UTILITY COMMITTEE

AGENDA

July 14, 2008 - 5:00 P.M. - Council Chambers - City Hall - City of Dover Public comments are welcomed on any item and will be permitted at appropriate times. When possible, please notify the City Clerk (736-7008 or e-mail at <u>Tmcdowell@dover.de.us</u>) should you wish to be recognized.

AGENDA ADDITIONS/DELETIONS

- 1. 2008 Comprehensive Plan Review: Utility Chapter (With Committee Recommendations Incorporated)
- 2. PACE/NAES Monthly Report (May)
- 3. Adjournment by 5:55 P.M.

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CHAPTER 7

PUBLIC UTILITIES AND

INFRASTRUCTURE PLAN

Part I – Background Information

The City of Dover is a full service municipality providing a wide array of services to its citizens and utility customers including: Water, Waster Water, and Electric

The City of Dover maintains a work force of approximately 350 fulltime employees; the city-operating budget for its General, Electric, and Water\Waste Water Funds is approximately \$86 million.

The following sections give a more detail on the operations of the City of Dover Utilities, Recreation and a Facilities Assessment.

Water Utility

The City of Dover is supplied by 15 deep wells and 7 shallow wells drawing potable water from three aquifers. The deep wells draw from the Cheswold and the Piney Point aquifers, while the shallow wells draw from the Columbia Aquifer. These wells draw an average of 5.5 million gallons of water each day. During summer months, water usage has peaked as high as 9 million gallons per day. The water is transported to customers over 196 miles of pipe. The Department of Natural Resources and Environmental Control (DNREC) has permitted the City to draw as many as 10 million gallons of water per day from these aquifers. If it can be demonstrated that the City needs in excess of this amount, the permitted volume may be increased in the future. Currently, the system has the capacity to draw as much as 12.1 million gallons a day should DNREC permitting ever be increased to allow it.

The City's service area includes the City of Dover boundaries as well as unincorporated areas south of Dover including Rodney Village, Kent Acres, Capitol Park, and areas to the east of Dover along White Oak Road and Fox Road. To the north we have an interconnection with Tidewater Utilities that in turn serves Reichhold Chemical, Carlisle Village, Winding Ridge and Planters Woods. In addition, a fourth interconnection with Tidewater Utilities to the north (Scarborough Road interchange area) is in the design phase that will provide a secondary source to Tidewater Utilities or the City of Dover should the need arise. To the south, we have an interconnection with Tidewater Utilities to the area south of Highview Avenue.

To the north of Dover, the area is franchised with Tidewater Utilities. To the east, the area is un-franchised; and to the west it is principally un-franchised. To the south are un-franchised areas and the areas served by the Camden-Wyoming Sewer & Water Authority and Tidewater Utilities.

A Water System Master Plan was developed in 2005 to update the hydraulic model, review demand and production data, and identify future capital projects for distribution and production facilities to meet projected needs. According to the Master Plan, the current water system is adequate to serve the current population and projected growth through 2008 to meet fire flow requirements during peak demand periods. For this reason, capital improvements such as a new well and elevated storage tank are under design with construction planned for 2010.

Planned Capital Investments Projects to Maintain the System

There are a number of ongoing programs needed to maintain the water system. These include general distribution upgrades, wellhead redevelopment, meter reading technology upgrades, and water tank painting. In addition to these ongoing programs, the following represent major capital investments needed to preserve the integrity of the system.

Cheswold Well #8 Replacement 2008

The replacement of Cheswold Well #8 has been established to return this well to production. The condition of this well has deteriorated to a point of keeping this well offline despite previous efforts to rehabilitate the well. This project includes the complete re-drilling of the well and to get the well back into operation in order to obtain the information necessary to design water quality improvements for the site (contact chamber, flow meter, VFD, etc.) As such water quality improvements are not included as part of this bid and will be planned for under the Water Quality Improvements and related projects.

Wellhead Redevelopment Program 2008/09

The City of Dover operates and maintains fifteen (15) deep production wells and a shallow well field with seven (7) production wells which provide a potable supply of water for residential, commercial, and industrial users within the City's service area. In order to maintain an efficient and dependable source of potable water, periodic cleaning of the well screening and gravel pack is necessary, in addition to inspection and repair of the production wells' mechanical and electrical components. This project includes inspecting and assessing the condition of all well pumps, pump motors and controls, pump shafts, well pump piping, well casings and well screens by a licensed well contractor. Inspections will be conducted by performing flow tests and video monitoring.

Scarborough Road Interconnection 2008/09

The City of Dover has served potable water and provided fire protection service to the Wilmington College building located 3282 North DuPont Highway since March 2004. This building is located within Tidewater Utility's Certificate of Public Convenience and Necessity (CPCN0 territory. As such, City staff has been working with Tidewater to develop an equitable agreement which results in the City receiving the right to serve this customer and Tidewater relinquishing its rights under the current CPCN. This project includes the construction of a twelve-inch (12") diameter water main along the northern property line of Wilmington College in an easterly direction to a proposed interconnection with Tidewater Utilities. The proposed interconnection will include a concrete vault, valves and two meters.

Wellhead VFD Upgrades 2008/09

This project includes the purchase and installation of three variable frequency drives (VFD's) or (Adjustable Frequency Drives) at three existing freshwater well sites in the City of Dover. The VFD's are being installed to regulate the amount of water that is withdrawn from the aquifer on a daily basis, thereby preventing the well from exceeding the permitted gallons per day allocation. The VFD's will allow the pump motors to slowly ramp up at start up which should reduce the sudden changes in flow direction in the water mains and minimize the occurrence of brown water along with the damaging effects of water hammer. The existing telemetry system has already been programmed to control the new VFD's and will only require the addition of a few cards, to be installed when the VFD's are up and running.

