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JUN 27 2007

DIVISION OF AIR
RESOURCES MANAGEMENT



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June 25, 2007

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Certified Mail
No. 7006 3450 0000 2282 0803
Return Receipt Request

✓ Mr. Joe Kahn, P.E., Director
Division of Air Resources Management
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, MS-5500
Tallahassee, FL 32399-2400

Mr. Mike Halpin, P.E., Administrator
Siting Coordination Office
Florida Department of
Environmental Protection
2600 Blair Stone Road, MS 48
Tallahassee, FL 32399-2400

RE: Curtis H. Stanton Energy Center Unit B IGCC
PSD Permit No. PSD-FL-373

Dear Mr. Kahn

Dear Mr. Halpin:

The Orlando Utilities Commission ("OUC") and Southern Power Company-Orlando Gasification LLC ("Southern") have recently obtained the necessary approvals from the Florida Department of Environmental Protection ("Department"), including a Site Certification Order and Prevention of Significant Deterioration ("PSD") air construction permit, for the construction of a 285-megawatt Integrated Gasification Combined Cycle ("IGCC") unit at the Stanton Energy Center ("Stanton Unit B"). The project has been selected by the U.S. Department of Energy ("DOE") to demonstrate advanced power generation systems using IGCC technology. DOE and Southern executed a Cooperative Agreement amendment giving DOE's final approval for construction of the facility effective on May 1, 2007, whereby DOE will provide cost-shared funding to design, construct, and demonstrate this new technology. Upon completion, Stanton Unit B is expected to be one of the cleanest and most-efficient coal-based power plants in the world. Construction is scheduled to commence in September of 2007.

We are pleased to report that, after much effort, the Front-End Engineering Design ("FEED") process for this demonstration project is now complete. As a result of this FEED process, certain technical aspects of the project are being refined from the preliminary design plans available during the PSD air construction permitting process. The purpose of this letter is to inform the Department of these design updates in order to update the Department's records accordingly. We believe the data included in support of this letter is both complete and sufficient and would satisfy the standard for data which may be required for post-certification review as provided for in Section 62-17.191, F.A.C.

In particular, OUC /Southern intend to incorporate the following updates in design plans for Stanton Unit B:

1. This project will require construction of a single gasifier vessel instead of two gasifier vessels. The coal input to and the syngas output from the single gasifier will be the same as presented in the original application as the total for the two gasifiers. A single gasifier is shown on the site drawings included in Attachment 1. With a single gasifier as opposed to two gasifiers, emissions during gasifier startup will remain within the estimates presented in the original application and will most likely be reduced.
2. This project will require certain site layout revisions in order to optimize the design and performance of the unit. Upon the conclusion of FEED, several structure heights and locations have been revised. These revisions are indicated in the design drawings located in Attachment 1. A revised air dispersion modeling study has been conducted considering the new layout and its results are included in Attachment 2. Impacts from all pollutants modeled remain below applicable modeling significance levels.
3. This project will require that certain components of the coal storage system be resized. The number of coal processing trains has been reduced from four to three resulting in the following revisions to the material handling system:
 - The system will include three Crushed Coal Storage Silos (1-3) instead of the original four (referred to as Coal Storage Bins 1-4 in the original application). These silos will have a common baghouse that replaces the original four Crushed Coal Storage Silo 1-4 baghouses.
 - A nitrogen purge stream will replace the original four coal mill silo baghouses.
 - The ash storage silo baghouse has been eliminated.
 - There will be a discharge from a makeup solids unloading system.

The overall result of these updates is that the number of emission points from the system is reduced, as are the total emissions from the system. These changes have been reflected in the drawings in Attachment 1 and in the revised dispersion modeling included in Attachment 2.

4. The flare will be resized to provide for the ability to flare several process vents during emergency conditions (instead of their release to the atmosphere) as well as for continuous flaring of several small cleanup streams from the gasification island. Any changes in NOx emissions at the flare as a result of this resizing will be accommodated under the existing NOx Emissions Cap as stated in the Permit.

Mr. J. Kahn
Mr. Halpin


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The IGCC project did not trigger PSD applicability for NOx; the PSD permit therefore only establishes a total NOx cap. The resizing of the flare will not affect this NOx Emissions Cap and no change to the permit conditions is requested. The permit does specify, as an emission unit description, "A multipoint flare (including 8 pilot flares)". As detailed design of the flare system is completed, it is likely that the exact number of pilots will change. Since the resizing of the flare will not require a change in any permit limit, and since the NOx Emission Cap for Unit B will remain the same, we request that the informational description of the flare be administratively corrected from "including 8 pilot flares" to "including a pilot system".

