



*Appendix B*  
*Perryman Phase I Recommended*  
*Conditions*



**CASE NO. 8413 - PERRYMAN**  
**RECOMMENDED LICENSING CONDITIONS**

**Socioeconomic**

1. Baltimore Gas & Electric Company (BG&E) shall work with the appropriate agencies of Harford County and/or the Maryland State Highway Administration (MSHA) to evaluate the need for two highway upgrades:
  - (a) BG&E shall work with the MSHA to identify traffic flow improvement(s) to the Spesutia Road/U.S. 40 and MD 7/MD 715 intersections, and if requested by MSHA, provide compensation for such improvement(s) commensurate with the amount of traffic attributable to the Perryman Power Plant.
  - (b) BG&E shall work with the appropriate agencies of Harford County to improve Chelsea Road to enable it to accommodate anticipated traffic volumes and heavy loads from trucks servicing the facility.

The need for both of these upgrades shall be evaluated prior to the commencement of construction at the Perryman site.

2. BG&E shall mitigate visual impacts from facility structures upon residents along MD 159 between Forest Greens Road and Canning House Road by adding a natural buffer of trees along the boundary of its property adjacent to the Amtrak/Conrail right-of-way.
3. BG&E shall avoid the northern section of the Hopewell Farm Complex archaeological site (18 HA 193), which is eligible for the Maryland Register of Historic Properties. BG&E shall enclose the site with a fence and route the proposed utility corridor around the site to protect it from all construction-related activities and equipment.
4. BG&E shall provide the Maryland Historical Trust (MHT) and the Department of Natural Resources/Power Plant Research Program (DNR/PPRP) with an assessment of the effect of the new combined cycle facility on the Perryman Historic District, which is eligible for the Maryland Register of Historic Properties. This assessment shall take into consideration visual impacts, traffic and future development. In consultation with MHT and DNR/PPRP, BG&E shall develop measures to mitigate any significant adverse effects. The details of the mitigation plan shall be submitted to MHT and DNR/PPRP for review and approval prior to the commencement of construction.

**Ground Water**

5. During simple cycle operation, BG&E shall be permitted to withdraw ground water from two wells in the Upper Aquifer no more than a daily average of 100,000 gallons on a yearly basis; the allowable daily average for the month of maximum use will be 400,000 gallons. These conditions shall be established under Water Appropriation and Use Permit Number HA90G029 and are subject to triennial review and renewal by the Department of Natural Resources Water Resources

Administration (DNR/WRA) in 12 years from the date the CPCN is granted. BG&E shall submit semi-annual reports to DNR/WRA that contain summaries of the rate of ground water withdrawal for each month.

6. BG&E shall:

- (a) Locate the two proposed production wells north of the transmission line right-of-way.
- (b) Install two ground water monitoring well clusters between the production wells and the Perryman Combustion Turbine Facility. Each cluster shall consist of a well with the screen interval constructed across the water table and a well with the screen interval commensurate with the elevation screened for the production wells. These wells will be sampled periodically for constituents indicative of No. 2 fuel oil.

7. BG&E shall institute a ground water monitoring program to evaluate long-term effects to ground water quality and quantity. The details of this plan shall be submitted to the Maryland Department of the Environment (MDE) and DNR/WRA for review and approval prior to initiating ground water withdrawals.

8. The ground water monitoring program proposed by BG&E at the oil storage area for the combined cycle facility, which includes one well upgradient and three wells downgradient, shall be instituted by the Company. The details of this plan shall be submitted to MDE for review and approval prior to operation of the first combustion turbine.

9. BG&E shall institute a ground water monitoring program in and around the oil storage area at the existing Perryman Combustion Turbine Facility to determine future potential releases to ground water. The monitoring program will be commensurate with the ground water monitoring program proposed by BG&E for the oil storage area at the new combined cycle facility. The details of this plan shall be submitted to MDE for review and approval, with a copy to PPRP, prior to operation of the first combustion turbine.

Noise

10. Once BG&E selects the vendors for equipment, BG&E shall ensure that noise emission guarantees are consistent with the noise emissions assumptions used in projecting plant operations noise impacts. BG&E shall submit to the MDE and PPRP a summary of this evaluation as soon as equipment is selected.

11. Once operation of one combustion turbine is begun (CT No. 51), and again after operation of combined cycle Unit No. 5 is begun, BG&E shall conduct studies of ambient noise levels in the vicinity of the facility to ensure compliance with allowable noise levels. The studies shall be conducted when all the new units and existing units are operating. The scope of work for the noise studies shall be provided to MDE for approval, before the end of the first year of operation of the simple cycle and combined cycle units. The results shall be submitted to the Maryland Department of the Environment/Air and Radiation Management Administration (MDE/ARMA) before the end of the first year of operation of CT No. 51, and again after the first year of operation of combined cycle Unit No. 5.

### Water Supply and Quality

12. The selection of the water supply that will be used as the cooling and process water source for combined cycle operation, namely purchase of water from the City of Baltimore or use of treated effluent from the Sod Run Waste Water Treatment Facility (WWTP), will be resolved prior to construction of combined cycle facilities. Efforts to resolve this issue will begin at least one year prior to beginning construction of the combined cycle facilities, through a PSC adjudicatory proceeding, if necessary. Until the proceeding is completed, construction of primary components of combined cycle facilities, including water conveyance and treatment systems related to combined cycle operations, shall not commence. However this restriction does not include ancillary facilities to support the ultimate construction configuration.
13. BG&E shall restrict discharge pipeline dredging activities to late fall when nutrients which may be released from the dredged material will have minimal impact and when biota are present in reduced numbers. Dredging shall also be limited to calm periods to limit the spread of turbidity.
14. BG&E shall develop a turbidity monitoring program prior to construction to demonstrate and ensure the effectiveness of the turbidity curtains. BG&E shall submit details of this program to PPRP for review and approval prior to construction of the discharge pipeline. Results of the monitoring program shall be submitted to PPRP within six months of completion of construction of the discharge pipeline.
15. In addition to the biomonitoring requirements that will be part of BG&E's National Pollutant Discharge Elimination System (NPDES) discharge permit, an acute test on larval yellow perch shall also be conducted after plant startup to ensure protection of this particular species. The results of the acute test on larval yellow perch shall be submitted to PPRP for review.

### Air Quality

16. All representations in the license application, in subsequent documentation provided by the applicant, and in license hearings with regard to construction plans, operating procedures, and other aspects of the proposed facility are incorporated by reference into these conditions. The owner or operator of this facility may not vary from such representations if the change will cause a change in the method of operation of the proposed facility, the method of control of emissions, the character of the emissions, or if the change will result in an increase in the discharge of any of the various emissions.
17. The Best Available Control Technology (BACT) determination is applicable to combustion turbine (CT) No. 51, CT No. 52, and combined cycle Unit No. 5. BACT shall be re-evaluated if construction has not begun within 18 months of the Phase I order.
18. For a turbine operating in the simple cycle mode burning gas, the outlet concentration of nitrogen oxides (NO<sub>x</sub>) shall not exceed 25 parts per million by volume on a dry basis (ppmvd) at 15 percent excess oxygen, on an hourly basis. When operating in the simple cycle mode burning No. 2 fuel oil, the outlet concentration of NO<sub>x</sub> shall be established through tests to determine the highest practical combustion zone water injection rate that, without voiding manufacturer's

guarantees, can be used to reduce the emissions of NO<sub>x</sub>. BG&E shall submit the results of these tests to MDE/ARMA for review and approval. Copies of the results of these tests shall also be submitted to PPRP. At no time shall the water to fuel ratio be less than that required to achieve a maximum NO<sub>x</sub> concentration of 65 ppmvd at 15 percent oxygen on an hourly basis.