Water Quality Improvements 2008/2013

Projects to be included in this program consist of additional water system monitoring, replacement or relining of old unlined cast iron water main within the City's water distribution system; the installation of piping (contact chambers) at deep wells to improve contact time; installation of on-line analyzers to monitor water quality parameters at all source water locations; system upgrades to improve system control; and utilization of a consultant to provide additional design and evaluation services, as needed. The City's water quality waterline rehabilitation priority program has identified waterlines throughout the City that require replacement or relining. Using the program as a guide, the following water line rehabilitation projects are scheduled for Fiscal Year 2009: Greenhill Road, Pennsylvania Avenue, Madison Street, Rodney Street, American Avenue Ext., Rte. 13 Design, Pear Street, N. West Street, Bayard Avenue, Hazel Road, Maryland Avenue, and Smith Street. The S. Governors Avenue water main replacement is also included in this project and coincides with the DelDOT S. Governors Avenue improvement project. In some cases it may only be portions of the streets that require replacement; we have not differentiated that within this listing. If a street is added to the City's street program that was not anticipated we may defer one of the listed projects to address that street before it is repaved.

Piney Point Well 2008/2010

The project proposes drilling of a new Piney Point Aquifer production well to increase our production capacity up to our permitted allocation. Reduction in yield from our Piney Point wells is causing a greater reliance on our more costly aquifers. Without this project, there will be continued reduction in our production capabilities under our permitted allocation.

1.0MG Elevated Water Storage Tank 2008/2010

The project proposes the construction of a new 1.0 million gallon elevated storage tank within the distribution system. This project will allow the City to meet future storage volume requirements based upon demands and aid in reducing low pressure areas and enhance fire suppression capability.

Future Well Installation 2013

The project, identified by staff and confirmed by the 2004 Water Master Plan Update, proposes the drilling of a new Production Well to increase production capacity up to our

current permitted allocation as well as increase system pressure and stabilize the chlorine residuals of the City.

Water Treatment Plant Improvements 2013

The project, identified by staff and confirmed by the 2004 Water Master Plan Update, proposes process improvements to the existing Water Treatment Plant. Process improvements will allow for capacity enhancements as well as the improved ability to meet regulatory requirements. Completing this project will increase production capacity and improve regulatory compliance.

Possible Water Systems Expansions

As lands are annexed into the City, water service will be supplied. It is the developer's responsibility to expand the water system, including any necessary capacity upgrades, at their expense.

Sanitary Sewer

The City's 195 mile sewer system collects 1.7 billion gallons of liquid waste from residential, commercial and institutional land uses annually. Forty-two (42) pumping stations transport the waste to the County treatment facility south of Frederica. While the sanitary sewer serves the majority of the City, there are a few isolated properties that still have septic systems. The current service territory includes most of the area within the incorporated boundaries and un-incorporated areas including Hunter's Pointe, Rodney Village and areas along White Oak Road. Kent County operates sewer districts to the south, east and north of Dover. There is no service to the west.

Due to the topography of the area, a relatively large portion of the City's sewer mains are force mains, which require pumping stations. These stations are both publicly and privately owned. The primary county main running through Dover (mostly beneath US 13) is a large trunk line with evenly spaced pumping stations. The County has also installed a Central Bypass line on the eastern side of the City to help reduce the load on primary county main.

Currently, the City of Dover Public Utilities Department is engaged in the development of a Pump Station and Sewer Basin Study (an update based upon the 1999 *Wastewater Master Plan Technical Documents*) to evaluate pump station and sewer basin capacities. It is anticipated that in FY 2009 the Wastewater Master Plan will be updated and include the following: (1) a modeling update to include GIS mapping of the entire wastewater collection and transmission system; (2) evaluation of available capacities of the critical junctions in the system; and (3) development of future CIP projects to address the needs of the system including future growth.

Planned Capital Investments Projects to Maintain the System

There are a number of ongoing programs needed to maintain the sewer system. These include pumping station upgrades that include pump and motor replacements, electrical upgrades, water seal system and wet well rehabilitation, and pump house rehabilitations. Upgrades are planned for the Lafferty Lane, Fox Hall, Weaver Street, Acorn Lane,

Heatherfield Subdivision, Brandywine Subdivision, Lepore Road, Rolling Acres Subdivision, Dover Brook Gardens, Baltray Road, DelTech, Delaware State University and Westover pumping stations. In addition to these, the following represent major capital investments needed to preserve the integrity of the system.

White Oak Farms Pumping Station VFD Installation 2008

This project involves the purchase and installation of two variable frequency drives or (Adjustable Frequency Drives) for the two existing 75 horsepower motors at the White Oak Farms Pumping Station. The VFD's will be installed to operate on a "flow matching" principle minimizing the number of starts and stops required by the motors. The pump station discharges into the Kent County Central Transmission Bypass (CTB) force main and as a result experiences varying discharge head conditions. The VFD's will allow the speed of the motors to be adjusted to best meet the new system conditions. To minimize the damaging effects of water hammer and to prevent the universal joints from "slamming" at startup, the VFD's will start and stop the pumps by slowly "ramping" up the r.p.m.'s on startup and "ramping" down at shut down. Adding VFD's to the system will also benefit the motors by controlling the in rush of electric current at motor startup, thereby increasing the life of the motor.

Lafferty Lane Pump Station Replacement 2008/09

The City of Dover's plan is to replace the existing Lafferty Lane - Smith & Loveless package pumping station which was originally installed back in 1987. The station is approaching its life expectancy of 20-25 years but is stricken with a severe corrosion problem. The steel pumping station and all of the electrical equipment and wiring have extensive corrosion due to hydrogen sulfide gas believed to be from the sewage coming from the Little Creek the station. The system has recently been connected to the Kent County Central Bypass (CTB) station which increased the system pressure in the force main and created an additional need for the upgrade.

South Governors Avenue Sewer Main Upgrade 2008/09

The S. Governors Avenue sewer main is scheduled to be replaced as part of the DelDOT S. Governors Avenue improvements.