These technical design updates are consistent with the kinds of changes contemplated during the permitting process. We have attached revised materials to update the application file reflecting these revisions. We do not anticipate that these changes will require substantial technical evaluation by the Department, and these changes will not lead to substantially different environmental impacts. Accordingly, it is our understanding that no processing fee is required by the Department for these updates to the application. While some information referenced by the permit from the application is revised, this is considered an informational change to the permit only, and no change to the conditions of the permit is requested.

Thank you for your attention to this matter. Please let me know if you have any questions or need additional information.

Sincerely,

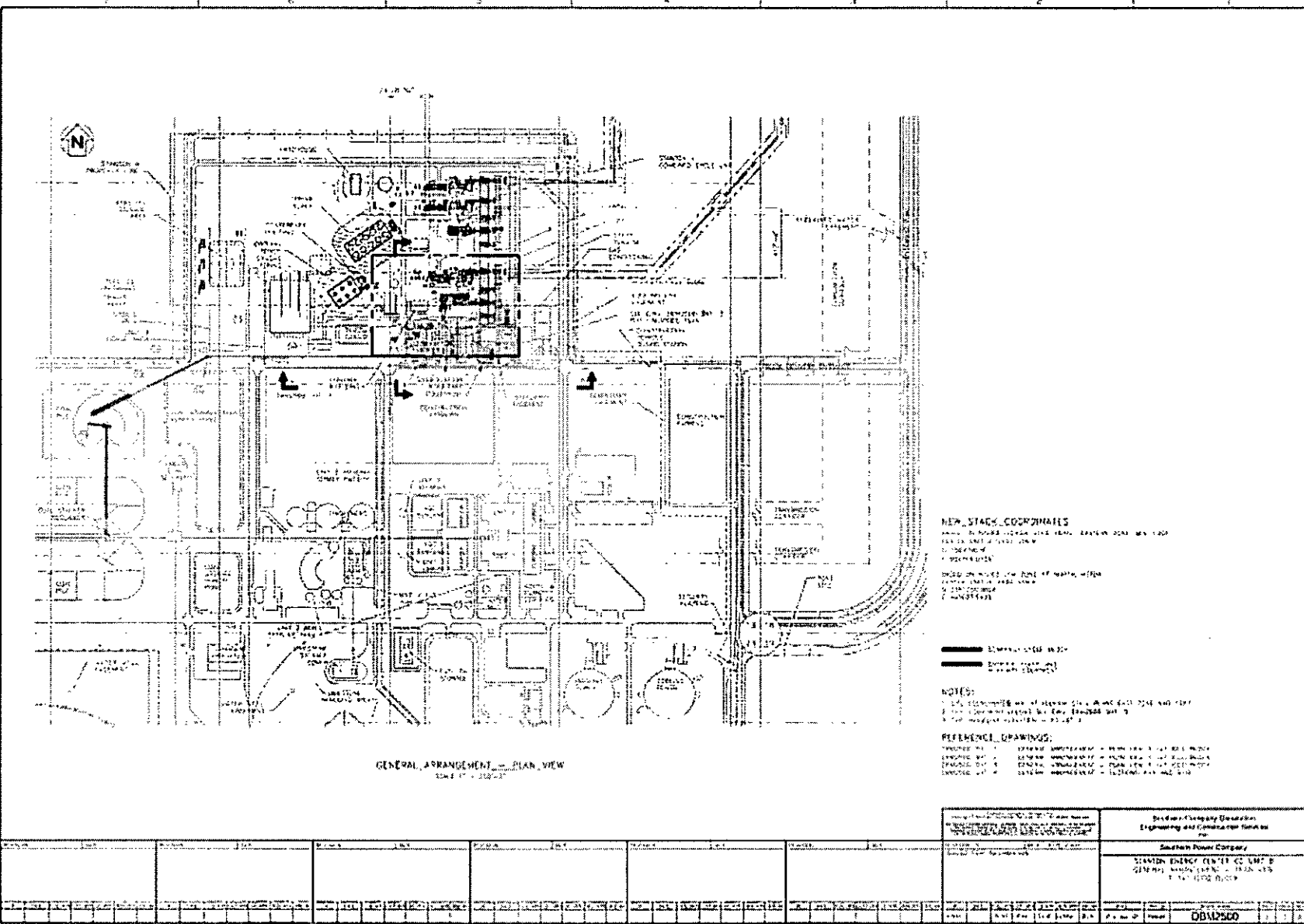

Denise Stalls, Vice President
Environmental Affairs

cc: Ms. Trina Vielhauer, FDEP
Mr. Alvaro Linero, P.E., FDEP

Attachments

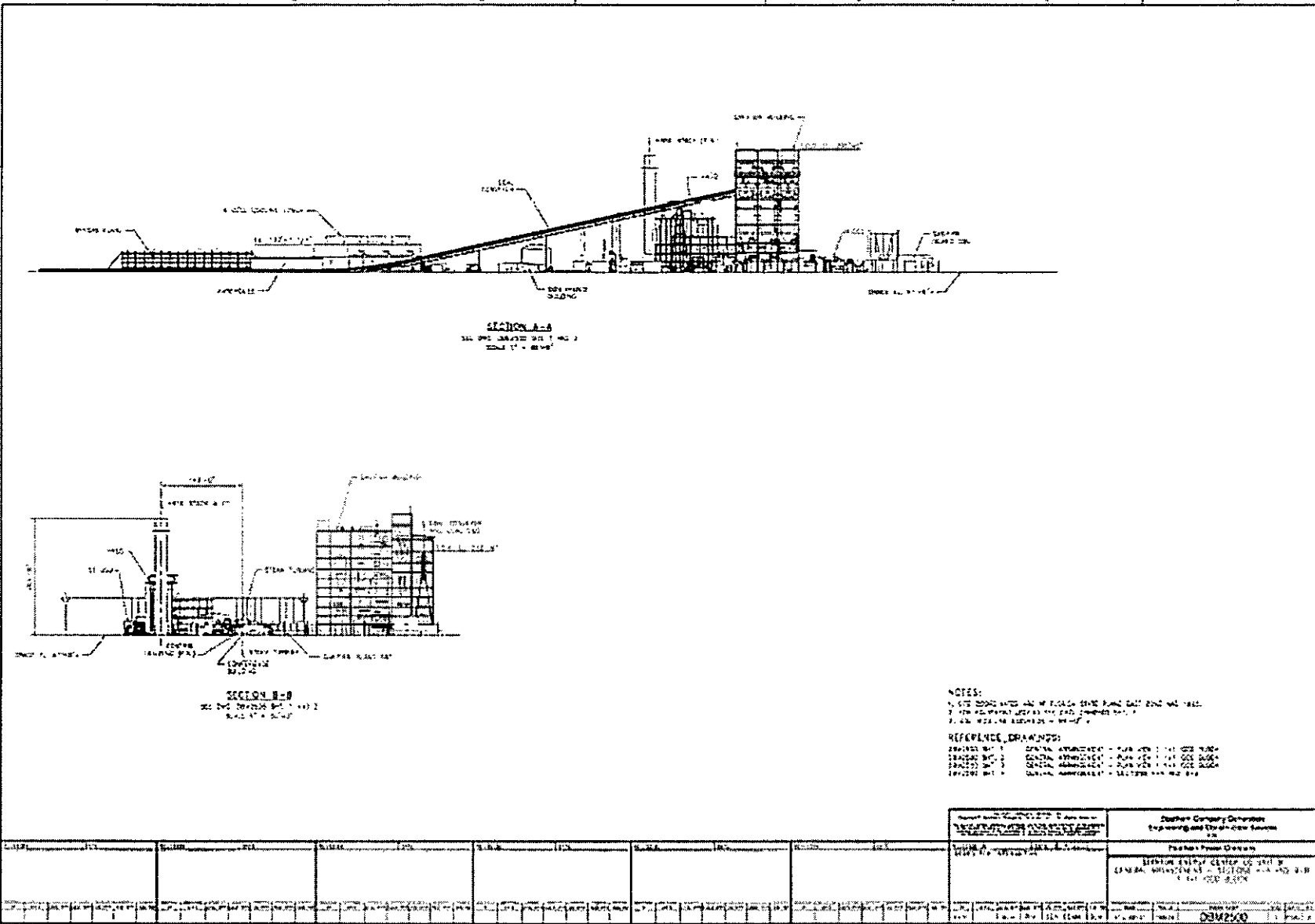
1. Updated Facility Design Drawings.
2. Revised Dispersion Modeling Results.