19. The NO<sub>x</sub> emissions from each of the combustion turbines shall be limited to 1,363 tons/year during simple cycle operation and 554 tons/year during combined cycle operation.
20. Regarding control of NO<sub>x</sub> emissions from the proposed Perryman turbines (combustion turbine Units 51 and 52 and combined cycle Unit 5), a selective catalytic reduction (SCR) system is required during operation of combined cycle Unit 5 for both gas and fuel oil. At this time, there is no limitation on the amount of fuel oil which can be burned beyond that imposed by the Maryland New Source Impacting on a Nonattainment Area requirements (COMAR 26.11.06.11.6), which is covered by Condition No. 28. If, however, the following conditions are met, SCR will not be required during combined cycle operation of Unit 5:
  - (a) BG&E demonstrates during the simple cycle operation of Unit 51 or 52 that 15 ppm NO<sub>x</sub> (on a dry basis, corrected to 15 percent oxygen) can be achieved when burning natural gas and commits to the 15 ppm NO<sub>x</sub> level during operation of combined cycle Unit 5;
  - (b) BG&E agrees to limit oil burning to only those periods of gas interruptions and other emergencies, within the constraints identified by "c" below; and
  - (c) BG&E agrees to limit the NO<sub>x</sub> emissions resulting from oil burning to a total of 248 tons/year.

For the purpose of "c" above, a year is measured from November 1 through October 31. If limited as described above, conditions will be added to address fuel oil restrictions. Those circumstances during which fuel oil can be burned (i.e., gas interruptions and other emergencies) will be defined once a gas plan becomes available for review. License conditions, including but not limited to, Nos. 19, 21 through 25, and 32 will also be altered to reflect revised requirements.

21. In addition to limits imposed by other conditions, each combustion turbine operating in the simple cycle mode, except during periods of power augmentation (see Condition No. 24), shall be limited to no more than the following hourly emissions expressed in units of pounds per hour:

	<u>Natural Gas</u>	<u>No. 2 Oil</u>
Carbon Monoxide	52	70
PM <sub>10</sub>	10	11
Total Particulate	10	11
Volatile Organic Compounds	2.9	7
Nitrogen Oxides (as NO <sub>2</sub> )	170	490
Sulfur Oxides (as SO <sub>2</sub> )	28	87
Sulfuric Acid Mist	not applicable	7.8

22. For the turbines operating in the combined cycle mode and firing natural gas, SCR will be used to reduce NO<sub>x</sub> emissions to a level of no more than 9 ppmvd at 15 percent oxygen on an hourly basis. For oil firing in this mode, an SCR system will be used to reduce NO<sub>x</sub> emissions to a level of no more than 27 ppmvd at 15 percent oxygen on an hourly basis.
23. In addition to limits imposed by other conditions, each combustion turbine operating in the combined cycle mode operation shall be limited, except during periods of power augmentation (see Condition No. 24), to no more than the following hourly emissions expressed in units of pounds per hour:

	<u>Natural Gas</u>	<u>No. 2 Oil</u>
Carbon Monoxide	52	70
PM <sub>10</sub>	12	24
Total Particulate	12	24
Volatile Organic Compounds	2.9	8
Nitrogen Oxides (as NO <sub>2</sub> )	61	199
Sulfur Oxides (as SO <sub>2</sub> )	28	87
Sulfuric Acid Mist	not applicable	7.8
Ammonia	20	20

24. Power augmentation may be used only during periods of maximum emergency generation, defined as any operation during reserve shortages as described in Section 2.1 of PJM Interconnection and Operation Instruction, OI - 8.15, Peak Load: Alerts, Warnings, Actions; dated February 1992. During periods of power augmentation, each combustion turbine operating in the simple cycle mode shall be limited to no more than the following hourly emissions expressed in units of pounds per hour:

	<u>Natural Gas</u>	<u>No. 2 Oil</u>
Carbon Monoxide	92	93
PM <sub>10</sub>	12	38
Total Particulate	12	38
Volatile Organic Compounds	3	8
Nitrogen Oxides (as NO <sub>2</sub> )	170	490
Sulfur Oxides (as SO <sub>2</sub> )	28	87
Sulfuric Acid Mist	not applicable	7.8

During periods of power augmentation, each combustion turbine operating in the combined cycle mode shall be limited to no more than the following hourly emissions expressed in units of pounds per hour:



	<u>Natural Gas</u>	<u>No. 2 Oil</u>
Carbon Monoxide	92	93
PM <sub>10</sub>	12	38
Total Particulate	12	38
Volatile Organic Compounds	3	8
Nitrogen Oxides (as NO <sub>2</sub> )	61	199
Sulfur Oxides (as SO <sub>2</sub> )	28	87
Sulfuric Acid Mist	not applicable	7.8
Ammonia	20	20

25. The ammonia emissions during combined cycle operation shall not exceed 9 ppm corrected to 15 percent oxygen on an hourly basis. BG&E shall submit to ARMA for review and approval a method for ensuring that the ammonia concentrations do not exceed the 9 ppm limitation. Copies of this report shall be submitted to PPRP.
26. The emission limitations contained in these conditions do not apply to emissions during periods of startup, shutdown, and malfunction.
27. The fuel oil burned in the combustion turbines shall contain no more than 0.05 percent sulfur by weight. If this type of fuel is not available or is not priced competitively, fuel with a maximum sulfur content of 0.2 percent may be used. Oil containing a maximum of 0.05 percent sulfur is considered to be "priced competitively" if it costs (on a \$/MMBtu basis) no more than 10 percent more than No. 2 oil containing 0.2 percent sulfur. Procedures as described in 40 CFR 75 Appendix D Section 2.2 must be used to determine sulfur content.
28. When firing fuel oil exclusively, operation of each of the turbines shall be limited to 5,700 hours per year. When both oil and gas are used, the combined VOC emissions from all turbines shall not exceed 45.6 tons/year, or 91,200 pounds/year. Compliance with this annual limit will be achieved by limiting the amounts of fuel oil and natural gas, as shown in the following equation:  

$$(A \times 83 \text{ lb VOC/MM lb fuel oil}) + (B \times 1.8 \text{ lb VOC/MM SCF gas}) \leq 91,200 \text{ lb/year}$$

where A = total amount of fuel oil, million (MM) pounds per year, and B = total amount of natural gas, MM standard cubic feet (scf) per year.
29. There shall be no discharge of visible emissions other than water in an uncombined form from the combustion turbines as required in COMAR 26.11.06.02.
30. BG&E shall take reasonable precautions at all times to prevent fugitive particulate matter from becoming airborne.
31. BG&E shall equip the proposed turbines with a continuous emissions monitoring system (CEMS) to determine direct compliance with the NO<sub>x</sub> permitted emissions limitations.

BG&E shall develop, implement, and maintain for all CEMS a Quality Assurance (QA) Plan which satisfactorily documents operations pursuant to 40 CFR 60, Appendix F. The QA procedures of Appendix F must be followed.

