (The order proposed March 26 required three non-speciated monitors while EPA's ACO required no PM<sub>2.5</sub> monitors.)
- Mirant shall have continuous PM emission monitors (PM CEMs) installed and operating on both stacks immediately upon completion of the stack merge project.
- Mirant shall meet annual emission limits for SO<sub>2</sub>, CO, VOCs, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> to assure that the Plant's emissions following completion of the stack merge project are below its baseline emissions. *[These limits would be effective only during the life of the Order and would be superseded by any more stringent limits contained in a permit imposing NAAQS-protective requirements.]*

**COMMONWEALTH OF VIRGINIA  
STATE AIR POLLUTION CONTROL BOARD**

**ORDER BY CONSENT**

**ISSUED TO**

**MIRANT POTOMAC RIVER, LLC  
Registration No. 70228**

**SECTION A: Purpose**

This is a Consent Order issued under the authority of Va. Code §§ 10.1-1307D and 10.1-1307.1, between the State Air Pollution Control Board and Mirant Potomac River, LLC for the purpose of ensuring compliance with ambient air quality standards incorporated at 9 VAC Chapter 30, 9 VAC 5-20-180I, and Va. Code § 10.1-1307.3(3) at the Potomac River Power Station located in Alexandria, Virginia.

**SECTION B: Definitions**

Unless the context clearly indicates otherwise, the following words and terms have the meanings assigned to them below:

1. "Va. Code" means the Code of Virginia (1950), as amended.
2. "Board" means the State Air Pollution Control Board, a permanent collegial body of the Commonwealth of Virginia as described in Va. Code §§ 10.1-1301 and 10.1-1184.
3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in Va. Code § 10.1-1183.
4. "Director" means the Director of the Department of Environmental Quality.
5. "EPA" means the United States Environmental Protection Agency.
6. "The Order" or "this Order" means this document, also known as a Consent Order.
7. "ACO" means the Administrative Compliance Order by Consent issued by EPA to Mirant on June 1, 2006, resolving EPA's December 22, 2005, Notice to Mirant alleging that Mirant did not immediately undertake the necessary action to protect human health

and the environment in violation of 9 VAC 5-20-180I and the federally-enforceable Virginia State Implementation Plan.

8. "Order by Consent" means the consent order entered into between Mirant and the Department effective September 23, 2004, that required Mirant to perform a dispersion modeling analysis to assess the effect of Downwash (the "downwash study") of emissions from the Facility and further required Mirant devise with the Department and comply with a plan to eliminate any exceedances of the NAAQS.
9. "Mirant" means Mirant Potomac River, LLC, a limited liability company certified to do business in Virginia. Mirant Potomac River, LLC is owned by Mirant Mid-Atlantic, LLC.
10. "Facility" means the Potomac River Generating Station owned and operated by Mirant located at 1400 North Royal Street, Alexandria, Virginia, 22314. The Facility is a five unit, 488 MW coal-fired electric generating plant.
11. "The Permit" means the Stationary Source Permit to Operate issued by DEQ to the Facility on September 18, 2000, pursuant to 9 VAC 5-80-800, *et seq.*
12. "Marina Towers" means a multiple-unit residential condominium building located at 501 Slaters Lane, Alexandria, Virginia, in proximity to the Facility.
13. "Downwash" means the effect that occurs when aerodynamic turbulence induced by wind over nearby structures causes pollutants from an elevated source (such as a stack) to be mixed rapidly toward the ground resulting in higher ground-level concentrations of pollutants.
14. "NAAQS" means the primary National Ambient Air Quality Standards established by EPA for certain pollutants, including sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), ozone, and particulate matter 10 microns across (PM<sub>10</sub>), and particulate matter 2.5 microns across (PM<sub>2.5</sub>), pursuant to § 109 of the federal Clean Air Act, 42 USC § 7409, set forth at 40 CFR Part 50 and incorporated at 9 VAC Chapter 30. NAAQS are established at concentrations necessary to protect public health with an adequate margin of safety.
15. "State Air Toxic Pollutant Standards" means the requirements of Virginia's "Emission Standards for Toxic Pollutants From Existing Sources" set forth at 9 VAC 5-60-200, *et seq.*
16. "NO<sub>x</sub>" means oxides of nitrogen, which are pollutants resulting from the combustion of fossil fuels and a precursor to the formation of ozone.
17. "PM<sub>10</sub>" means particulate matter with an aerodynamic diameter less than or equal to 10 micrometers and is a pollutant resulting from, among other things, the combustion of fossil fuels.

18. "PM2.5" means particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers and is a pollutant resulting from, among other things, the combustion of fossil fuels.
19. "HCl" means hydrogen chloride, which is a toxic pollutant under the State Air Toxic Pollutant Standards.
20. "HF" means hydrogen fluoride, which is a toxic pollutant under the State Air Toxic Pollutant Standards.
21. "AERMOD Default" means Version 04300 of the AERMOD computer model using BPIP PRIME derived direction-specific dimensions, currently approved for general use by EPA.
22. "AERMOD EBD" means the most recent EPA-approved version of AERMOD computer model with modified direction-specific building dimensions approved by EPA in a letter from Judith Katz, Director, Air Protection Division, EPA Region III to David S. Cramer, Mirant Potomac River LLC dated March 21, 2007.
23. "Wind Tunnel Study" means a study undertaken by Mirant pursuant to the ACO using a physical model, as outlined in CPP Wind's Wind Tunnel Model Evaluation protocol, dated January 17, 2006, which has been submitted to EPA for approval and conducted in accordance with EPA Guidance, to evaluate the accuracy of AERMOD Default's assumptions with respect to the direction-specific effective building dimensions when applied to the Facility.
24. "DOE" means the United States Department of Energy.
25. "DOE Order" means Order No. 202-05-3, issued by the Department of Energy on December 20, 2005 in Docket No. EO-05-01, in response to an Emergency Petition and Complaint filed by the District of Columbia Public Service Commission, as subsequently modified and extended by DOE.
26. "Line Outage Situation" means that one or more of the 230 kV transmission lines serving the Central D.C. area are out of service due to a planned or unplanned outage, and that PJM directs the Facility to operate pursuant to the DOE Order.
27. "Modeled NAAQS Exceedance" means a modeled 3-hour average sulfur dioxide concentration which, when a background concentration of 176 micrograms per cubic meter is added, exceeds 1,300 micrograms per cubic meter; or a modeled 24-hour average sulfur dioxide concentration which, when a background concentration of 55 micrograms per cubic meter is added, exceeds 365 micrograms per cubic meter; or a modeled 24 hour PM10 concentration which, when a background concentration of 44 micrograms per cubic meter is added, exceeds 150 micrograms per cubic meter.
28. "Model Evaluation Study" or "MES" means the study submitted by Mirant and approved by EPA pursuant to the ACO to compare multiple computer model predicted ambient air impacts to actual measured ambient air concentrations for the purpose of determining the

best performing computer model in evaluating the effects of the emissions resulting from the operation of the Facility.