SCADA System Technology Upgrades 2009/2013

This project involves the replacement of antiquated and/or obsolete terminal units (RTU's) at sewage pumping stations with new up-to-date serviceable SCADA equipment. Microwave radios, antennas and enclosures would be upgraded as needed. The RTU and radio are the reporting equipment for the SCADA system (Supervisory Control and Data Acquisition) which reports, on a constant basis, the status of alarms at the City's pumping stations. The RTU's that are being replaced are outdated and unable to be repaired. Most of the equipment is installed in two steel cabinets mounted outside and are corroding. The new equipment is installed within a single fiberglass NEMA 4 enclosure.

Rt. 13 & West Rustic Lane Interceptor Sewer Extension 2008/2010

This project will construct approximately 6,500 linear feet of various diameter gravity sewer from the entrance road to Dover Downs, Inc. to the west end of West Rustic Lane. The proposed gravity sewer interceptor will allow the City to abandon the existing Schwartz Pumping Station immediately adjacent to US RT 13. If the gravity sewer is not constructed, the Schwartz Pumping Station must be reconstructed due to its age and accessibility problems. The gravity sewer will allow further gravity sewer extensions to the surrounding area which will allow for the redevelopment of properties on the east and west side of RT 13. These properties are currently under utilized due to lack of public sewer. This project is also necessary to redirect flow to the US RT 13 gravity basin and relieve problems at Kent County Station #2. This would be accomplished through future redirecting of force mains from the Delaware State University, Delaware Tech and McKee Pumping Stations. This project will also extend sewer to the proposed convention center property.

Fox Hall/Retreat Force Main Rerouting 2009/10

This project will reroute approximately 1,600 linear feet of force main from the Walker Road basin to the McKee Road basin. The Walker Road Pumping Station is currently operating at 80 percent capacity and needs upgrades. The transfer will relieve continued stress on the Walker Road Station.

Fox Hall Pump Station Rehabilitation 20010/11

This project will completely rehabilitate the wet well side of the pump station using the poly-triplex system liner.

Delaware State University Force Main Rerouting 2010/11

This project will reroute approximately 2,750 linear feet of 8" force main exiting from the Delaware State University Pump Station. The new force main will discharge into the upstream end of the new Rt. 13 Sanitary Sewer Interceptor at the end of West Rustic Lane.

Delaware State University Pumping Station Replacement 2009/10

The proposed project includes the replacement of the Smith & Loveless package capsular pumping station and wet well replacement/relocation installed in 1975. The below grade capsular station will be replaced with a wet well mounted package pumping station eliminating a confined space entry requirement. The station is located at the rear of Delaware State University campus adjacent to Silver Lake. The station has exceeded its anticipated life expectancy of 20-25 years. This project is anticipated to provide the capacity required for future growth of the campus.

Turnberry Force Main Redirect 2013/2014

This project will redirect the sanitary sewage handled by the Turnberry Pumping Station to the McKee Pumping Station drainage basin where it can be re-pumped into the Central Transmission Bypass (CTB). Project consists of approximately 6,000 linear feet of 8" force main from the Turnberry Station to Mudstone Interceptor in the Maidstone Subdivision at the intersection of Denney's and Kenton Roads. The project will require a rotating assembly change to increase the motor horsepower and pump rate.

Westover Pumping Station and Force Main Upgrade 2013/2014

This project includes the upgrade of the Smith & Loveless pumping station and force main installed in 1994. The pump station's available capacity will be consumed with the build out of the Village of Cannon Mills and will be in need of additional capacity in

order to be able to receive additional flow from the west. The project will include replacement of interior 6 inch suction and discharge piping with 8 inch pipe, upgrade of 1,400 feet of 6 inch main to 12 inch diameter pipe from the station to Electric Avenue.

Delaware Tech Pumping Station Replacement/Redirect 2013/2014

This project includes the upgrade of the Smith & Loveless pumping station and wet well replacement/relocation which was originally installed in 1994. The below-grade capsular station will be replaced with a wet well mounted package pumping station eliminating a confined space entry requirement. The station is located at the rear of the Delaware Tech campus on the corner of Scarborough Road and Crawford Carroll Avenue. The station has exceeded its life expectancy of 20-25 years.

Brandywine Pumping Station Replacement 2011/2012

This project includes the replacement of the Smith & Loveless package pumping station installed in 1977. The station has exceeded its anticipated life expectancy of 20-25 years and is in need of a capacity upgrade due to the increased growth in the basin. This project is anticipated to utilize an outside contractor to replace the pumping station, electrical service panel, and SCADA equipment.

Heatherfield Pumping Station Replacement/Redirect 2010/2012

This project calls for the replacement of approximately 1,200 linear feet of existing 4 inch force main and for the existing impellers to be downsized to increase the capacity of the station over 200 gallons per minute. The increase in force main size does not require the small 1.5-hp single phase motors and electrical service to be upgraded.

Rolling Acres Pumping Station Replacement 2012/2013

This project calls for the replacement of the Smith & Loveless package pumping station installed in 1973 in order to handle the commercial areas from Harrington Realty Shopping Center to the Howard Johnson Hotel. The station has exceeded its anticipated life expectancy of 20-25 years and is in need of a capacity upgrade due to the high peak inflow rates.

Dover Brook Gardens Pump Station Upgrade 2012/2013

This project would construct a force main priming loop to insure adequate back pressure is provided to the check valves to maintain prime on the vacuum primed Smith & Loveless pumps and upgrade to maintain or increase capacity. The loop is to create a high point in the force main above the pumps to provide a column of water against the check valves. The existing force main was originally installed with a constant slope away from the station to the receiving gravity manhole. The force main drains by gravity away from the check valves providing very little static water pressure to hold check valve closed.