At least 180 days prior to purchase of the CEMS, BG&E shall submit to MDE/ARMA for review a monitoring protocol and the QA plan. Approval of the monitoring protocol and QA plan must be obtained from MDE/ARMA prior to implementation. Said protocol shall specify acceptable instrumentation, monitoring procedures, calibration procedures, and data acquisition systems as required to demonstrate compliance with this permit. The protocol shall also include emission testing procedures that will be used to evaluate CEMS performance. The CEMS must be initially certified according to the applicable EPA Performance Specification in 40 CFR 60, Appendix B and operated in accordance with 40 CFR 60.13. The CEMS must be installed, certified, and operational within 180 days of start-up of simple cycle operation.

Valid CEMS data (monitoring data for both NO<sub>x</sub> and O<sub>2</sub> concentrations) are required for a minimum of 90 percent of the CT operating hours in each quarter.

32. BG&E shall submit to MDE/ARMA for review and approval the vendor specific design information and engineering drawings for the SCR system when they are available, but not later than 180 days prior to start of construction of the SCR unit. Copies of this report shall be submitted to PPRP.
33. Within 45 days of the end of each calendar quarter, BG&E shall submit to MDE/ARMA quarterly reports that contain for each turbine monthly summaries of at least the following:
  - (a) The total hours of operation;
  - (b) The number of hours of operation burning oil, and the amount of oil burned, in units of gallons/hour and MMBtu/hour;
  - (c) The number of hours of operation burning natural gas, and the amount of gas burned, in units of cubic feet/hour and MMBtu/hour;
  - (d) Times of start-up and shutdown of the turbine and the HRSG;
  - (e) The sulfur content of the fuel oil by batch;
  - (f) If the sulfur content of fuel oil used during the quarter contains more than 0.05 percent sulfur, a discussion on the availability of 0.05 percent sulfur oil and the current costs of 0.2 percent and 0.05 percent sulfur oil;
  - (g) The hourly, daily, and cumulative annual calculated VOC emissions;
  - (h) The maximum hourly and average hourly NO<sub>x</sub> emissions, in units of ppmvd at 15 percent oxygen and of pounds/hour, and the cumulative annual NO<sub>x</sub> emissions;
  - (i) Any emissions in excess of NO<sub>x</sub> concentrations specified in this permit, including the amount of the emissions, the date(s) on which the excess emissions occurred, the length of time over which the excess emissions occurred, the reason(s) why the excess emissions occurred, and the corrective action to be implemented, if required, to ensure that excess emissions do not occur in the future; and
  - (j) Construction progress.

Separate reports shall be filed for each combustion turbine or HRSG. Data used for developing the above summaries shall be maintained on file at the plant for at least two years and shall be readily available for inspection.

34. BG&E shall comply with the requirements of New Source Performance Standards (NSPS), Subpart A and Subpart GG, 40 CFR 60.330 *et seq.*
35. BG&E shall submit a natural gas supply plan to DNR/PPRP and MDE/ARMA describing its planned gas acquisition and contract agreements, as well as circumstances during which fuel oil can be used.
36. Within 60 days after achieving the maximum production rate at which each turbine or HRSG will be operated, but not later than 180 days after initial startup of such facility and HRSG, performance testing shall be conducted to determine compliance with the permitted limitations for both simple and combined cycles. Testing of a turbine operating in the simple cycle mode shall include NO<sub>x</sub>, VOC, PM<sub>10</sub>, TSP, SO<sub>2</sub>, and CO for gas fired operation and NO<sub>x</sub>, VOC, PM<sub>10</sub>, TSP, SO<sub>2</sub>, CO, and sulfuric acid mist for oil firing. Testing for the combined cycle operating mode shall include the above pollutants with the addition of ammonia. Periodic testing shall be conducted as recommended by MDE/ARMA after the initial performance testing. A stack testing protocol shall be submitted to MDE/ARMA for review. Approval of the protocol must be obtained from MDE/ARMA prior to performance of any stack tests. The owner/operator shall provide at least 60 days prior notice of any performance test.
37. As required in 40 CFR 52.21(r)(2), approval to construct shall become invalid if construction is not commenced within 18 months after issuance of this license, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. As defined in 40 CFR 52.21(b)(9), the term "commence," as applied to the construction of the proposed source, means that the owner or operator either has:
  - (a) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or
  - (b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a continuous program of actual construction or modification of the source to be completed within a reasonable time.

Construction of the facility will be considered to have been completed within a reasonable time if start-up of combined cycle Unit No. 5 is initiated within five (5) years after construction of the first combustion turbine (CT No. 51) commences. The term "start-up" is defined as the generation of electricity by the unit for any purpose. BG&E shall notify the Public Service Commission and the MDE/ARMA upon commencement of construction and start-up of each unit.

38. ARMA and other appropriate State personnel shall be afforded access to the Company's property, at reasonable times and upon presentation of credentials:
  - (a) To inspect construction authorized under this certificate;
  - (b) To sample any discharge into the atmosphere;

- (c) To inspect any monitoring equipment required by this certificate or applicable regulations;
  - (d) To have access to and copy any records required to be kept by this certificate or by applicable regulations;
  - (e) To obtain any photographic documentation relative to compliance with this certificate and applicable regulations; and
  - (f) To determine compliance with the certificate and applicable regulations.
39. All reports and notifications required by 40 CFR 60.7 shall be sent to both MDE/ARMA and to:
- Air Enforcement Branch  
U. S. Environmental Protection Agency  
Region III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107
40. If any air quality provision of this certificate shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from the certificate.

#### General Issues

41. BG&E shall prepare a detailed plan that addresses future management options for disposition of coal gasification by-products. This plan shall specify in a step-wise manner how BG&E proposes to handle coal combustion by-products generated at Perryman, including contingencies in the event that preferable options prove infeasible. This plan must be submitted to PPRP when and if BG&E identifies Perryman as a site for coal gasification.
42. BG&E shall conduct a survey of the distribution and abundance of nesting bald eagles in and around the site immediately prior to construction to ensure protection of this endangered species. BG&E shall submit the results of this survey to PPRP for review prior to start of construction.
43. BG&E shall comply with appropriate state and county requirements associated with development within the portion of the site classified as Resource Conservation Area as part of the Chesapeake Bay Critical Area.
44. BG&E shall obtain all the required permits from the WRA, including but not limited to tidal wetlands (COMAR 08.05.07.05) and non-tidal wetlands (COMAR 08.05.04). Information required for the evaluation of the permit applications by WRA and other appropriate agencies such as the Corps of Engineers shall be submitted 8 to 10 months prior to initiating construction of the power plant and/or pipeline. This information shall contain the latest details on construction plans and the proposed pipeline locations available at the time the information is submitted. The updated permit information shall include the following information, if not previously submitted:

- (a) An analysis of the environmental and financial costs and benefits of different methods of supplying fuel and water to the plant, i.e., the pipeline, rail, or truck.
- (b) The construction schedule of the three elements of the pipeline, i.e., the gas, oil, and water supply lines. Information shall include whether all supply lines will be installed simultaneously or at separate times, depending on the need for the resource being supplied. If installation of all lines is not to occur simultaneously, BG&E shall include an environmental assessment of the additional impact due to sequential pipeline installation.
- (c) Proposed mitigation for conversion of forested wetlands to scrub/shrub wetlands.
- (d) Pipeline corridor siting, construction, and alignment alternatives which avoid tidal wetland impacts shall be forwarded before other alternatives which require mitigation will be considered. Tidal wetland impacts caused by the dredging of Bush River and the disposal of dredge material shall be detailed.
- (e) An estimate of nontidal wetlands impacts shall include wetland type, whether the impact is permanent or temporary, evaluation of alternatives for avoidance and minimization of impacts, justification of selected option, and planned maintenance of rights-of-way.
- (f) Responses to any requests for additional information on the permit application from WRA or other interested parties.