29. "Modified Model Evaluation Study" or "Modified MES" means a study to be submitted by Mirant pursuant to this Order and approved by the Department for the purpose of comparing multiple computer model predicted ambient air impacts to actual measured ambient air concentrations for the purpose of determining the best performing computer model in evaluating the effects of the emissions resulting from the operation of the Facility following completion of the Stack Merge Project.
30. "MES Protocol" means the protocol submitted by Mirant pursuant to ACO and approved by the EPA for the purpose of preparing the MES.
31. "Modified MES Protocol" means a protocol to be submitted by Mirant pursuant to this Order and approved by the Department for the purpose of preparing the Modified MES to account for operations of the Facility following completion of the Stack Merge Project.
32. "Monitoring Plan" means the plan submitted by Mirant pursuant to the ACO and approved by EPA as part of the MES for the installation and use of ambient air monitors in the vicinity of the Facility to monitor ambient air quality impacts of the Facility.
33. "Revised Monitoring Plan" means a plan to be submitted by Mirant pursuant to this Order and approved by the Department as part of the Revised MES for the purpose of determining proper location and use of ambient air monitors in the vicinity of the Facility to monitor ambient air quality impacts of the Facility following completion of the Stack Merge Project.
34. "Monitors" means the ambient SO<sub>2</sub> and PM<sub>2.5</sub> air monitors installed in accordance with the Monitoring Plan or Revised Monitoring Plan.
35. "Non-Line Outage Situation" means all periods of time that do not qualify as a Line Outage Situation.
36. "Operating Parameters" means the hourly average MW load of each unit for each hour of that day at the Facility, and the hourly average SO<sub>2</sub> emission rate expressed in lb/MMBTU for each unit for each hour of that day.
37. "Operating Plan" means the December 30, 2005, Operating Plan submitted to DOE by Mirant to respond to the requirement for a compliance plan under the DOE Order.
38. "Predictive Modeling" means the daily use of the AERMOD EBD computer model with forecasted weather conditions and planned Operating Parameters for the following day to predict modeled SO<sub>2</sub> and PM<sub>10</sub> NAAQS compliance and compliance with applicable State Air Toxic Pollutant Standards for HCl and HF on a day-ahead basis.
39. "PJM" means the regional transmission organization for the region where the Facility is located, which has authority to direct operations at the Facility during Line Outage Situations pursuant to the DOE Order.

## **SECTION C: Findings of Fact and Conclusions of Law**

1. In April 2004, certain residents of Alexandria, Virginia, provided the Department with a document entitled "Screening-Level Modeling Analysis of the Potomac River Power Plant Located in Alexandria, Virginia" prepared by Sullivan Environmental Consulting, Inc., dated March 29, 2004 ("the Sullivan Screening"). The Sullivan Screening was commissioned by, among others, certain residents of Marina Towers for the purpose of assessing whether emissions from the Facility may cause exceedances of certain NAAQS at Marina Towers as a result of "downwash." The Sullivan Screening concluded that, "on average, meteorological conditions associated with plume impaction conditions on the Marina Towers condominium were screened to occur as often as 1,200 hours per year."
2. Although the Sullivan Screening did not establish that emissions from the Facility result in exceedances of the NAAQS at Marina Towers, the Department believed the results of the Sullivan Screening warranted that further comprehensive analysis be conducted in accordance with the Department and EPA approved modeling procedures in order to more fully ascertain the effect of emissions from the Facility on the ambient air quality at Marina Towers and in the area in the immediate vicinity of the Facility.
3. Pursuant to the Order by Consent entered into by Mirant and the Department effective September 23, 2004, Mirant performed a dispersion modeling analysis using AERMOD Default to assess the effect of Downwash (the "downwash study") of emissions from the Facility. The downwash study used computer modeling to predict ambient concentrations of pollutants emitted by the Facility under certain weather and atmospheric conditions.
4. Mirant provided the results of the downwash study to the Department on August 17, 2005. By letter dated August 19, 2005, the Department informed Mirant that the downwash study demonstrated that emissions from the Facility resulted in, caused or substantially contributed to, modeled violations of the primary NAAQS for SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub> under certain atmospheric conditions.
5. The Department's August 19<sup>th</sup> letter also requested Mirant to immediately undertake "such action as is necessary to ensure protection of human health and the environment, in the area surrounding the Potomac River Generating Station" pursuant to 9 VAC 5-20-180I.
6. In response to the Department's August 19<sup>th</sup> letter Mirant shut down all five units of the Facility at midnight on August 24, 2005.
7. On August 24, 2005, the District of Columbia Public Service Commission ("DCPSC") filed an "Emergency Petition and Complaint" with the DOE and the Federal Energy Regulatory Commission ("FERC"), respectively, pursuant to the Federal Power Act ("FPA"), 16 U.S.C. § 824a(c), 824f and 825h, and Section 301(b) of the DOE Organization Act, 42 U.S.C. § 7151(b). The Emergency Petition and Complaint

requested that DOE find that an emergency existed under Section 202(c) of the FPA and issue an order requiring Mirant to continue operation of the Facility.