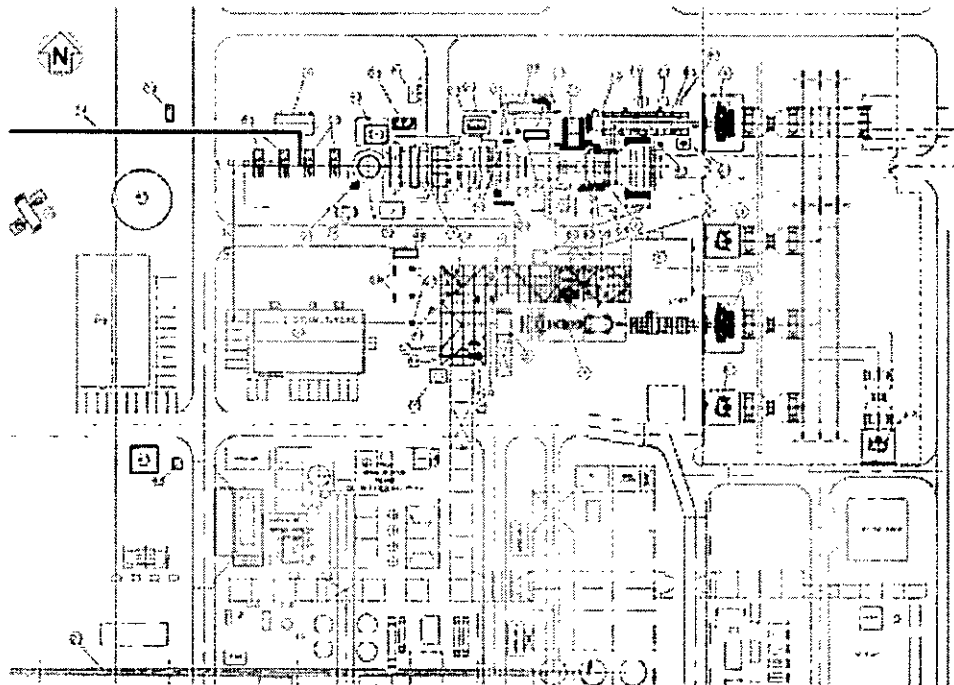
Attachment 1
Updated Facility Design Drawings



| NO. | REVISION | DATE | BY | CHECKED | APPROVED | DESCRIPTION |
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08A01250





LEGEND

- 1. Steam Turbine
- 2. Condenser
- 3. Cooling Water Pump
- 4. Cooling Tower
- 5. Cooling Water Reservoir
- 6. Cooling Water Distribution
- 7. Cooling Water Piping
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— STEAM LINE
 --- WATER LINE
 --- COOLING WATER LINE