*Appendix C*  
*Panda-Brandywine*  
*Recommended Conditions*

CASE NO. 8488 - PANDA-BRANDYWINE  
RECOMMENDED LICENSING CONDITIONS

General

1. Panda shall notify the Public Service Commission (PSC), the Power Plant Research Program (PPRP), and the Air and Radiation Management Administration of the Maryland Department of the Environment (ARMA) if the project schedule pertaining to engineering, construction, and operation of the project is delayed from the schedule filed in Panda's application. Panda shall also provide notification to these agencies of when the project has been completed and the transmission line energized.
2. Panda shall provide to the Maryland Historical Trust (MHT) a copy of training programs, or guidelines provided to Panda inspectors or contractors, to identify and/or protect unforeseen archaeological sites that may be revealed during construction of the facilities associated with this project. If such relics are identified in the project area, Panda, in consultation with and as approved by MHT, shall develop and implement a plan for avoidance and protection, data recovery, or destruction without recovery of the properties adversely affected by the project.

Air Quality

3. The combustion turbines shall comply with the applicable requirements of the New Source Performance Standards (NSPS), Subpart A and Subpart GG, 40 CFR 60.330 *et seq.*
4. For burning natural gas, the outlet concentration of nitrogen oxides (NO<sub>x</sub>) for each turbine shall not exceed 9 parts per million by volume on a dry basis (ppmvd) at 15 percent excess oxygen, on an hourly basis. For burning liquefied



natural gas (LNG), the outlet concentration of  $\text{NO}_x$  for each turbine shall not exceed 10 ppmvd at 15 percent excess oxygen, on an hourly basis. When burning No. 2 fuel oil, the outlet concentration of  $\text{NO}_x$  for each turbine shall not exceed 54 ppmvd at 15 percent excess oxygen, on an hourly basis. Compliance with this condition shall be demonstrated using the procedures described in the NSPS, Subpart GG, 40 CFR 60.335.

5. Each combustion turbine shall be limited to no more than the following hourly emissions expressed in units of pounds per hour:

	Natural Gas	LNG	No. 2 Oil
Carbon Monoxide	59	59	71
$\text{PM}_{10}$	7	7	15
Total Particulate	7	7	15
Volatile Organic Compounds	2	2	5
Nitrogen Oxides (as $\text{NO}_x$ )	35	39	239
Sulfur Oxides (as $\text{SO}_2$ )	29	29	54
Sulfuric Acid Mist	3	3	6

These emission limits do not apply during periods of start-up, shutdown and malfunction.

6. Annual facility-wide  $\text{NO}_x$  emissions shall be limited to no more than 437 tons per year (as  $\text{NO}_x$ ), excluding emissions during periods of start-up, shutdown, malfunction or emergency conditions as defined in Condition 11. Under no circumstance shall facility-wide emissions exceed 518 tons per year.
7. Except for start-up and shutdown periods, each combustion turbine generator shall operate at a load of not less than 51 megawatts.

8. The fuel oil burned in the combustion turbines shall contain no more than 0.05 percent sulfur by weight. Procedures as described in 40 CFR 75, Appendix D, Section 2.2 must be used to determine sulfur content.
9. The combustion turbines shall generate electricity using natural gas or LNG only except as otherwise provided for in these conditions. When the fuel delivery to the turbines is interrupted or curtailed, the facility may burn No. 2 distillate oil but shall be limited to 143 tons/year of NO<sub>x</sub> when burning oil. If the facility has reached its 143 ton limit and there is a PJM system emergency as defined in Condition 11 and natural gas is unavailable, the facility may burn No. 2 distillate oil. Under no circumstance, however, may the facility burn No. 2 distillate oil for more than 2,400 turbine hours.

For the purposes of this condition, a year is defined as November 1 through October 31. Natural gas/LNG service interruptions shall be verified by a letter each year from Panda's natural gas/LNG supplier identifying the dates on which service was restricted. Panda will ensure that ARMA, PPRP, and the PSC receive a copy of this letter within 60 days of the start of each new year.

10. Panda will provide a gas supply plan to PPRP for its review.
11. For the purposes of Condition Nos. 6 and 9, a PJM system emergency is operation during reserve shortages and refers to Maximum Emergency Generation, as defined in Section 2.1 of the PJM Interconnection Operation Instructions, OI-8.15, Peak Load: Alerts, Warnings, Actions; Dated February 1992. Any changes affecting the definition of emergency conditions, for the purposes of this permit, must have the approval of ARMA. Panda shall submit annual reports to ARMA and the Maryland Public Service Commission that describe the times, duration, and circumstances of any operations under emergency conditions and identify whether each declared emergency condition applied to Panda alone or to any other part of the PJM Interconnection.

12. Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up of such facility, performance testing shall be conducted to determine compliance with the permitted limitations for oil, LNG, and gas burning. Testing of each turbine shall include NO<sub>x</sub>, volatile organic compounds (VOCs), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), sulfuric acid mist and carbon monoxide (CO) emissions. Compliance for NO<sub>x</sub> must be demonstrated for emission limitations in both pounds per hour and ppm. Periodic testing shall be conducted as recommended by ARMA after the initial performance testing. A stack testing protocol shall be submitted to ARMA and PPRP for review and approval by ARMA prior to the performance of any stack tests. The owner/operator shall provide at least 60 days prior notice of any performance test.
13. Panda shall install continuous emissions monitoring systems (CEMS) for NO<sub>x</sub> and oxygen (O<sub>2</sub>) in accordance with COMAR 26.11.01.10 and 11.

Panda shall develop, implement, and maintain for all CEMS a Quality Assurance (QA) Plan which satisfactorily documents operations pursuant to 40 CFR 60, Appendix F. The QA procedures of Appendix F must be followed.

At least 180 days prior to purchase of the CEMS, Panda shall submit to ARMA and PPRP a monitoring protocol and the QA plan. ARMA will approve the protocol and QA plan. The protocol shall specify acceptable instrumentation, monitoring procedures, calibration procedures, and data acquisition systems as required to demonstrate compliance with this permit. The protocol shall also include emission testing procedures that will be used to evaluate CEMS performance. The CEMS must be initially certified according to the applicable EPA Performance Specification in 40 CFR 60, Appendix B, and operated in accordance with 40 CFR 60.13. The CEMS must be installed, certified, and operational within 180 days of plant start-up.

Valid CEMS data (monitoring data for both NO<sub>x</sub> and O<sub>2</sub> concentrations) are required for a minimum of 90 percent of the plant operating hours in each quarter.

14. Within 45 days of the end of each calendar quarter, Panda shall submit to ARMA quarterly reports that contain for each turbine monthly summaries of at least the following:

- The total hours of operation;
- The number of hours of operation burning oil;
- The amount of oil burned, in units of gallons/hour and MMBtu/hour;
- The number of hours of operation burning natural gas and LNG;
- The amount of natural gas and LNG burned, in units of pounds/hour and MMBtu/hour;
- Times of start-up and shutdown of each turbine;
- The megawatts of electricity produced by each turbine on an hourly basis;
- The sulfur content of the fuel oil in the Panda fuel oil storage tank after fuel oil delivery, consistent with methods specified in 40 CFR 75, Appendix D, Section 2.2;
- The calculated hourly, daily, and cumulative annual VOC emissions;

- The maximum hourly and average hourly NO<sub>x</sub> emissions, in units of ppmvd at 15 percent oxygen and pounds per hour, and the cumulative annual NO<sub>x</sub> emissions;
- Any emissions in excess of NO<sub>x</sub> concentrations specified in this permit, including the amount of the emissions, the date(s) on which the excess emissions occurred, the length of time over which the excess emissions occurred, the reason(s) why the excess emissions occurred, and the corrective action taken, if required, to ensure that excess emissions do not occur in the future.