Baltray Pumping Station Replacement 2012/2013

This proposed project includes the replacement of the grinder pumping station installed with the construction of the Baltray Subdivision in 1988. The station is approaching its anticipated life expectancy of 20-25 years. The grinder pumps, rail system and electric controls will be replaced.

McKee Road Pumping Station Communator Replacement 2012/2013

The proposed project includes the replacement of the communator at the influent line to the pumping station installed in 1995. This acts as a screen/grinder at the influent side of the station cutting or stopping large debris from entering the wet well and clogging the pumps. The communator motor has run 24/7 since the initial startup of the pumping station.

Weaver Street Pump Station Replacement 2009

This project calls for the replacement of the existing 1972 Smith & Loveless wet well mounted pumping station on Weaver Street. The existing wet well mounted station was originally located in the Turnberry Subdivision and has exceeded its anticipated life expectancy of 20-25 years. This station is located at the rear of Wild Meadows.

Acorn Lane Package Pump Station Replacement 2009/2010

This project calls for the replacement of the existing Smith & Loveless package pumping station installed in 1978 with the construction of the Independence Village Subdivision. The station has exceeded its life expectancy of 20-25 years. The capacity will shortly be exceeded with the addition of 500 new contributing homes. This project is anticipated to be completed utilizing an outside contractor.

Lepore Road Pump Station Relocation 2011/2012

An upgrade of this station was identified in the Wastewater Master Plan and the current proposal is to completely replace the aging station with a new Smith & Loveless package pumping station to be located on adjacent lands. In addition, approximately 1,000 linear feet of gravity sewer main from Silver Mill Apartments to the proposed station location will be replaced.

Dover East Pump Station Abandonment & Sewer Line Install 2010/2011

This proposed project includes the abandonment and removal of the existing Smith & Loveless package capsular pumping station. This scope of work will also include the removal of the existing wet well. The station will be eliminated due to the construction to occur on the Rojan Meadows Subdivision site. Sanitary sewer from East Dover MHP will connect to the new Rojan Meadows pump station by installing approximately 400 linear feet of 12" gravity sanitary sewer pipe. The existing Dover East station has exceeded its anticipated life expectancy of 20-25 years and the removal of this station can be justified because of the pump station being constructed in the Rojan Meadows site.

Inflow/Infiltration Removal 2009/2013

This project will identify and correct areas in the sanitary sewer collection system that are deteriorating and allowing groundwater to enter the sanitary sewer system through craked pipes and/or joints. In addition, video investigation will help identify sump pump connections to the system which will have to be removed by individual property owners.

Possible Sanitary Sewer System Expansions

As lands are annexed into the City, sanitary sewer service will be supplied. It is the developer's responsibility to expand the sanitary sewer system, including any necessary capacity upgrades, at their expense.

Electric Utility

The Electric System owned by the City primarily consists of production plant, transmission plant, distribution plant, and general plant facilities.

The City owns two power plants, the McKee Run Generating Station (McKee Run) and the VanSant Generating Station (VanSant). McKee Run consists of three steam turbine generating units with total combined capacity of 136 megawatts (MW). VanSant is a 39 MW simple-cycle combustion turbine unit.

The Electric Division purchased its power requirements under an all-requirements power and energy supply contract with Duke Energy Trading & Marketing (Duke) in FY 2006. The contract was executed on March 11, 1996 and expired on June 30, 2006. Effective May 4, 2006 the City entered into a five year Energy Management Agreement with PACE Global Asset Management (Pace), LLC of Fairfax, Virginia to assist the City with its energy procurement, energy sale, purchase of fuels, establishment and management of risk policies, to develop and manage hedging protocols and related energy procurement challenges. Currently all power is purchased through a combination of long term hedges and the Day-Ahead market. Energy produced by the City of Dover power plants are sold into the Day-Ahead market at market prices and are settled at real time prices, which cover the cost of production plus reasonable profit. The City of Dover generated less than 3% of its annual kWh consumption in 2007.

Duke/Fluor Daniel (D/FD) assumed responsibility for operating and maintaining the City's two power plants under a separate agreement also dated March 11, 1996. These agreements provided for the City to retain complete ownership of the two generating stations. The partnership between D/FD was dissolved as of September 13, 2004. The two power plants were operated by DE Operating Services, LLC (DEOS) in FY 2006. As of July 1, 2006, North American Energy Services (NAES) began operating the plants.

The Electric Division system supplies electricity to a service area of 92 square miles, serves approximately 22,400 customers, approximately 18,800 of which were residential customers, as of the end of FY 2007. The transmission system interconnects with the Delmarva Utility's regional transmission system at the 230 Kv Carranza Substations which has a redundant capacity of 300 mw; in 2007 the system peak was 171 mw. The distribution facilities include 221.11 miles of overhead lines and 230.35 miles of underground lines connected through fifteen different substations.

Four of the Electric Division customers take service off of the 69 kV transmission system. These customers include the Dover Air Force Base, Kraft, Proctor & Gamble, and NRG Energy Center (NRG). NRG is an exempt wholesale generator that sells power that must be transmitted through the City's transmission system to third party purchasers. When the NRG plant is not operational, the Electric Division provides power for the plant site. The Electric Division has one contract for providing transmission service through the Electric System. As mentioned above, the Electric Division provides transmission service to NRG for the output of its 16 MW electric generator.

Planned Capital Improvements Project to Maintain the System

69 Kv Feeders 3 & 4

This project will install two new 69 Kv feeders from Carranza Substation and will interconnect with the existing transmission line near Fulton and West Streets. This will double the capacity of the Utilities transmission line and provide redundancy to the system as well as providing improved reliability.

St. Jones Substation Rebuild

In conjunction with the 69 Kv Feeder project this substation will be rebuilt to convert the high-side voltage to 69 Kv, whereby the Utility can then abandon the obsolete 22 Kv transmission system. Additionally this will increase the capacity of the substation and improve the reliability of the electric network.