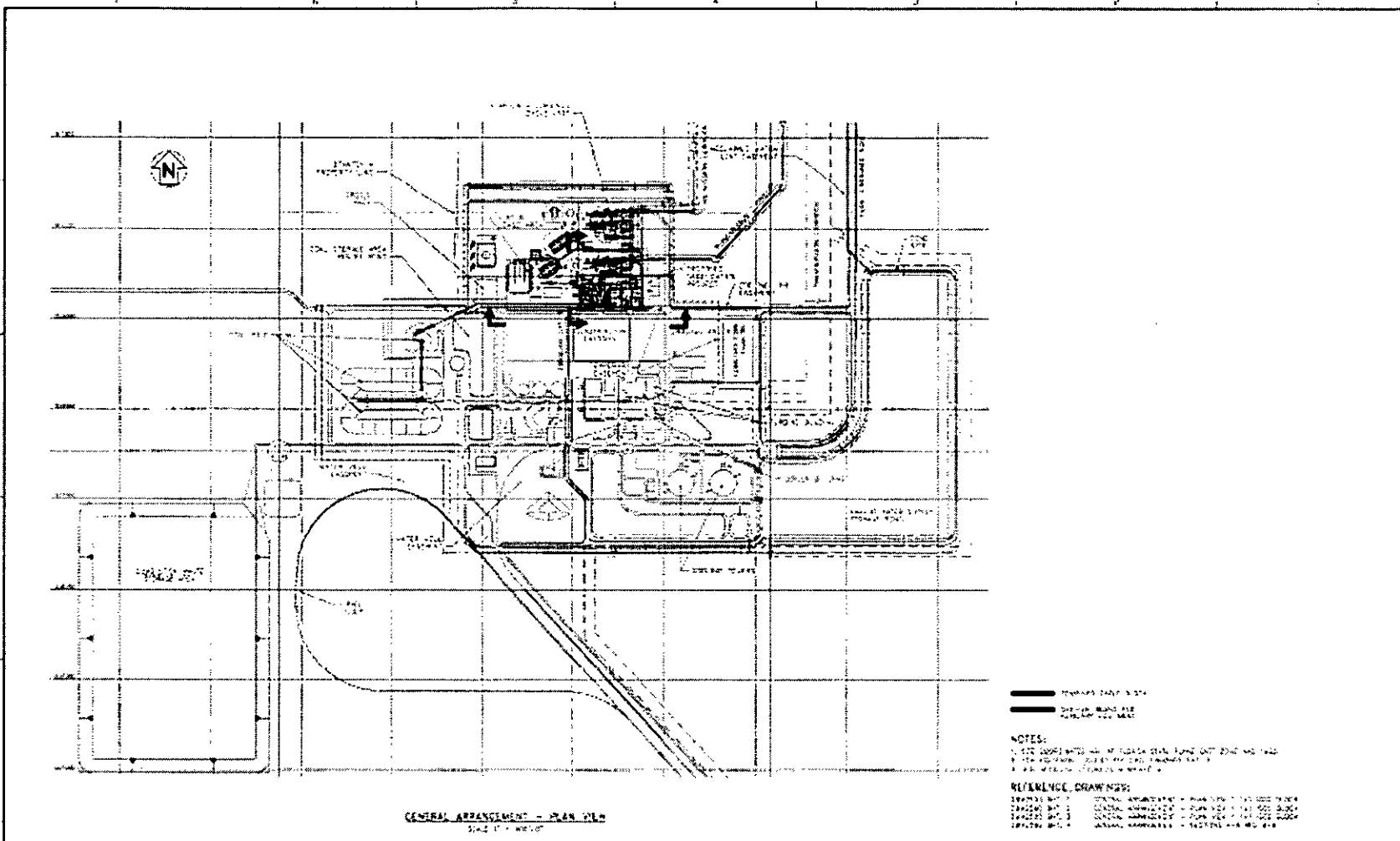
- NOTES:**
1. SEE LEGEND FOR SYMBOLS AND DIMENSIONS
 2. SEE LEGEND FOR DIMENSIONS
 3. SEE LEGEND FOR DIMENSIONS

REFERENCE DRAWINGS:

- 1. GENERAL ARRANGEMENT - PLAN VIEW
- 2. GENERAL ARRANGEMENT - PLAN VIEW
- 3. GENERAL ARRANGEMENT - PLAN VIEW
- 4. GENERAL ARRANGEMENT - PLAN VIEW

GENERAL ARRANGEMENT - PLAN VIEW
 1/2" = 1'-0"

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| SYSTEM NO. _____ PROJECT NO. _____ | | | | | | | | | | Station Power Category STATION ENERGY CENTER CC LMT D GENERAL ARRANGEMENT - PLAN VIEW 1/2" = 1'-0" | | | | | | | | | |
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Attachment 2
Revised Dispersion Modeling Results

Stanton Unit B
Revised Class II Modeling – June 2007

Project Revisions

1. Changes to site layout and structure heights per updated design drawings.
2. Reduce 6-cell cooling tower PM₁₀ emission rate per cell from 0.22 lb/hr (0.0277 g/s) to 0.055 lb/hr (0.0069 g/s) due to change in drift loss rate from 0.002% (rate proposed in application) to 0.0005% (permitted rate). Cooling tower exhaust parameters remain unchanged.
3. Number of coal processing trains has been reduced from four to three resulting in the following revisions to the material handling system:
 - a. System will include three Crushed Coal Storage Silos 1-3 instead of the original four (referred to as Coal Storage Bins No. 1-4 in the PSD permit application and Pulverized Coal Storage Bins No 1-4 in the PSD permit). Since only one silo can receive crushed coal at a time, system will be equipped with one common baghouse. The common baghouse on Crushed Coal Storage Silos 1-3 replaces the original four Crushed Coal Storage Silo 1-4 baghouses. Common baghouse will have an exhaust flow rate of 484 acfm (will use a nominal 500 scfm for PM/PM₁₀ emission estimates), and will be located on the northern side of the middle silo (SI2100) at an elevation approximately 135 feet above grade. Baghouse outlet PM/PM₁₀ emission rate is 0.043 lb/hr (0.0054 g/s) based on permit limit of 0.01 gr/scf.
 - b. Nitrogen will be used to convey the overhead streams from the three coal mills to baghouses for coal separation. The conveying nitrogen streams will then be cooled, dried, and recirculated back to the coal mills. System will include one common nitrogen purge stream that will discharge to atmosphere following coal separation, cooling, and drying. Purge stream flow rate is 1,500 acfm and will be located adjacent to Coal Mill No. 2 baghouse (FL2102) at an elevation approximately 215 above grade. Coal mill nitrogen purge PM/PM₁₀ emission rate is 0.129 lb/hr (0.0162 g/s) based on permit limit of 0.01 gr/scf. The nitrogen purge stream replaces the original four coal mill silo baghouses.
 - c. Ash storage silo will vent to the flare instead of atmosphere. This eliminates the previously modeled ash silo baghouse.
 - d. Makeup solids unloading system storage bin (SI0241) will have a baghouse and discharge to atmosphere. Baghouse will have an exhaust flow rate of 3,500 acfm and will be located on the northern side of SI0241 at an elevation approximately 105 feet above grade. Baghouse outlet PM/PM₁₀ emission rate is 0.300 lb/hr (0.0378 g/s) based on permit limit of 0.01 gr/scf.