Data used for developing the above summaries shall be maintained on file at the plant for at least two years and shall be readily available to State personnel for inspection.

15. ARMA and other appropriate State personnel shall be afforded access to the Company's property, at reasonable times and upon presentation of credentials:

- To determine compliance with the certificate and applicable regulations;
- To sample any discharge into the atmosphere;
- To inspect any monitoring equipment required by this certificate or applicable regulation;
- To have access to and copy any records required to be kept by this certificate or by applicable regulations; and
- To obtain any photographic documentation relative to compliance with this certificate and applicable regulations.

16. There shall be no discharge of visible emissions other than water in an uncombined form from the combustion turbines, as required in COMAR 26.11.06.02.
17. Panda shall take reasonable precautions at all times to prevent fugitive particulate matter from becoming airborne, as required in COMAR 26.11.06.03.
18. All representations in the license application, in subsequent documentation provided by the applicant, and in license hearings with regard to construction plans, operating procedures, and other aspects of the proposed facility are incorporated by reference into these conditions. The owner or operator of this facility may not vary from such representations if the change will cause a change in the method of operation of the proposed facility, the method of control of emissions, or the character of the emissions, or if the change will result in an increase in the discharge of any of the various emissions.
19. Panda shall submit to ARMA by April 1st of each year an emissions statement certifying the annual emissions of VOC and NO<sub>x</sub> for the previous calendar year, as required in COMAR 26.11.01.05-1.
20. All reports and notifications required by NSPS 40 CFR 60.7 shall be sent to ARMA and to:

Air Enforcement Branch  
U.S. Environmental Protection Agency  
Region III  
841 Chestnut Building  
Philadelphia, PA 19107

21. If any air quality provision of this certificate shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from the certificate.

#### Socioeconomic Impacts

22. Panda shall comply with all conditions specified by the Maryland-National Capital Park and Planning Commission for on-site and off-site transportation improvements that have been resolved for the subdivision in which it is located.
23. Prior to the commencement of any construction-related activity, Panda shall construct a temporary haul road/entrance sufficient in width to accommodate industrial ingress/egress access, which is to connect to Cedarville Road within the right-of-way planned for the future construction of the Brandywine Industrial Spine Road (Betty Boulevard). The proposed haul road/entrance shall include a reserved left-turn lane into the site for eastbound traffic on Cedarville Road and, under no circumstances, shall be constructed closer than 400 feet to the Penn-Central Railroad crossing. In order to maintain traffic safety, all construction-related traffic must use this intersection to access the construction site. Panda shall coordinate all design and construction activities with the Prince George's County Department of Public Works.
24. Panda shall construct the Brandywine Industrial Spine Road (Betty Boulevard), as part of its frontage improvement responsibility, so that it is completed prior to the County issuing a "final use and occupancy permit" or commencement of operations of the Panda-Brandywine facility.
25. Panda shall work with the Mass Transit Administration of the Maryland Department of Transportation in the development and configuration of its linear facilities within the Conrail right-of-way in order to maintain the availability of the Conrail right-of-way for possible future commuter rail passenger travel.

26. Panda shall prepare and implement a detailed visual impact mitigation plan that identifies effective buffers between facility structures and potentially impacted households on the south side of Cedarville Road, both directly south and to the east of the Conrail right-of-way. This mitigation plan shall be submitted to PPRP for review prior to the start of construction.

Noise

27. Before construction begins, Panda shall prepare an updated analysis of noise impacts, which shall include the following elements:

- a. the combined effects of both the proposed generating facility and the associated distilled water facility; and
- b. actual vendor specifications of noise levels to be produced by the project components (transformers, combustion turbines (inlet and stack), heat recovery steam generators, turbine cooling water modules, and cooling towers), once vendors for the equipment have been selected.

Panda shall submit the updated noise analysis and supporting documentation on source characteristics and vendor guarantees to ARMA and PPRP, for ARMA's review and approval. Panda shall certify that the cogeneration plant will not create violations of Maryland's Environmental Noise Standards found at COMAR 26.02.03. If the analysis indicates that violations could occur, Panda shall include a detailed description of remedial measures which will be implemented to abate the known possible violations if they occur.

28. Within one year after commercial operation of the facility has begun, Panda shall conduct a study of ambient noise levels in the vicinity of the facility to ensure compliance with applicable noise levels. The study shall be conducted when the facility is operating at full load, and the associated host facility is also



in full operation, to assess the impacts of maximum noise emissions. The scope of work for the noise study shall be provided to MDE ARMA and PPRP, for MDE's review and approval, within six months after the generating facility commences operation. The results shall be submitted to MDE ARMA and PPRP not more than one year after Panda receives study approval from MDE ARMA.

#### Ground Water Appropriation

29. This CPCN authorizes Panda to appropriate and use waters of the state. The appropriation will be tracked under Water Resources Administration (DNR-WRA) permit number PG93G003(01). The appropriation will be subject to the following conditions:

- a. *Duration/Renewal.* The effective date of the appropriation will be the first of the month following the issuance of the Certification of Public Convenience and Necessity (CPCN). The appropriation will expire three years from the effective date or when treated effluent from the Mattawoman Wastewater Treatment Plant (WWTP) is available to Panda, whichever comes first. In order to renew the appropriation, Panda shall file a renewal application with DNR WRA no later than 45 days prior to expiration. In the event that the treated effluent is not yet available after three years, a one-year renewal of the appropriation shall only be granted if Panda provides written documentation demonstrating reasonable progress toward completion of the conveyance pipeline from the Mattawoman facility. The demonstration of reasonable progress shall be approved by DNR-WRA before the renewal request for the appropriation is granted.
- b. *Initiation of Withdrawal.* The permittee shall notify DNR WRA by certified mail when withdrawal for the uses specified by this appropriation has been initiated. This appropriation shall expire if water withdrawal is

not commenced within two years after the effective date. The time limit may be extended for good cause, at the discretion of WRA DNR, upon written request to DNR WRA prior to the expiration of the two year period. Withdrawal associated with plant construction can qualify as initiation.

- c. *Allocation.* The water withdrawal is limited to a daily average of 1,322,000 gallons on a yearly basis and a maximum daily withdrawal of 1,849,000 gallons for the month of maximum use.
- d. *Use.* The water is to be used for boiler makeup, emission control, cooling purposes, construction support, potable water, fire protection, and plant washdown.
- e. *Source.* The water shall be withdrawn from two wells completed in the La Plata Aquifer of the Patapsco Formation.
- f. *Non-transferable.* This appropriation is non-transferable. A new owner may acquire authorization to continue the appropriation by filing a new application with DNR WRA. Authorization will be accomplished by issuance of a new permit.
- g. *Suspension or Revocation.* This appropriation may be suspended or revoked by DNR WRA upon violation of the conditions of this appropriation, or upon violation of any regulation promulgated pursuant to Title 8 of The Natural Resources Article, Annotated Code of Maryland (1990 Replacement Volume) as amended.
- h. *Change of Operations.* Any anticipated change in appropriation which may result in a new or different use, quantity, source, or place of use of

water shall be reported to DNR WRA by Panda by submission of a new application.