Horsepond Substation Transformer Upgrade

The existing 1970 transformer will be replaced with a larger unit to increase the capacity of this substation and relieve current overloading conditions.

Division Street Substation Rebuild

This project was completed in 2004 and added additional capacity and improved reliability to the customers in central Dover. By converting the substation to a higher transmission voltage the losses were reduced and the substation is more efficient. Mayfair to Mid-City Transmission Line and Substation

By the summer of 2008 the transmission line from Mid-City substation to Mayfair substation will be completed along with the installation of a new substation. This will provide better service to residents in the Mayfair, Crossgates, Rodney Village and south Dover areas and should reduce the number of outages and reduce maintenance and operating costs.

4KV to 12KV Upgrade

In 2007 the department completed the conversion of all customers to the 12 Kv system, which will reduce inventory costs and increase reliability to the end user.

Distribution Upgrades

This ongoing project calls for the systematic replacement of overhead lines with underground lines whenever services are being moved, wire is damaged, or trees are causing a high number of outages. The affected area can range from a single service up to an entire residential neighborhood or commercial development. The number of storm and tree related outages have been greatly reduced under this program. Reliability has become the single most important factor to electric customers.

McKee Run Power Plant

The current generator units will have modifications completed to comply with new environmental regulations. After completion of this project the pollution emissions will be greatly reduced and provide cleaner air for the citizens of Dover.

Storm Sewer System

The City of Dover is served by a storm sewer system that includes catch basins, storm sewer drain pipe, gutters and ditches. This system aids in controlling and transporting excess storm water runoff that is unable to infiltrate into the ground or evaporate. The collected storm water is discharged to local water courses. This control is typically necessary to prevent excessive flooding and hazardous conditions. The excess storm water is a direct effect of urbanization, development and increased impervious surface coverage. Development can dramatically alter the existing local hydrologic cycles. Existing trees, meadow grasses and the like, that intercept and absorb rainfall, are replaced with severely compacted grades and impervious surfaces that are much less receptive to absorption and convert precipitation into storm water runoff. As the natural drainage system cannot handle the excessive load, storm water facilities (curb and gutter, enclosed storm sewers) are provided to collect the runoff and quickly convey it to downstream water bodies.

Since the early 1990's developments have been required by State regulation to manage storm water runoff associated with the effects of urbanization. Older developments, however, were built prior to modern storm water management controls. Much of the storm water runoff from older areas of the City is discharged from the City's storm sewer system, untreated, into surface waters.

Studies have shown that storm water runoff from urban and industrial areas typically contains the same general types of pollutants that are often found in industrial wastewater discharges (heavy metals, pesticides, herbicides, and synthetic organic compounds such as fuels, waste oils, solvents, lubricant and grease). Runoff can also contain high levels of contaminants such as sediment, bacteria and nutrients. Polluted storm water is a major contributor to surface water quality degradation and can have damaging effects on human health and the environment, particularly aquatic ecosystems. In response to these issues, the Environmental Protection Agency (EPA) developed the National Pollutant Discharge Elimination System (NPDES). Phase II of the NPDES program requires operators of small municipal separate storm sewer systems (MS4s) to develop and implement a Storm Water Management Program (SWMP) and obtain a permit for discharge of storm water from/through their portion of the MS4. (Small MS4s typically consist of cities with a population of less than 100,000 within an urbanized area. The City of Dover has been classified as a small MS4 due to this population criterion only.)

The SWMP is to focus on six minimum control measures: Public Education and Outreach on Storm water Impacts, Public Participation/Involvement, Illicit Discharge Detection and Elimination, Construction Site Storm water Runoff Control, Post-Construction Storm water Management in New Development/Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations. For each measure, Best Management Practices (BMPs), measurable goals, and time frames for implementation are to be provided. Other elements of the plan include developing a storm sewer map, implementing ordinances/regulatory mechanisms, enforcement and employee training. The SWMP is to be designed to reduce the discharge of pollutants to the "maximum extent practicable", protect water quality and satisfy the water quality requirements of the Clean Water Act.

Permits are obtained through the Delaware Department of Natural Resources and Environmental Control (DNREC). The first permit term was for five years, beginning in 2003. Reporting is required each year to assess the effectiveness of the program. New permits must be applied for prior to the expiration of the current permit to continue the activity regulated by the permit past its expiration date. The current permit will expire in August 2008, and the City will need to renew the permit.

This program is managed through the Public Services Group but compliance with the conditions of the permit requires inter-departmental, City Council, Planning Commission and community cooperation and support to be successful.

[Additional information will be added regarding Stormwater Utility]

Part II - Planning for Utilities

The City of Dover as a service provider to both residents of the City and County, has a responsibility to prepare for future issues and challenges to the utility infrastructure. Providing adequate services requires that maintenance of the physical infrastructure be regularly addressed and that the City must be responsive to changes and pressures upon its system.

The most recent version of the City of Dover's Water System Master Plan identifies some key issues which the City must address due to their relevance to growth management within the service areas of the City.

Perhaps the most vital issue regarding both the direction of growth in the City and utility service is the identification of future service areas. Both municipal development and annexation are reliant upon the availability of service for water and sewer. While the physical extension of piping around and to the extent of the City boundary is an easily identifiable issue, development both on the edge of the City boundary and in the downtown core requires careful consideration of water flow and availability.

Planning for downtown re-development must ensure that the new challenges encountered by the City, such as the push towards taller buildings in the downtown (five stories and/or higher), are met with utility services which are capable of addressing those needs. In a similar manner, the Water System Master Plan identifies industrial use of water resources as stagnant due towards trending away from traditional manufacturing. However, in the event that a considerably sized industrial operation were proposed to locate within the City, careful attention must be paid to the new potential demands on the water system. Improvements to the distribution system for water within the City's water utility were also specifically identified in the Water System Master Plan. These improvements include expansion of piping to adequately address demand over time and a scheduled replacement of the older portions of the City's infrastructure, especially where cast-iron pipes are still in use. These actions were identified as important due to the fact that they increase the availability of service over time and would address some of the current concerns over 'brown' water.