8. Following additional AERMOD Default modeling and assessment of the downwash study, Mirant re-started Unit 1 of the Facility on September 21, 2005. Additional modeling conducted by Mirant indicated that operation of only Unit 1 would not cause any modeled NAAQS exceedances.
9. On December 20, 2005, the Secretary of Energy issued the DOE Order finding that an emergency existed and ordering Mirant to operate in a manner that would not cause an exceedance of the NAAQS during Non-Line Outage Situations and to “utilize pollution control equipment and measures to the maximum extent possible to minimize the magnitude and duration of any exceedance of the NAAQS” during Line Outage Situations. The DOE Order, among other things, required Mirant to submit a plan to DOE detailing the steps to be taken to ensure Mirant’s compliance with the DOE Order. The DOE Order, modified as discussed below and extended by DOE, remains in effect as of the effective date of this Order.
10. On December 30, 2005, Mirant submitted to DOE an Operating Plan proposing two options for operating under Non-Line Outage Situations: According to Mirant, Option A provided for less electric reliability but would not result in exceedances of the NAAQS; Option B on the other hand provided for greater electric reliability but would have resulted in exceedances of the NAAQS in certain Non-Line Outage Situations (Option A called for fewer operating hours and lower emissions than Option B).
11. By letter dated January 4, 2006, DOE required that Mirant “immediately” implement Option A of the proposed Operating Plan.
12. In accordance with DOE’s directive to maximize electric generation while not causing or contributing to a NAAQS violation, Mirant supplemented Option A of the Operating Plan with additional operating configurations and modeling. The supplements to Option A called for the use of Trona injection and a blend of low sulfur coal to manage SO<sub>2</sub> emissions. According to Mirant, the supplemental operating scenarios would result in no modeled NAAQS exceedances.
13. By letter dated December 22, 2005, EPA issued a Notice to Mirant alleging that Mirant did not immediately undertake the necessary action to protect human health and the environment required by the Department’s August 19, 2005 letter, and that Mirant was therefore in violation of 9 VAC 5-20-180I and the federally-enforceable Virginia State Implementation Plan (“SIP”) for the period of time in which it failed to immediately shut down all the Facility units.
14. On June 1, 2006, EPA issued to Mirant the Administrative Compliance Order by Consent (“ACO”). The ACO gave Mirant the option of conducting an MES for the purpose of determining the best performing computer model in evaluating the effects of emissions from the Facility on the surrounding area. Mirant elected to conduct an MES pursuant to the terms of the ACO.

15. The ACO required Mirant, while conducting the MES, to operate on a daily basis at levels no greater than those that would assure that emissions of SO<sub>2</sub> and PM<sub>10</sub> from the Facility did not result in localized modeled exceedances of the NAAQS pursuant to Predictive Modeling during Non-Line Outage Situations.
16. The ACO further required Mirant to install at the Facility a system to inject Trona into each unit while it is operating to reduce emissions of SO<sub>2</sub>.
17. The ACO further required Mirant to install and continuously operate six SO<sub>2</sub> monitors in the vicinity of the Facility at locations generally near points of highest modeled predicted pollutant impact. The ACO required Mirant to quickly reduce operations if monitored SO<sub>2</sub> readings reached 80% of the NAAQS.
18. Notwithstanding the provisions discussed above, the ACO required Mirant to operate pursuant to directives from the regional electric grid operator, PJM, during Line-Outage Situations, while taking all reasonable steps to limit emissions of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>.
19. By letter dated June 2, 2006, DOE instructed Mirant to operate the Facility in accordance with the requirements of Part IV of the ACO during Non-Line Outage Situations. In that letter, DOE determined that operation of the Facility under Option A pursuant to its January 4, 2006, letter did not provide an adequate level of electric reliability to the District of Columbia and that operation under Part IV of the ACO, in particular under the Model Evaluation Study, was necessary to assure an acceptable level of reliability under the circumstances.
20. At no time have the Facility's operations under Predictive Modeling pursuant to the terms of the ACO under Non-Line Outage Situations resulted in a monitored exceedance of the SO<sub>2</sub> NAAQS or in monitored concentrations of SO<sub>2</sub> approaching 80% of the NAAQS during Non-Line Outage Situations.
21. During the course of the ACO, the Department, EPA, and Mirant and have continued to work to devise a long-term solution to ensure that emissions from the Facility do not harm public health or the environment as directed by the September 23, 2004, Order by Consent and in accordance with Virginia and federal law.
22. In September 2006, the Board ordered that future permits issued to the Facility imposing NAAQS protective emission requirements would be approved by it rather than the Department.
23. Towards this end, the Board has commenced a process to develop and issue Mirant a permit containing emission limits to assure that operation of the Facility does not result in exceedances of the NAAQS or applicable State Air Toxic Pollutant Standards.
24. An essential tool in developing the Board's permit is a model that predicts the impact of the Facility's emissions on the surrounding area as accurately as possible. The unique physical characteristics and placement of buildings adjacent to the Facility, as well as the discrepancies between modeled impacts and monitoring data thus far collected in the

course of the MES indicate that the accuracy of AERMOD Default may be improved by the Modified MES.

25. Moreover, Mirant has expressed its intention to reconfigure and merge the Facility's stacks and exhaust system (combining the emission ducts from boilers 1 and 2 into a common stack (and possibly connecting the two merged stacks with duct work) and the emission ducts for units 3,4 and 5 into another common stack) and has provided preliminary information to the Department that indicates that the project would reduce Downwash and otherwise abate the impact of emissions on the area surrounding the Facility ("the Stack Merge Project"). The Department has reviewed this information and has preliminarily determined, subject to EPA confirmation, that the Stack Merge Project, in conjunction with the reductions in SO<sub>2</sub> emissions required by this Order will provide improved environmental protection over the current configuration and is not a "dispersion technique" as defined in 9 VAC 5-10-20 because the Stack Merge Project is accompanied by a net reduction in allowable emissions.
26. Mirant also expressed its desire to raise the height of the stacks, which is limited by the Facility's proximity to Ronald Reagan National Airport. The FAA has determined that an increase in stack height up to an additional 50 feet will not pose a hazard to aeronautical navigation and has authorized that increase. Good engineering practices indicate that raising the height of the stacks by 50 feet in combination with the limitations on emissions imposed by this Order will improve environmental protection.
27. The Department believes based on available information that the Facility's operation under Predictive Modeling pursuant to the MES and ACO during Non-Line Outage Situations in combination with the monitor alert system set at 80% of the NAAQS has adequately assured compliance with the NAAQS on an interim basis pending issuance of a permit with NAAQS-protective emission limits.
28. The ACO expires by its terms on June 1, 2007. Pursuant to 9 VAC 5-20-180I, this Order is intended to extend the Facility's operation under Predictive Modeling on an interim basis until a permit is issued to Mirant with emission limits protective of the NAAQS and the applicable State Air Toxic Pollutant Standards for HCl or HF. This Order shall require the installation and operation of 10 total SO<sub>2</sub> monitors - four more than required by the ACO - as well as the installation and operation of one Tapered Element Oscillating Microbalance (TEOM) PM<sub>2.5</sub> monitor and three speciation PM<sub>2.5</sub> monitoring sites in the vicinity of the Facility. The speciation PM<sub>2.5</sub> monitoring sites shall use a combination of Federal Reference Method (FRM) and speciation monitors as necessary to determine the mass fraction of PM<sub>2.5</sub> species. Operation of such monitors may be outsourced to an independent contractor acceptable to the DEQ at Mirant's expense.
29. The Facility is subject to the Clean Air Interstate Rule ("CAIR") which imposes certain requirements, which may require future pollution control equipment.