30. DNR WRA shall review the appropriation every three years (triennial review) regarding water use under the terms of the appropriation. Failure to return the triennial review query will result in suspension or revocation of the appropriation. DNR WRA may at any time (including triennial review or when a change application is submitted) revise any condition of this appropriation or add additional conditions concerning the character, amount, means, and manner of the appropriation or use, which may be necessary to properly protect, control and manage the water resources of the State. Condition revisions and additions will be accomplished by issuance of a revised appropriation.
31. Panda shall conduct the following monitoring activities in support of the ground water appropriation:
  - a. *Flow Measurement.* Panda shall measure all water used under this appropriation by a method approved by DNR WRA.
  - b. *Monitoring Water Levels.* Panda shall install and maintain a monitoring well on the property. The monitoring well shall be completed in the La Plata Aquifer. The proposed design and construction plans of the well shall be submitted in writing to DNR WRA for approval 60 days prior to the installation of the well. Panda shall measure and record, on a monthly basis, water levels in each production well and the monitoring well.
  - c. *Capability to Obtain Water Level Measurements.* For the two pumping wells and the monitoring well, pumping equipment shall be installed so that water levels can be measured during pumping and non-pumping periods without dismantling any equipment. An opening for tape

measurements of water levels shall have a minimum inside diameter of 0.5 inches and be sealed by a removable cap or plug. Panda shall provide a tap for taking raw water samples before water enters a treatment facility, pressure tank, or storage tank.

- d. *Withdrawal and Water Level Reports.* Panda shall submit to DNR WRA semi-annually (July-December, no later than January 31 and January-June, no later than July 31), pumping and water level measuring records. These reports shall show the total quantity of water pumped and the water level as measured in each well for each month under this appropriation.

32. Panda shall allow authorized representatives of DNR WRA access to Panda's facility to conduct inspections and evaluations necessary to assure compliance with the conditions of this appropriation. Panda shall provide such assistance as may be necessary to effectively and safely conduct such inspections and evaluations.
33. Treated effluent from the Martawoman WWTP shall be the sole source of cooling water for this facility under normal operating conditions. After construction of the effluent pipeline is complete, ground water withdrawals granted by this appropriation are limited to a daily average of 64,000 gallons on a yearly basis and a daily average of 342,000 gallons for the month of maximum use, to be used for the purposes listed in Condition No. 29.d. (with the exception of cooling). The appropriation will continue to be tracked by DNR WRA under permit number PG93G003(01), and will be subject to the same limitations specified in Condition No. 29.e. through 29.h. This appropriation is subject to renewal by DNR WRA 12 years from the date the CPCN is issued. Prior to the delivery of treated effluent to the facility, the water withdrawals shall be governed by Condition No. 29.

34. After construction of the effluent pipeline is complete, in the event that treated effluent becomes unavailable due to an emergency at the treatment plant or the Panda facility, Panda may withdraw an average of 1,849,000 gpd for a period not to exceed 30 consecutive days. Panda shall notify DNR WRA immediately and in writing of the emergency situation. The notification shall detail the nature of the emergency and the expected duration. Emergency withdrawals shall cease immediately upon abatement of the emergency. If emergency conditions are expected to exceed 30 days duration, Panda must apply to DNR WRA and be granted authorization to continue emergency withdrawals. For the purposes of this condition, an emergency situation is defined as:

- total shutdown of the Mattawoman facility either from electrical or mechanical failures;
- failure of blockage in the pipeline or lift stations;
- mechanical or electrical problems at the Panda-Brandywine facility (e.g., valve, pipe, or filter problems); or
- failure to meet the residual chlorine limitation specified in Condition No. 37 or the turbidity limit specified in Condition No. 39.

#### Use of Treated Effluent

35. Effluent from the Mattawoman WWTP shall be conveyed to the Panda facility via pipeline. The pipeline shall be designed in such a manner to provide a minimum of 8 hours of in-line retention prior to delivery of the water to the site. In addition, the WWTP effluent delivery pipeline shall be installed in such a manner to allow instantaneous by-pass of the cooling water system and return of the WWTP effluent to the municipal sewer system in the event that WWTP effluent of unsuitable quality is received.

36. Each January following issuance of the CPCN, Panda shall submit to the PSC and DNR a progress report describing the status of the effluent pipeline construction project. The progress reports shall discuss all permits and approvals applied for or obtained, and shall update the implementation schedule. Panda shall notify DNR immediately of any changes in the implementation schedule that would delay by six months or more the date on which treated effluent will be available for facility use.
37. Panda shall superchlorinate the effluent withdrawn from the Mattawoman WWTP to establish a free residual chlorine concentration of 0.5 mg/l at the initial pump station in the effluent pipeline system. At or near the midpoint of the effluent pipeline, Panda shall maintain a continuous chlorine monitor to measure free chlorine concentration in the effluent, and shall perform additional chlorination at the initial pump station whenever the free chlorine concentration is below 0.5 mg/l. In addition, Panda shall also maintain a continuous free chlorine monitor at or near the end of the effluent delivery pipeline and shall dose additional chlorine at this location whenever the free residual chlorine concentration is below 0.5 mg/l.
38. Prior to construction, Panda shall provide to the PSC and PPRP for their review and approval final design documentation, including drawings and equipment and materials specifications, for the chlorination and chlorine monitoring systems required by Condition No. 37. Also prior to construction, Panda shall submit to the PSC and PPRP for approval a report describing the specific procedures related to the withdrawal of effluent from the Mattawoman WWTP and related routine procedural interactions between Mattawoman plant personnel and Panda-Brandywine.
39. Following treatment of WWTP effluent at the Brandywine facility and prior to entry in the cooling system, Panda shall as a minimum perform daily sampling and analyses for total suspended solids, pH, turbidity, fecal coliform, and free

chlorine residual. These tests shall be performed in accordance with procedures specified in 40 CFR 136, and the results maintained in the facility's operating log. Turbidity values greater than 5 Nephelometric Turbidity Units (NTU) shall result in effluent water unsuitable for use in the Panda cooling water system. In addition to the above analyses, Panda may perform testing for enteric viruses, as well as any other parameters they choose, to suggest an alternative chlorination scheme to that prescribed in Condition No. 37. If virological analysis are performed by Panda, they shall be performed by a certified virology laboratory. In addition, sample concentration, assay and virus identification shall be performed in accordance with one of the procedures recommended in Standard Methods for the Examination of Water and Wastewater (latest edition). Panda shall submit these analytical data to PPRP for interagency review no less frequently than once per month and may submit the data prior to or at any time during plant operation. At least six months operational data, or the equivalent thereof, shall be required by PPRP for their review. These reports will be reviewed, including comparisons with available water quality standards for reclaimed water, to determine if the requirements contained in this condition and Condition No. 37 can be adjusted while maintaining the appropriate level of disinfection.

40. Consistent with specifications outlined by the American Water Works Association (AWWA) in "Guidelines for Distribution of Nonpotable Water," to prevent inadvertent and inappropriate use of the WWTP effluent, Panda shall ensure the following:

- All exposed and aboveground piping, fittings, pumps, valves, etc., associated with the WWTP effluent line shall be painted purple "Pantone 512."