Managing Inflow and Infiltration

When planning for utilities, the issues regarding inflow and infiltration present unique challenges. The City faces challenges in managing the inflow of storm water into the existing system. Continued growth and the expansion of impervious coverage across the City means that over time, less and less water is being infiltrated back into the ground. This runoff presents a two-fold problem. Increased runoff means that the existing infrastructure is becoming more burdened over time. It also means that less water is returning via infiltration into the aquifer.

The City has taken an initial step towards more adequately managing this issue through the implementation of its Source Water Protection Overlay Zone which seeks to retain and manage storm water on the sites where it is most capable of infiltrating to the aquifer. Other potential solutions include the implementation of a storm water utility system which residents and users would pay into. This storm water utility system would have the benefit of providing central management to the maintenance and responsibility of storm water management facilities. It would also create a funding source for the long term care of these facilities which is something that homeowners associations and business owners often find difficult to provide.

Electricity and Energy Consumption

[Energy and Electricity Consumption Information under development]

Part III – Plan Goals: Public Utilities and Infrastructure

Goal 1: Proactively Maintain Existing Infrastructure

Continue to place highest priority on maintaining existing utilities and community infrastructure so that reliable service can continue to be provided to existing community.

Goal 2: Expand Infrastructure when Cost Beneficial

Expand public utility infrastructure when it has been determined to be cost-beneficial to the City of Dover.

Goal 3: Enhance Infrastructure to Meet Community Needs

Enhance public utilities and infrastructure where studies indicate that community services standards are not being met.

Part III – Plan Recommendation: Public Utility and Infrastructure

Recommendation 1: Update Utility Plans Regularly

Dover water, sewer and electric will have their long-range plans updated every five years and integrated into the Consolidated Utility Plan for the City of Dover.

Recommendation 2: Implement a Stormwater Utility within the City of Dover

Begin by developing an implementation plan for initiating a stormwater utility within the City. The implementation plan will include an analysis of the staffing needs and fees necessary to support a stormwater utility. Once this initial study is done, implement the stormwater utility.

Recommendation 3: Encourage and Possibly Require Green Technology for Stormwater Management in New Development Projects

Recommendation 4: Continue to Implement Plans to Improve Water Quality

The City has developed a plan for resolving the "brown water" issues that have occurred since the City began to chlorinate the water system. The City should continue its commitment to implementing the water system improvements that will improve the water quality concerns.

Recommendation 5: Continue to Seek Interconnections with Other Water Systems



4401 Fair Lakes Court Fairfax, Virginia 22033-3848 USA Phone: 703-818-9100 Fax: 703-818-9108

City of Dover

May Monthly Report

Energy and Operations Management

June 19, 2008

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Further, certain statements, findings and conclusions in this Report are based on Pace Global's interpretations of various contracts. Interpretations of these contracts by legal counsel or a jurisdictional body could differ.

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1.0 - EXECUTIVE SUMMARY



Purchased Power Management

Wholesale load for the month of May was 56,785 MWhs versus a three year historic load of 64,305 MWhs. Hedged transactions accounted for 53,040 MWhs or 93.4% of this volume at a cost of \$3.5 million. Spot Market purchases as well as other PJM related charges accounted for an additional cost of \$1.61 million, inclusive of all load related fees. May All-In Energy Cost of Service net of all capacity obligations is \$0.68/MWh below the May 2008 budget of \$77.06/MWh. For the year, expected Load Cost of Service is currently \$2.48/MWh below budget and is projected at \$82.14/MWh.

Generation and Asset Management

Net generation for the month of May credited by PJM was 13 MWhs compared to zero MWh budgeted. Neither McKee Run nor Van Sant units were called upon by PJM. The recorded generation was attributed with testing after Van Sant stack repair work was completed on May 23, 2008. The testing on Van Sant generated \$1,222 at an average \$98 per MWh resulting in a negative margin after fuel costs¹ of \$1,364 or \$108.82/MWh.

Emissions and Allowance Management

Total net revenue from allowance sales for the 2007-08 fiscal year is \$1,068,190, exceeding the Dover annual budget projection of \$1,030,000. No sales have occurred in the 2008-09 fiscal year. City of Dover has a balance of 549 tons of vintage 2007 SO₂ allowances and no vintage 2007 NO_x allowances. Additionally, City of Dover holds 2,718 tons of vintage 2008 SO₂ allowances and 198 tons of vintage 2008 NO_x allowances.

Additional revenue can be accrued through the sale of the remaining 549 tons of 2007 vintage SO_2 allowances. At the June 13th asking price of \$355 per ton, this revenue would be approximately \$195,000. The state of the market was discussed with the City in April at which point the City determined a wait and hold straegy was appropriate.

¹ Margin after fuel costs does not account for the variable Operations and Maintenance costs nor does this margin account for the value of the emission allowances.



EMISSIONS & ALLOWANCE SUMMARY						
Allowance	Allowance	Emissions	Emissions	Allowances	Allowances	Allowance
Vintage	Allocation	Month	YTD	Sold Month	Sold YTD	Balance
SO ₂ – 2007	2723	0	98	0	2076	549 ²
SO ₂ - 2008	2723	5	5	0	0	2718
NO _x – 2007	198	0	32	0	166	0
NO _x – 2008	198	0	0	0	0	198

Operations Management Summary

During the month of May, North American Energy Services reported no OSHA recordable accidents or lost time injuries. Additionally, there were no environmental Notice of Violations or operating permit deviations. There were no opportunities for generation for PJM for the month. VanSant operated for 0.60 hours after successfully completing stack repairs and other scheduled maintenance activities. Plant staff successfully completed three years of accident free operation in April and continued through the month of May.