30. On February 23, 2007, Mirant measured concentrations of SO<sub>2</sub> in excess of the NAAQS at one of its on-site monitors. The NAAQS exceedance on February 23, 2007 would not have occurred but for the DOE Order because the Predictive Modeling and Monitoring imposed by the EPA ACO would have required Mirant to reduce operations. The Board finds that DOE Order in combination with the EPA ACO are not protective of the NAAQS to the extent they allow a monitored NAAQS exceedance during a Line Outage Situation. The Board finds that an extension of the relief provided in the EPA ACO during Line Outage Situations is not in the best interest of the Commonwealth. Therefore, in addition to continuing the Predictive Monitoring requirement, this Order imposes additional monitoring requirements as well as emission limitations, which apply even during the term of the DOE Order, to provide additional protection against actual monitored NAAQS exceedances over that afforded by the EPA ACO.
31. In March 2007, DEQ presented a draft consent order that had been negotiated with Mirant addressing operations of the Facility after the expiration of the EPA ACO. The Board rejected this draft order. At the direction of the State Air Pollution Control Board at its meeting on March 26, 2007, the Department, Mirant and the City of Alexandria met in several day long sessions to attempt to negotiate a Consent Order satisfactory to all parties. While that goal was not met, Mirant and DEQ have incorporated several of the City's suggestions.

#### **SECTION D: Agreement and Order**

Accordingly, the Board, by virtue of the authority granted it in Va. Code §§ 10.1-1307D and 10.1-1307.1 orders Mirant, and Mirant agrees, to perform the actions described in this section of the Order:

### **Use of Trona**

1. Mirant shall maintain and operate a Trona injection system on all five units at the Facility. Mirant shall inject Trona into the exhaust gas of each unit while it is operating for the purpose of complying with this Order. During the time this order is in effect (including Line Outage Situations) SO<sub>2</sub> emissions from the Facility shall not exceed 0.55 lbs SO<sub>2</sub>/MMBTU heat input on a 24 hour block basis (midnight to midnight) or 0.50 lbs SO<sub>2</sub> /MMBTU on a 30 day rolling average. Compliance with these limits shall be based on SO<sub>2</sub> continuous emission monitors.

### **Control Technology Evaluation**

2. By July 31, 2007, Mirant shall submit to the Department a report prepared by an independent engineering consultant on feasible, available and achievable treatment technologies for the reduction of SO<sub>2</sub>, NO<sub>x</sub> and PM emissions. The study shall evaluate devices, systems, process modifications, process optimizations or other apparatus or techniques that are reasonably available taking into account:(1) the necessity of imposing such controls in order to attain and maintain a national ambient air quality standard;(2) the social, environmental, and economic impact of such controls; and(3) alternative means of providing for attainment and maintenance of such standard consistent with 40 C.F.R. 51.100(o)(definition of Reasonably Available Control Technology). The study shall present detailed cost information as well as a list of federal, state and local approvals required for the installation and operation of any technology. The study shall be used along with other available information in developing the permit described in Paragraph 22 of Section C above.

### **Model Evaluation Study**

3. From June 2, 2007, until completion of the Stack Merge Project, Mirant may continue the MES commenced pursuant to the terms of the ACO, and the protocol as approved by EPA under the ACO except as modified by this Order.

### **Operations in Accordance with Daily Predictive Modeling**

4. From June 2, 2007 until the termination of this Order, Mirant shall operate the Facility in a manner that does not cause or significantly contribute to Modeled NAAQS Exceedances by using Predictive Modeling described as follows: By 10 AM each morning, Mirant shall collect actual weather predictions from the National Weather Service for the Reagan National Airport and use them along with planned Operating Parameters as inputs to conduct a computer modeling run for the following day using AERMOD EBD. If the modeling predicts that Mirant's planned operations for the following day will not result in a Modeled NAAQS Exceedance for SO<sub>2</sub> or PM<sub>10</sub>, or the applicable State Air Toxic Pollutant Standards for HCl or HF, Mirant may operate on the day modeled in accordance with the modeled Operating Parameters and subject to the other limitations in Paragraph 1 of Section D of this Order. If the Predictive Modeling indicates that the planned Operating Parameters will result in one or more Modeled NAAQS Exceedances for SO<sub>2</sub> or PM<sub>10</sub>, or the applicable State Air Toxic Pollutant

Standards for HCl or HF, Mirant shall not run under those operating parameters but shall continue to adjust its planned operations and conduct additional modeling runs using the adjusted Operating Parameters to confirm that the adjusted operations will not cause or significantly contribute to a modeled exceedance of a PM10 or SO2 NAAQS or the applicable State Air Toxic Pollutant Standards for HCl or HF for the day modeled.