- All piping shall be identified using an accepted means of labeling reading, "CAUTION: NONPOTABLE WATER -- DO NOT DRINK" or "CAUTION: RECLAIMED WATER -- DO NOT DRINK".
- In a fenced pump station area, at least one sign shall be posted on the fence that can be readily seen by all operations personnel using the facility.

#### Water Discharge

41. Panda shall obtain an Industrial Discharge Authorization Permit from the Washington Suburban Sanitary Commission (WSSC) prior to beginning operation of the facility.

#### Fuel Delivery and Storage

42. Panda shall comply with the requirements of applicable US Department of Transportation (DOT) regulations in 49 CFR Part 192, and applicable regulations of the PSC Pipeline Safety requirements in COMAR, in designing, operating, maintaining, and constructing the natural gas pipeline. In addition, Panda shall design the natural gas pipe in compliance with the applicable standards for Class 4 locations under the US DOT regulations. The remainder of the pipeline and its features shall comply with the minimum federal safety standards for Class 3 locations.
43. Prior to the commencement of construction of the Panda facility and associated linear facilities, Panda shall develop a Risk Management Plan (RMP) for the gas and water pipelines. Prior to construction, Panda shall submit a copy of the plan to the PSC and PPRP for review and approval by the PSC. In addition, Panda shall also submit a copy of the plan to the Charles County



Commissioners for review and approval of that portion of the Risk Management Plan which addresses facilities located in Charles County. The plan should reduce the likelihood, mitigate the consequences and provide for emergency response to accidental releases of hazardous materials (e.g. natural gas, odorizing agents) associated with the pipelines. The plan shall consist of the following risk management elements: Management System; Process Safety Information; Process Hazards Analysis; Hazards Assessment; Operating Procedures; Training Program; Contractor Management Program; Pre-startup Safety Review; Maintenance and Structural Integrity Program; Hot Work Permits Program; Management of Change Program; Incident Investigation and Recovery Program; Emergency Planning, Communication and Response Program; and Compliance Audit Program. The comprehensive nature of this RMP will address the requirement for emergency response plans contained in 49 CFR 192.615 and operation and maintenance procedures in 192.605, but will also include procedures for employee training, maintenance, leak detections and incident awareness to ensure that Panda addresses both accident prevention as well as emergency response. The approved plan will be implemented by Panda prior to the commencement of operations of the facility. Panda shall coordinate an emergency response plan with the Federal Railroad Administration and local fire officials.

Panda shall review the plan annually, revise it as appropriate to reflect any significant changes in operation, management, or the surroundings. At a minimum the annual review should result in a report summarizing the status of all required activities associated with each Plan element. The report and any necessary changes to the Risk Management Plan will be submitted to the PSC and PPRP.

44. The tie-in point of the Panda gas line with the Columbia LNG line (i.e., Facilities at Columbia) shall be protected as required in 49 CFR Part 192.317 by either locating these facilities a minimum distance of 120 feet from the

center of the railroad track, or by placement below ground. If these facilities are placed below ground, they shall be placed in a ventilated vault designed in accordance with the minimum standards of 49 CFR Part 192.182, Part 192.185, Part 192.187 and Part 192.189. In addition, Panda shall be responsible for odorizing the 6.5 mile pipeline; odorization facilities shall be considered part of the Facilities at Columbia and subject to the requirements of this condition.

45

Panda-Brandywine shall provide to the PPRP and the PSC the final detailed design, routing, construction procedures, and plans for the entire natural gas facilities and natural gas pipeline system, as well as the effluent pipeline system, prior to any construction activities. Final approval for construction will be given by the PSC only after reviewing these design details, procedures, and plans and ensuring that the project protects the public and environment to the greatest extent feasible.

46.

Panda shall provide secondary containment for the on-site oil storage tank. All piping associated with the oil storage tank shall either be above ground or shall have secondary containment. The waste oil collection system (including piping) associated with the oil/water separator shall also be either above ground or shall have secondary containment.

47.

Before operation begins, Panda shall prepare a final Spill Prevention, Control and Countermeasures Plan, and have the plan reviewed and certified by a registered Professional Engineer in the State of Maryland as specified in 40 CFR 112.3.

48.

During the detailed design phase, Panda shall submit to MDE an application for an Oil Operations Permit. The application shall be submitted sufficiently early to allow MDE to request changes in facility design with regard to oil storage and conveyance.

### Aquatic and Terrestrial Impacts

49. Prior to the commencement of construction of the Panda-Brandywine facility, Panda shall finalize its Erosion and Sediment Control Plan and its Stormwater Pollution Prevention Plan for the facility and associated linear facilities and prepare a grading plan for the site. These plans shall be submitted to PPRP for review, and to Prince George's County Department of Environmental Resources, Prince George's County Soil Conservation District, and WSSC for review and approval; Panda shall submit only plans for the linear facilities to Charles County for its review and approval as well. The approved Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan shall be on site during all phases of construction.
50. Panda shall minimize the disturbance of stream beds and minimize sediment transport into the adjacent waters of the state during construction and operation of the Panda-Brandywine facility and associated linear facilities. Sediment bearing waters shall not be discharged to the receiving waterway except as provided in the Erosion and Sediment Control Plan. Discharges of sediment bearing water shall not cause violations of the State water quality standards.
51. Construction work, including temporary access bridges, fords, or culverts within the stream channels shall be conducted in a manner to protect fish habitat and in accordance with the seasonal restrictions for each proposed stream crossing as specified in COMAR 26.08.02.11B and as specified by DNR WRA in compliance with COMAR 08.05.03.
52. Prior to the commencement of any construction activity within a regulated area, Panda shall contact DNR WRA, Prince George's County, and the US Army Corps of Engineers, as appropriate, to obtain waterway construction and nontidal wetlands permits or exemptions in accordance with COMAR 08.05.07, 08.05.04, and 08.05.03, Section 404 of the Clean Water Act, and Section 10

of the Rivers and Harbors Act. A copy of these permits or exemptions shall be forwarded to the PSC and PPRP.

53. To fully address the issue of wetland buffers on the site, Panda shall prepare a site grading plan and compute the extent of disturbances to nontidal wetland buffers, if any. These plans shall be submitted to PPRP and Prince George's County for review to determine if these impacts can be further reduced or if a nontidal wetlands permit is required.
54. Panda shall employ best management practices as defined in COMAR 08.05.04.10 in constructing and maintaining the Panda-Brandywine facility and associated linear facilities in wetlands. In addition, Panda shall minimize vehicle traffic in wetlands where possible. Where wetland soil could be potentially damaged by vehicle access for the construction of the Panda-Brandywine facility or linear facilities, clearing and maintenance cutting will be restricted to chain saws or brush axes, vehicle access will be restricted to four-wheel drive and low-pressure vehicles where necessary, and heavy equipment will be placed on mats. Facility or linear facility structures may not be placed in open water areas. All mats used for construction access in nontidal wetlands shall be removed within four weeks of initial placement. Temporary access roads in nontidal wetlands shall be removed and restoration initiated immediately upon completion of construction for that portion of the linear facility. Any disturbance to the bottom contours of waters and the elevations of wetlands shall be corrected at the end of the construction period so that the post-construction bottom contours and elevations of nontidal wetlands are the same as the original contours and elevations.
55. In developing final plans for the stormwater detention pond(s) on the Brandywine site, Panda shall consider the feasibility of using enhanced wet ponds or stormwater wetlands, as discussed in the document prepared by MDE Stormwater Management, entitled *Feasibility and Design of Wet Ponds to*

*Achieve Water Quality Control* (July 1986), and *The Design Manual for Use of Bio-Retention and Stormwater Management* (June 8, 1993) prepared for the Prince George's Watershed Protection Branch, respectively.