Monthly Budget Variance – The actual expenses attributable to O&M of the two sites for the month of March were \$397,175. The expenses were \$20,123 below the approved budget of \$417,298. The principal reasons for the positive variance are due to having three less employees than budgeted and less operating time than budgeted resulting in lower operating and maintenance expenses. Currently the year end budget variance is projected to be favorable by approximately \$700,000.

Considerable time was spent during the month in talks between NAES, Pace global, City of Dover, and officials of DNREC to negotiate the terms of the operating and construction permitting associated with McKee Run Pollution Remediation project.

² Corrected 2007 SO2 tons emitted to reflect actual emission for Units 3 & 11. December, 2007 report included emissions for all four units.



Risk Management Summary

Forward markets continued their several-month long run-up across all energy commodities. May in particular was characterized by extreme volatility for crude oil, where daily swings in forward months were as much as \$10 per barrel. Forward natural gas prices likewise climbed in response to all-time high crude oil prices, higher-than-normal temperatures, and supply concerns. All of the above translated into higher forward PJM electricity markets.

	Budget			June		May	April
Power Year	Cost-of- Service Budget	Cost-of Service \$/MWh	Hedge Ratio	Year-to Year Increase	Forecasted over Budget	Cost-of Service \$/MWh	Cost-of Service \$/MWh
2007-2008 *	\$85.11	\$82.14	100%	-0.6%	-3.49%	\$82.16	\$82.08
2008-2009	\$90.18	\$92.67	85%	12.8%	2.76%	\$90.89	\$89.73
2009-2010	N/A	\$97.99	67%	5.7%	N/A	\$94.20	\$89.55
2010-2011	N/A	\$99.65	3%	1.7%	N/A	\$95.19	\$90.30

Wholesale Cost-of-Service Summary (Projected) $% MWh^3$

* Reflects balance of year hedge ratio for current Power Year ** FY 06/07 Cost-of-Service is \$82.66/ MWh

³ Includes Energy, Load Following, PJM Fees, and PGAM Base Fees and estimated Incentive. The values in the table reflect the terms of the First Amendment to the Energy Management Agreement.



2.0 - BUDGET REPORT

2.1 – VARIANCE REPORT

	Budget	Actual	Variance
	May-08	May-08	May-08
Power Supply			A Q4 T QQ T
Power Supply (Incl. LFC & Mgt Fees)	\$4,955,537	\$4,337,541	\$617,997
Capacity UCAP Obligated Purchased	\$1,003,026	\$1,043,039	(\$40,013)
Total - Power Supply	\$5,958,563	\$5,380,579	\$577,984
Power Generation			
Plant O&M	\$417,298	\$397,175	\$20,123
Plant Capital Projects	\$300,000	\$0	\$300,000
Fixed Fuel and Transport Charges	\$21,988	\$27,968	(\$5,980)
Subtotal O&M	\$739,286	\$425,143	\$314,143
Generation Production Margin			
Power Revenue from PJM	\$0	(\$1,222)	\$1.222
Fuel & Transport (Variable)	\$0	\$2.586	(\$2.586)
Total - Generation Production Margin	\$0	\$1,364	(\$1,364)
Non-Production Revenue			
Generation Capacity Payment	(\$971,589)	(\$1,013,533)	\$41,944
Emissions Allowance Sales	(¢01 1,000) \$0	\$0	\$0
Black Start Revenue	(\$5,000)	(5.729)	\$729
Subtotal - Non-Production Revenue	(\$976,589)	(\$1,019,262)	\$42,673
Subtotal - Power Generation	\$739 286	\$426 507	\$312 780
Subtotal - Non-Production Revenue	(\$976.589)	(\$1.019.262)	\$42.673
Total – Power Generation	(\$237,303)	(\$592,755)	\$355,453
Total - Utilities Cost	\$5,721,261	\$4,787,824	\$933,437
Unit Costs			
Total - Power Supply	\$92,66	\$94,75	(\$2.09)
Total - Power Generation	(\$3.69)	(\$10,44)	\$6.75
	(\$0.00)	(\$10111)	\$ 0110
Final Unit Cost of Service	\$88.97	\$84.31	\$4.66



July 2007– May 2008	Budget	Actual	Variance
	YTD	YTD	YTD
Power Supply			
Power Supply (incl. LFC & Mgt Fees)	\$60,925,088	\$56,927,595	\$3,997,493
Capacity UCAP Obligated Purchased	\$11,178,375	\$11,306,549	(\$128,174)
Total - Power Supply	\$72,103,463	\$68,234,144	\$3,869,319
Power Generation			
Plant O&M	\$5,364,428	\$4,400,924	\$963,504
Plant Capital Projects	\$377,000	\$322,317	\$54,683
Fixed Fuel and Transport Charges	\$301,370	\$256,452	\$44,918
Subtotal O&M	\$6,042,798	\$4,979,694	\$1,063,105
Generation Production Margin			
Power Revenue from PJM (exc. Black Start)	(\$3,636,990)	(\$3,039,175)	(\$597,815)
Fuel & Transport (Variable)	\$2,535,958	\$2,383,637	\$152,321
Total - Generation Production Margin	(\$1,101,032)	(\$655,538)	(\$445,494)
Non-Production Revenue			
Generation Capacity Payment	(\$10,828,023)	(\$10,985,392)	\$157,369
Emissions Allowance Sales	(\$1,030,000)	(\$1,069,190)	\$39,190
Black Start Revenue	(\$55,000)	(\$59,968)	\$4,968
Subtotal - Non-Production Revenue	(\$11,913,023)	(\$12,114,550)	\$201,527
Subtotal - Power Generation	\$4,941,766	\$4,324,156	\$617,610
Subtotal - Non-Production Revenue	(\$11,913,023)	(\$12,114,550)	\$201,527
Total – Power Generation	(\$6,971,257)	(\$7,790,394)	\$819,138
	¢05 400 000	¢00 440 740	¢ 4 000 457
Total - Utilities Cost	\$0 5,132,200	\$60,443,749	\$4,088,4 57
Unit Costs (\$/MWh)			
Total - Power Supply	\$100.61	\$97.85	\$2.76
Total - Power Generation	(\$9.73)	(\$11.17)	\$1.44
	()		·
Final Unit Cost of Service (\$/MWh)	\$90.88	\$86.68	\$4.20