Modeling Procedure

1. Re-model using AERMOD and same meteorological data used for initial Unit B PSD application modeling.

Revised June, 2007

**Stanton Unit B Criteria Pollutant Maximum Impacts
(Syngas and Natural Gas CT/HRSG Operating Scenarios)**

| Pollutant | Averaging Time | Max. Impact (ug/m ³) | Class II PSD SIL (ug/m ³) | Percent of SIL |
|------------------|----------------|----------------------------------|---------------------------------------|----------------|
| CO | 8-Hour | 8.54 | 500 | 1.7 |
| | 1-Hour | 14.77 | 2,000 | 0.7 |
| PM ₁₀ | Annual | 0.17 | 1 | 17.0 |
| | 24-Hour | 1.33 | 5 | 26.6 |
| SO ₂ | Annual | 0.09 | 1 | 9.5 |
| | 24-Hour | 1.03 | 5 | 20.7 |
| | 3-Hour | 3.10 | 25 | 12.4 |
| NO ₂ | Annual | 0.61 | 1 | 61.4 |

Stanton Unit B Modeling Data - PM₁₀

| Emission Source | PM ₁₀ | | Height | | Diameter | | Temperature | | Flow Rate | | Velocity | |
|---|-------------------------------|--------|--------|-------|----------|------|-------------|-------|------------------------|-----------------------|----------|-------|
| | (lb/hr) | (g/s) | (ft) | (m) | (in) | (m) | (°F) | (K) | (ft ³ /min) | (m ³ /min) | (ft/sec) | (m/s) |
| | Crushed Coal Storage Bins 1-3 | 0.043 | 0.0054 | 135.0 | 41.1 | 6.0 | 0.15 | 70.0 | 294.3 | 500 | 14.2 | 42.4 |
| Coal Mills 1-3 N ₂ Purge Stream | 0.129 | 0.0162 | 215.0 | 65.5 | 10.0 | 0.25 | 70.0 | 294.3 | 1,500 | 42.5 | 45.8 | 14.0 |
| Makeup Solids Unloading System Storage Bin | 0.300 | 0.038 | 105.0 | 32.0 | 14.0 | 0.36 | 70.0 | 294.3 | 3,500 | 99.1 | 54.6 | 16.6 |

| Emission Source | PM ₁₀ | | Height | | Diameter | | Temperature | | Flow Rate | | Velocity | |
|--------------------------|--------------------------|--------|--------|------|----------|------|-------------|-------|------------------------|-----------------------|----------|-------|
| | (lb/hr) | (g/s) | (ft) | (m) | (ft) | (m) | (°F) | (K) | (ft ³ /min) | (m ³ /min) | (ft/sec) | (m/s) |
| | Cooling Tower Cell No. 1 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 |
| Cooling Tower Cell No. 2 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 | 7.6 |
| Cooling Tower Cell No. 3 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 | 7.6 |
| Cooling Tower Cell No. 4 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 | 7.6 |
| Cooling Tower Cell No. 5 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 | 7.6 |
| Cooling Tower Cell No. 6 | 0.055 | 0.0069 | 64.0 | 19.5 | 34.0 | 10.4 | 90.0 | 305.4 | 1,361,880 | 38,564.2 | 25.0 | 7.6 |

Sources: ECT, 2007
SCS, 2007.

Sum 8,171,282