56. Prior to the construction of the Panda-Brandywine facility and associated linear facilities, Panda shall prepare a Forest Stand Delineation and a Forest Conservation Plan to comply with the Maryland Forest Conservation regulations (COMAR 08.19.01 through 08.19.06) and the Prince George's County Woodland Conservation and Tree Preservation Ordinance (for the site and those portions of the linear facilities in Prince George's County). These plans shall be submitted to PPRP and DNR Forestry Division for review and to Maryland-National Capital Parks and Planning Commission for review and approval. For those portions of the linear facilities that are in Charles County, Panda shall prepare and submit a Forest Stand Delineation and Forest Conservation Plan to PPRP and DNR Forestry Division for review and to Charles County for review and approval.

#### Linear Facilities

57. When the actual right-of-way centerline alignment and right-of-way width have been defined by Panda, Panda shall provide details on the following to PPRP and the PSC in accordance with COMAR 20.80.04:
- a. Final engineering and construction plans of the linear facilities, including the following: right-of-way width; length and total acreage of the rights-of-way; area of disturbance for the pipelines; transmission line structures and foundation types and dimensions; transmission line conductor configuration; nominal length of span between transmission line structure types; and dewatering procedures to be implemented for construction of the linear facilities.

- b. Quantitative description of all temporary and permanent impacts on terrestrial resources and land use characteristics.
  - c. The results of a habitat assessment study of the linear facility rights-of-way and access roads. This habitat assessment study will include, at a minimum, a description of existing natural resources, the results of a wetlands delineation study, a discussion of potential impacts to wetlands and other natural resources, and a discussion of proposed mitigation measures to minimize impacts to these resources.
58. Panda shall provide a plan to PPRP for review and DNR Nontidal Wetlands for review and approval which indicates how the linear facility design will avoid and minimize adverse impacts to nontidal wetlands, surface waters, and aquatic biota.
59. Panda shall maintain, through existing or replaced vegetation, 100 feet of natural vegetation as a buffer within the transmission line right-of-way where the right-of-way crosses roads, wetlands, and waterways, when compatible with existing land use. Selective maintenance within buffers shall permit the growth of screens with limited cutting and topping of vegetation. Vegetation that provides shade for, or is located on the banks of streams shall be retained or replaced. Following the identification of dominant vegetation at all stream crossings, Panda shall develop revegetation plans for the stream crossings, to be reviewed by PPRP, that minimize the amount of clearing and permit safe operation of the transmission line. When a right-of-way is cleared, it shall be widened away from the stream banks toward the uplands. As slope increases, the buffer zone shall be increased in order to minimize run-off.
60. Unless required otherwise for railroad safety, temporarily impacted wetlands and a 25-foot adjacent buffer shall not be mowed or otherwise managed to prevent the re-establishment of woody vegetation. Ground stabilization in the

wetland and buffer immediately after construction activities shall be with the following species: annual ryegrass (*Lolium multiflorum*), millet (*Setaria italica*), barley (*Horedum* spp.), oats (*Uniola* spp.), and/or rye (*Secale cereale*). Other non-persistent vegetation may be acceptable, but must be approved by DNR Nontidal Wetlands Division. Kentucky 31 fescue shall not be used in wetlands or buffers.

61. Panda shall work with the affected property owners in an attempt to reduce tree clearing or trimming within the linear facility rights-of-way, to the extent practicable, prior to final design of the transmission line and other linear facilities. In agricultural areas, grasses will be planted along streams where acceptable to the property owners.
62. Panda shall provide to the PSC and PPRP for review copies of contract specifications, guidelines and standards for clearing, construction, rehabilitation and maintenance of the rights-of-way sixty (60) days prior to beginning of construction. During any clearing of the rights-of-way, Panda and its contractors shall leave tree roots and stumps in place, except where such roots and stumps interfere with structure locations, access roads, or other components of the linear facilities. Cleared trees will be cut and windrowed along the edge of the right-of-way for wildlife habitat where acceptable to the property owner. Brush may be shredded and distributed on the cleared right-of-way as a ground cover to stabilize the soil surface.
63. PEPCO and its contractors shall use selective maintenance techniques to maintain the transmission line right-of-way. These techniques may include: chemical injection of herbicides, selective basal spraying, growth regulators, and the use of chain saws for fast-growing trees or existing large trees. All herbicides applied in any of the rights-of-way associated with the Panda-Brandywine facility shall be approved by the US Environmental Protection Agency and the Maryland Department of Agriculture. Herbicides

applied near aquatic environments must be approved for that use. No aerial application of herbicides shall be permitted.

64. Prior to the commencement of construction, Panda shall obtain from DNR, MDE, Prince George's County and Charles County all permits required to develop the linear facilities, including, if applicable, a nontidal wetlands Letter of Exemption.
65. In the construction of the transmission line, Panda shall follow the measures described in its application to minimize EMF at the edge of the right-of-way. Also, prior to construction of the transmission line, Panda shall furnish PSC Staff, ARMA and PPRP with a plan for assessing EMF values resulting from the line. The plan shall be subject to review and approval by the PSC and ARMA and shall specify loading assumptions and calculated EMF values from the centerline and edge of the transmission line right-of-way for the minimum proposed line clearances. The plan shall further incorporate the measurement of actual EMF values for each structure type and right-of-way width at the centerline and edge of the right-of-way, to be performed within three months of energizing the line and should explicitly show that the reverse phasing on the double-circuit part of the line does in fact reduce fields. The specific measurement locations and methods must be identified in the plan.





*Appendix D*  
*Dorchester Recommended*  
*Conditions*

Public Service Commission Case No. 8489, Phase II: Delmarva  
Power and Light Company's Proposed Dorchester Power Plant

RECOMMENDED CONDITIONS

*General*

1. Except as otherwise provided for in the following provisions, the application for the Certificate of Public Convenience and Necessity (CPCN) is considered to be part of this CPCN (certificate) for Delmarva Power's Dorchester power plant, Unit 1. The application consists of the original application received by the Maryland Public Service Commission (PSC) on 1 December 1993 including amendments dated 22 April 1994, 26 April 1994, and 13 June 1994, and supplemental information submitted to the PSC. Construction and operation of the facility shall be undertaken in accordance with the CPCN application and subsequent amendments. If there are any inconsistencies between the certificate conditions specified below and the application, the conditions in this certificate shall take precedence.
2. If any provision of this certificate shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provision shall be considered severed and deleted from this certificate.
3. Construction and operation of the facility shall be undertaken in accordance with this certificate and shall comply with all applicable local, State, and Federal regulations, including but not limited to the following:
  - a. Air Pollution Control
    - (1) COMAR 26.11.01.10A requires continuous emissions monitoring for fuel burning equipment with a rated heat input capacity of 250 million British thermal units per hour (MMBtu/hr) or greater;
    - (2) COMAR 26.11.06.02 C (3) prohibits, from any act of materials handling or construction, any visible emissions beyond the property line;
    - (3) COMAR 26.11.06.03D requires reasonable precautions to prevent any particulate matter from becoming airborne as a result of material being handled, transported, or stored;
    - (4) COMAR 26.11.06.08 and .09 generally prohibits the

discharge of emissions beyond the property line in