5. If the Predictive Modeling indicates that the predicted weather conditions and planned Operating Parameters do not result in a Modeled NAAQS Exceedance for SO2 or PM10, or an exceedance of applicable State Air Toxic Standards for HCl or HF, Mirant is authorized to operate using the planned Operating Parameters and shall not be in violation of this Order; or 9 VAC 5-20-180I, as incorporated into the Virginia SIP at 40 C.F.R. 52.2420(c), or the applicable State Air Toxic Pollutant Standards for HCl or HF; nor shall such operation be deemed to give a right for a cause of action for any alleged violation of the NAAQS as a result of Mirant's causing or contributing to any modeled exceedance of the NAAQS. This release is subject to Mirant's compliance with the limits in Paragraph 1 Section D of this Order and shall apply only to alleged exceedances or violations occurring during the lifetime of this Order and shall apply only to laws in existence on the effective date of this Order.
6. From the effective date of this Order until completion of the Stack Merge Project, Mirant shall continue to operate the six SO2 monitors approved by EPA under the Monitoring Plan pursuant to the terms of the ACO.
7. Within 30 days of the effective date of this Order, Mirant shall submit to the Department a detailed description of how it conducts daily Predictive Modeling under the MES and MES Protocol, including a description of the National Weather Service weather predictions used by Mirant. Mirant also shall submit within 30 days of the effective date of this Order to the Department for its approval a description of how it intends to conduct daily Predictive Modeling and follow-up modeling for HCl and HF. In performing the predictive modeling, Mirant shall use the following background concentrations for SO2: 55 ug/m<sup>3</sup> on a 24-hour basis and 176 ug/m<sup>3</sup> on a 3-basis for Predictive Modeling.

#### **PM10 Predictive Modeling**

8. From June 2, 2007, whenever Mirant operates four or more units, it shall abide by an emission rate of 0.055 lb/MMBTU for PM10 for each unit and shall conduct Predictive Modeling using this rate to determine whether operation of the units causes or contributes to a Modeled NAAQS Exceedance. If the Predictive Modeling indicates that the planned Operating Parameters will result in a Modeled NAAQS Exceedance for PM10, Mirant shall adjust its planned operating scenarios and re-run the Predictive Modeling with an emission rate of 0.055 lb/MMBTU until such time as Mirant confirms through predictive Modeling that the adjusted operations will not cause or significantly contribute to a Modeled NAAQS Exceedance for PM10. For PM 10 Predictive Modeling, Mirant shall use a background concentration of 44 ug/m<sup>3</sup>.

### **Operation During Periods of Elevated Monitored SO<sub>2</sub> Impacts**

9. From June 2, 2007, Mirant shall maintain and operate a monitor alert system in the Facility's Control Room that registers an audible alarm if in any one hour the average measured ambient concentration of SO<sub>2</sub> at any Monitor is equal to or greater than 80% of the 3 hour SO<sub>2</sub> NAAQS, measured as 400 parts per billion (1,040 µg/m<sup>3</sup>).
  - a. During the hour following the sounding of the alarm, Mirant shall promptly, but no later than within one hour, make operational adjustments, which may include increasing Trona injection and/or decreasing operation and shall observe the effect of these adjustments on the average, measured ambient concentration of SO<sub>2</sub>.
  - b. If, at the end of the second hour, the average measured ambient concentration of SO<sub>2</sub> is not equal to or less than 1,040 µg/m<sup>3</sup>, Mirant shall adjust its operations to conform to the scenarios described in Appendix 1 to this Order until the rolling 3 hour average is less than 1,040 µg/m<sup>3</sup>.
10. Mirant shall also configure the audible alarm to sound if, in any 12 hour period, any Monitor measures an average, ambient concentration of SO<sub>2</sub> equal to or greater than 80% of the 24 hour SO<sub>2</sub> NAAQS, measured as 112 parts per billion (292 µg/m<sup>3</sup>).
  - a. During the following 6 hours, Mirant shall make operational adjustments, which may include increasing Trona injection and/or decreasing operation and shall observe the effect of these adjustments on the measured ambient concentration of SO<sub>2</sub>.
  - b. If, at the end of the 6 hour period, the average, measured ambient concentration of SO<sub>2</sub> is not equal to or less than 292 µg/m<sup>3</sup>, Mirant shall adjust its operations to conform to the scenarios described in Appendix 1 for the balance of the calendar day.
11. Mirant shall also configure the audible alarm to sound if, after the first 6 months of operation from June 2, 2007, any Monitor measures an average, ambient concentration of SO<sub>2</sub> equal to or greater than 80% of the annual average NAAQS, measured as 64 µg/m<sup>3</sup>.
  - a. During the following 3 months, Mirant shall monitor the 7 month, 8 month and 9 month averages.
  - b. If, at the end of 9 months after June 2, 2007, the average, measured ambient concentration of SO<sub>2</sub> is not equal to or less than 64 µg/m<sup>3</sup>, Mirant shall adjust its operations so that the annual, measured ambient concentration of SO<sub>2</sub> does not exceed 80 µg/m<sup>3</sup>.
  - c. If the audible alarm sounds more than 5 times in a calendar month, Mirant shall, on a one-time basis, adjust the alarm to 75% of the applicable NAAQS.

### Stack Merge Project

12. Subject to receipt of any required permit from the Department or a determination that no such permit is required by June 1, 2007, Mirant shall complete the Stack Merge Project by January 30, 2008, unless it is delayed by reasons outside the control of Mirant.
13. Within 30 days of the effective date of this Order, Mirant shall submit to the Department for approval a Revised MES Protocol for modifying the MES, using the most recently EPA-approved version of AERMOD EBD to account for operations of the Facility following completion of the Stack Merge Project. Mirant shall send a copy of the Modified MES Protocol to EPA simultaneously with submitting it to the Department.
14. Within 30 days of Department approval of the document titled Protocol for Modeling Ambient Pollutant Concentrations from the Proposed Stack Merge Project at the Potomac River Power Plant (February 2007), including any amendments to this Protocol, Mirant shall submit to the Department for approval the modeling results that demonstrate compliance with the applicable NAAQS (SO<sub>2</sub>, NO<sub>x</sub>, CO, PM 10) and State Air Toxic Pollutant Standards (HCl and HF) using the most recently EPA-approved version of AERMOD EBD available as of the date of protocol approval.
15. Upon completion of the Stack Merge Project, in addition to the Continuous Emission Monitors required by law, Mirant shall install a particulate matter continuous emission monitor (“PM CEM”) in each of the two common stacks as described in Paragraph 24 of Section C above. Data from such PM CEMs shall be used for purposes of gathering information and operating experience only and shall not be used to determine compliance status. In addition, Mirant shall perform parametric monitoring to determine whether or not the electrostatic precipitators (“ESPs”) at the Facility are operating properly).
16. Within 30 days of the effective date of this Order Mirant shall submit for the Department's approval a Revised Monitoring Plan that calls for the installation of 10 (four additional) SO<sub>2</sub> Monitors, one TEOM PM<sub>2.5</sub> monitor and three speciation PM<sub>2.5</sub> monitoring sites as described in Paragraph 28 of Section C of this Order. The Revised Monitoring Plan shall require:
  - a. Two of the SO<sub>2</sub> Monitors and one of the speciation PM<sub>2.5</sub> monitor sites to be located at Marina Towers.
  - b. Until completion of the Stack Merge Project, the remaining Monitors to be located and operated generally in the vicinity of the Facility at points of highest pollutant impact as predicted by AERMOD EBD based on the modeling of emissions from the Facility as configured prior to completion of the Stack Merge Project.
  - c. Following completion of the Stack Merge Project, all of the Monitors (except for those located at Marina Towers) to be located generally in the vicinity of the Facility at points of highest pollutant impact as predicted by AERMOD EBD based on modeling of emissions resulting from the Stack Merge Project.

- d. A detailed discussion of how the monitoring sites were selected. The ability of Mirant and the Department to obtain permission to install a monitor at a particular location shall be factor in site selection.
  - e. The collection of one year of monitoring data following completion of the Stack Merge Project prior to completion of the Modified MES.
17. Mirant shall have all 14 monitor sites located, installed, and operating by July 15, 2007.
  18. By May 1, 2007, Mirant shall initiate work with the Department and the Agency for Toxic Substances and Disease Registry (ATSDR”) of the United States Department of Health and Human Services to develop a protocol for the collection of five minute SO2 ambient monitoring data and how to interpret it.
  19. It shall be the responsibility of Mirant to ensure that the monitors are operated, maintained, and subject to the appropriate QA/QC provisions set forth at Appendix A to 40 C.F.R. Part 58.
  20. Upon completion of the Stack Merge Project Mirant may commence the Modified MES as approved by the Department.
  21. At the conclusion of the Modified MES, the performance of the applicable models will be evaluated in accordance with the document "Protocol for Determining the Best Performing Model." EPA-454/R-92-025, Sept. 1992, Comparing Computer Model-Predicted Air Concentrations to Actual Ambient Air Concentrations Measured by the Monitors and the Department-approved Modified MES Protocol. The information yielded by the comparison of model predictions to measured ambient concentrations will result in a determination by the Department and EPA as to which model is best-performing. Thereafter, the best-performing model shall be used to conduct computer modeling to develop the NAAQS-protective emission limits to be contained in the permit the Board will issue to the Facility. The validity of and credit for the Modified MES shall be determined by the Department and EPA Region III consistent with the requirements of 40 C.F.R. Part 51 App. W. No provision of this Order shall be construed as creating any expectations regarding that determination. The requirements of Paragraph 1 of Section D apply regardless of which model is selected. Upon completion of the Modified MES, Mirant may discontinue the ambient monitoring required in this Order.

#### **Follow-Up Modeling**

22. From the effective date of this Order Mirant shall perform “follow-up,” also known as “hindcast,” computer modeling using actual weather conditions and Operating Parameters, and shall report the results to the Department and EPA on a weekly basis, as described below. This “follow-up” modeling will be performed on the Monday following the previous week of operation. If at any time the “follow-up” modeling demonstrates a modeled exceedance of the NAAQS or the applicable State Air Toxic Pollutant Standards, or the Monitors demonstrate an actual exceedance of the NAAQS, or the applicable State Air Toxic Pollutant Standards, Mirant shall report such modeled or monitored exceedance to the Department and EPA within 3 days of the modeled or

monitored exceedance, or as immediately as practicable upon receiving the results of follow up modeling or monitoring showing the modeled or monitored exceedance, for a determination by the Department as to whether corrective action is required.

### **Reporting**

23. Commencing June 2, 2007, Mirant shall deliver to the Department and EPA bi-weekly: (1) the modeled input files and results of the daily Predictive Modeling for the preceding month, including the hourly average heat input in MMBTU for each unit and the exit velocity (or exhaust volume) for each unit; (2) verification that the planned Operating Parameters utilized for Predictive Modeling in the preceding month were not exceeded, or if exceeded, documentation describing that exceedance; (3) the inputs and results of “follow-up” modeling for the preceding month (or portion thereof during which all Monitors were not in place), including the hourly average heat input in MMBTU for each unit and the exit velocity (or exhaust volume) for each unit; (4) the data generated by the Monitors; and (5) the meteorological data used for each day of Predictive Modeling and each day of follow-up modeling. All such reports shall be publicly available and Mirant waives any claims it might have that such reports contain confidential business information.

### **Operation During Line Outage Situations**

24. From the effective date of this Order, during a Line Outage Situation, Mirant shall operate the Facility to produce the amount of power needed to meet the load demand in the Washington, D.C. area, as specified by PJM and in accordance with the DOE Order. During such operations, Mirant shall utilize pollution control equipment and measures to the maximum extent possible under the circumstances consistent with the DOE Order, to limit the emissions of PM10, PM2.5, NOx, and SO2 from each boiler, including operating only the higher of the number of units necessary to meet PJM’s directive pursuant to the DOE Order or the number that satisfy the predictive modeling, and optimizing its use of Trona injection to minimize SO2 emissions. Mirant, at a minimum, shall operate the facility in accordance with best air pollution control practices as identified in Appendix 2 to this Order.
25. During Line Outage Situations, Predictive Modeling must continue to be performed but the Facility shall be operated under the Line Outage Situation provision in accordance with the DOE Order and this Order. During a Line Outage Situation, notwithstanding the DOE Order, Mirant shall comply with the limitations and requirements listed in Paragraphs 1, 9 and 10 of Section D.

### **Annual SO2 and NOx Emission Limits and PM10 Emission Rate Limits**

26. The Facility shall not emit more than 3700 tons of NOx per year more than 1600 tons of NOx from between May 1 through September 30 (the Ozone Season) of that same year.
27. The Facility shall limit the emission rate of PM10 for each unit to 0.055 lbs/MMBTU. on three hour average basis as measured by Method 201A.

28. After completion of the Stack Merge Project, the Facility:

- a. shall not emit more than 8359 tons of SO<sub>2</sub> per year calculated monthly as the sum of each consecutive twelve month period.
- b. shall not emit more than 250 tons of CO per year calculated monthly as the sum of each consecutive twelve month period.
- c. shall not emit more than 35 tons of VOC per year calculated monthly as the sum of each consecutive twelve month period.
- d. shall not emit more than 611 tons of PM per year calculated monthly as the sum of each consecutive twelve month period.
- e. shall not emit more than 414 tons of PM 10 per year calculated monthly as the sum of each consecutive twelve month period.
- f. shall not emit more than 173 tons of PM 2.5 per year calculated monthly as the sum of each consecutive twelve month period.

**Additional Particulate Matter and Fugitive Dust Control**

29. As of the effective date of this Order, Mirant shall have implemented and be operating the particulate matter and fugitive control measures identified in Appendix 3 of this Order.

**General Provisions**

30. Mirant's actions shall be consistent with all provisions of federal and state law, including but not limited to, the Clean Air Act, all federal regulations promulgated under the Clean Air Act, and any other applicable laws, including the Virginia SIP.
31. Mirant shall cooperate with the Department in the development of permit emission limits agrees to submit and provide to the Department on a timely basis all information requested by the Department for the development and issuance of any air permit.
32. Mirant agrees that the obligations of this Order, to the extent they have not been completed, may become obligations in an air permit issued to Mirant.
33. To the extent consistent with this Order, the terms of the September 23, 2004, Order by Consent between the Department and Mirant are incorporated herein by reference. Notwithstanding any requirements of this Order, Mirant remains obligated under the terms of the Order by Consent to eliminate and prevent any NAAQS exceedances caused by the Facility.

## **Section E: Administrative Provisions**

1. This Order shall apply to and be binding upon Mirant, its agents, successors, and assigns and upon all persons, contractors and consultants acting under or for Mirant, or persons acting in concert with Mirant who have actual knowledge of this Order or any combination thereof with respect to matters addressed in this Order. No change in ownership or corporate or partnership status will in any way alter Mirant's responsibilities under this Order.
2. The Board may modify, rewrite, or amend this Order with the consent of Mirant for good cause shown by Mirant, or after a proceeding as required by the Administrative Process Act for a case decision.
3. This Order addresses only those issues specifically identified herein. This Order shall not preclude the Board or the Director from taking any action authorized by law, including, but not limited to taking subsequent action to enforce the terms of this Order. This order shall not preclude appropriate enforcement actions by other federal, state or local regulatory agencies for matters not addressed herein.
4. Solely for the purposes of the execution of this Order, for compliance with this Order, and for subsequent actions with respect to this Order, Mirant consents to the jurisdictional allegations, but neither admits nor denies the findings of fact, and conclusions of law contained herein.
5. Mirant declares it has received fair and due process under the Administrative Process Act, Va. Code §§ 2.2-4000 *et seq.*, and the Air Pollution Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order, or any subsequent deliverables required to be submitted by Mirant and approved by the Department, without the consent of Mirant.
6. Subject to the Force Majeure provisions in Section E.8, failure by Mirant to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or Director as a result of such violations.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. Mirant shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or other such circumstance. Mirant must show that such circumstances resulting in noncompliance were beyond its control and not due to a lack of good faith or diligence on its part. Mirant shall notify the Department in writing when circumstances

are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of this Order. Such notice shall set forth:

- a. The reasons for the delay or noncompliance.
  - b. The projected duration of any such delay or noncompliance.
  - c. The measures taken and to be taken to prevent or minimize such delay or noncompliance.
  - d. The timetable by which such measures will be implemented and the date full compliance will be achieved.
9. Failure to so notify the Department in writing within 24 hours of learning of any condition above, which Mirant intends to assert will result in the impossibility of compliance, shall constitute a waiver of any claim of inability to comply with a requirement of this Order.
10. All notifications, plans, reports, or other information Mirant is required to submit to the Department pursuant to this Order shall be sent to:
- Director, Northern Regional Office  
Virginia Department of Environmental Quality  
13901 Crown Court  
Woodbridge, VA 22193
11. This Order shall become effective upon execution by both the Director of the Department of Environmental Quality or his designee and Mirant.
12. This Order shall continue in effect until:
- a. The effective date of a permit issued to the Facility which contains limits that assure that emissions from the Facility do not result in modeled exceedances of the NAAQS or the applicable State Air Toxic Pollutant Standards for all pollutants.
  - b. Mirant petitions the Director or his designee to terminate the order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order.
  - c. The Director or Board terminates the Order in his or its sole discretion upon 30 days written notice to Mirant.
13. Termination of this Order, or of any obligation imposed in this Order, shall not operate to relieve Mirant from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

AND IT IS ORDERED this \_\_\_\_ day of \_\_\_\_\_ 2007.

By: \_\_\_\_\_  
David K. Paylor, Director  
Department of Environmental Quality

Mirant Potomac River, LLC, voluntarily agrees to the issuance of this Order.

Mirant by: \_\_\_\_\_

The foregoing instrument was signed and acknowledged before me on this \_\_\_\_ day of \_\_\_\_\_ 2007 by \_\_\_\_\_ of Mirant Potomac River, LLC, in the City of \_\_\_\_\_, Commonwealth of Virginia.

\_\_\_\_\_  
Notary Public

My Commission expires: \_\_\_\_\_

## Appendix 1

Note: Mirant may request, subject to Department approval, additional complying scenarios to be added to the table at a later date.

### **Summary of Complying lb SO<sub>2</sub>/MMBtu Rates**

			<b>3-hr</b>	<b>24-hr</b>
1a	3 & 4	Both Units @ 16 hrs max/ 8 hrs min	0.46	0.44
1b	3 & 4	Both Units @ 12 hrs max/ 12 hrs min	0.46	0.42
2a	3 & 5	Both Units @ 16 hrs max/ 8 hrs min	0.51	0.47
2b	3 & 5	Both units @ 12 hrs max/ 12 hrs min	0.49	0.45
3a	4 & 5	Both Units @ 16 hrs max/ 8 hrs min	0.50	0.45
3b	4 & 5	Both units @ 12 hrs max/ 12 hrs min	0.45	0.43
4a	1,2,3	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 3 @ 16 hrs max/ 8 hrs min	0.37	0.40
4b	1,2,3	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 3 @ 12 hrs max/ 12 hrs min	0.37	0.40
5a	1,2,4	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 4 @ 16 hrs max/ 8 hrs min	0.40	0.40
5b	1,2,4	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 4 @ 12 hrs max/ 12 hrs min	0.40	0.40
6a	1,2,5	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 5 @ 16 hrs max/ 8 hrs min	0.46	0.43
6b	1,2,5	Units 1,2 @ 8 hrs max/ 8 hrs min/ 8 hrs off; Unit 5 @ 12 hrs max/ 12 hrs min	0.46	0.43
7a	3,4,5	All units @ 16 hrs max/ 8 hrs min	0.33	0.30
7b	3,4,5	All units @ 12 hrs max/ 12 hrs min	0.32	0.29
7c	3,4,5	All units @ 8 hrs max/ 16 hrs min	0.30	0.26

Assumes Background Concentrations

3hr: 238.4

## Appendix 2

The following procedures will be implemented during Line Outage Situations to ensure the ability to reduce SO<sub>2</sub> emissions is optimized:

1. Maintain trona injection on each unit at the maximum flow possible – up to the limitations of the system: blower discharge pressure, feeder speed, etc.
2. Station additional operators on the hot precipitator ash systems to quickly resolve ash pluggage problems and manually ensure ash is flowing properly.
3. Schedule extra ash trucks to be on site during line outages to handle the expected increase in ash generated.
4. Schedule the ash storage site to extend its hours, allowing additional truck deliveries from Potomac River plant to be received.
5. Shift load from units with higher SO<sub>2</sub> to units with lower SO<sub>2</sub>, to the extent possible, to reduce overall SO<sub>2</sub> emissions.
6. When unit loads ramp to follow demand, bring units with lowest SO<sub>2</sub> up first and down last to minimize overall SO<sub>2</sub> emissions.

## Appendix 3

### **Fugitive Dust Control Projects**

Note: Projects that make use of water sprays to control fugitive dust will not be operated during periods when daytime temperatures are below 32 degrees Fahrenheit, consistent with good operating practice, to avoid icing conditions that would be hazardous to employees and equipment.

#### 1. Bottom Ash and Fly Ash Silo Vent Reducting

Ash from the Potomac River Plant's operations is transported pneumatically from the five units to three ash silos. Once in the silos, ash drops out and the transport air is vented out the top of the silos, through baghouse dust collectors. In this Project, Mirant shall install ductwork from the outlet of each ash silo vent and combine them into one duct. The new ductwork will be routed to the inlet of Unit #1 hot precipitator. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 30 tons per year.

#### 2. Coal Pile Wind Erosion and Dust Suppression

Mirant shall install a 12' high perimeter fence with windscreens on the windward and leeward sides of the coal storage pile to reduce wind erosion. The fencing shall be installed on top of existing concrete walls, which form the boundary of the coal pile. The fencing shall also be engineered to handle area wind loads, and be designed to avoid the effects of eddying and dust carryover. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 2.8 tons per year.

#### 3. Coal Stackout Conveyor Dust Suppression

Coal delivered to the Potomac River Plant is either transported from a railcar unloader to the plant via a series of conveyor belts, or conveyed to a storage pile outside the plant. Currently, a set of nozzles spray water at the end of the conveyor that drops coal onto the storage pile to suppress fugitive dust emissions. Once this Project is implemented, Mirant shall spray a chemical binding agent onto coal as it drops onto the belt. The binding agent shall be a non-hazardous chemical that agglomerates fine coal particles together prior to being dropped onto the pile, thereby preventing wind from causing the fine particles to escape. The binding agent shall remain effective for a month or more on the coal in the pile, even with rain or when coal is moved around the pile. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 800 pounds per year.

#### 4. Ash Loader Upgrade

Ash is transferred from storage silos to trucks by a gravity-feed system, in which ash-loading equipment regulates the flow of ash out of the silo above, then mixes it with water prior to dropping the dampened ash into a truck below. Fugitive ash dust emissions at this location are correlated to the extent to which the loader mixes water into the flowing ash. There are three ash silos, two of which have had modern ash loader equipment installed (in 1997 and 2001), and one that has the original equipment. Mirant shall replace the ash loading equipment on the third silo with the modern design which is much more effective at mixing water into the ash, further reducing fugitive dust emissions associated with this process. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.

#### 5. Ash Loading System Dust Suppression

In addition to the Ash Loader Upgrade Project described above, Mirant shall install a water fogging system at the transfer points between the ash loaders and trucks, for additional dust suppression. Mirant shall also install a system of water pumps, piping, nozzles, and a control system to form a “fog” around the ash loader discharge chute. The water droplets shall drop fugitive ash particles to the ground, drain into a collection sump, and be treated at the Plant’s water treatment facility. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.

#### 6. Coal Railcar Unloading Dust Suppression

The railcar unloader is a device that empties individual railcars filled with coal onto conveyor belts, prior to the conveyance of the coal to the plant, by tipping the railcar upside down. To supplement the existing dust controls at this location, Mirant shall spray a dilute mixture of water and binding agent onto the coal at three locations during the unloading process. The three spray levels shall be activated in sequence as each railcar is tipped over. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.

#### 7. Truck Washing Facility

A truck washing facility shall be installed at the Potomac River Plant to wash the wheels, under-carriage, and sides of trucks used to haul fly ash and bottom ash to off-site ash storage facilities. The facility shall consist of a steel basin with ramps on either end, and an array of nozzles that spray high velocity jets of water on the bottom and sides of trucks as they are driven through the device. Water shall be recirculated through a filtration tank. Two pumps shall move water through the system, one to supply water to the spray nozzles, and one to draw water out of the basin and through the filtration tank.

Accumulated solids in the filtration tank shall be removed periodically, transported off site, and disposed of in accordance with all applicable local, state, and federal laws and regulations. Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 13.7 tons per year.