2.2 – VARIANCE ANALYSIS

Power Supply

- Power Supply costs excluding capacity obligations resulted in a favorable variance of \$617,997 due to substantially lower than 3 years historic load consumption. For May, 2008 Dover realized 11.7% lower load compared to projected load. In addition when comparing the Power Supply costs, excluding capacity obligation payment, on a dollar per MWh basis to the budget resulted in a favorable variance of \$0.68 due to favorable hedge positions relative to budget and relative to current market prices.
- The unforced capacity obligation payment resulted in an unfavorable variance of \$40,013 due to the budget allocating the cost on forecasted MWhs rather than days in the year. PGAM expects the annual payment to be consistent with the annual budget at the end of the year.

Power Generation Charges

- Plant O&M resulted in a favorable variance of \$20,123 against the budget due to a combination of factors including; reduced spending in Safety supplies and material testing; and reduced maintenance expenses. In addition, NAES contract services were billed in April instead of May and the May electric utility bill was not booked on time deferred this bill to the subsequent month reporting period.
- The \$300,000 positive variance for Plant Capital Costs is due to timing of the oil tank cleaning which was budgeted for May, 2008 but performed in November, 2007.
- Fixed fuel and transport charges realized an unfavorable variance of \$5,980 primarily due to higher than expected base load gas and demand charges. Furthermore approximately 227 Dth was purchased and consumed for nearly \$2,600 to test Van Sant unit after stack repair project was completed on May 23, 2008.

Generation Production Margin

• Although neither McKee Run Unit 3 nor Van Sant dispatched for the month of May; however, PJM recognized 13 MWh of generation on May 23 associated with completion and testing of Van Sant. This dispatch resulted in an unfavorable Generation Production Margin variance of \$1,364.

Non-Production Revenue

• The generation capacity payment realized a favorable variance of \$41,944. This is due to City of Dover's budget basing the payment on the volume of anticipated load forecast for the month. PJM, on the other hand, accounts for Generation Capacity Payment based upon the



number of days for each month. PGAM expects the annual Capacity Payment to be consistent with the annual budget at the end of the year.

• Black Start Revenue realized \$729 favorable variance against the budget. PJM has increased the reimbursement for Black Start Service costs based on the annual filing provided by NAES.

3.0 – ENERGY MANAGEMENT

3.1 - PURCHASED POWER

Management Highlights

- Dover's May load was 56,785 MWh which was 88.3% of the historic load of 64,305 MWh. Hedge volumes equaled 93.4% of actual load for the month.
- May All In unit energy cost excluding capacity of \$76.39 is \$0.68 per MWh below budget for the month.
- May Total All In unit energy cost including capacity of \$94.75 is \$2.09 per MWh above the budget for the month. This results from how the budget was calculated and not a true variance in the sense that the overall costs to the City has changed. The budget was created using a fixed \$ per MWh whereas PJM determined capacity charges and credits on a \$ per MW day. The actual capacity cost variance resulted in unfavorable \$40,013 or a negative variance of \$2.77 per MWh.
- The YTD All In Unit Energy cost, net of UCAP Obligation payment, of \$81.66 is \$2.96 below the annual fiscal year 2007-2008 budget target of \$84.62 per MWh. Currently, the unit energy cost is projected to be \$82.14 per MWh.









Purchased Power Variance Report

	Budget	Actual	Variance
	May-08	May-08	May-08
City of Dover Load			
Load Forecast (MWh)	64,305	56,785	7,520
UCAP Obligation – Total Capacity			
Requirement (MW)	190.2	190.2	0.0
Self-Supplied Capacity from Gen (MW)			
McKee Run 1	13.2	13.2	0.0
McKee Run 2	16.7	16.7	0.0
McKee Run 3	97.4	97.4	0.0
Van Sant	38.1	38.1	0.0
Total - Self-Supplied Capacity from			
Gen (MW)	165.4	165.4	0.0
Capacity Transfer Rights Credit			
(\$/MW.d)	\$20.16	\$20.16	\$0.00
PJM Purchased Capacity (\$/MW.d)	\$177.00	\$177.00	\$0.00
Gen Capacity Sales to PJM (\$/MW.d)	\$197.16	\$197.16	\$0.00
Energy Costs			
Unit Energy Costs (\$ per MWh)			
Energy Cost (including Load Following &			
Pace Fees)	\$72.41	\$69.46	\$2.95
Pass-Through Items	\$3.41	\$5.11	(\$1.70)
Incentive Fees	\$1.24	\$1.81	(\$0.57)
Unit Energy Costs (\$/MWh)	\$77.06	\$76.39	\$0.68
Unit Capacity Cost (\$/MWh)	\$15.60	\$18.37	(\$2.77)
Total - All In Energy Cost	\$92.66	\$94 75	(\$2.09)
	Ψ 01 .00	ψυτι υ	(₩2.00)

Purchased Power Variance Analysis

- Actual Dover load of 56,785 MWh was 11.7% lower than the projected load of 64,305 MWh.
- The Unit Energy Cost achieved favorable variances with a \$0.68 per MWh in May primarily due to variances in load following, congestion management and the favorable hedged positions.
- Pass-through items incurred an unfavorable variance of \$1.70 per MWh basis. One of the key drivers for the variance on a \$ per MWh basis is that the budget was set using the same fixed \$MWh for the whole year. When the MWhs of actual load are smaller than the average for the projected load it creates an unfavorable variance simply due to changes in the denominator. In addition, the transmission charges, reactive power service charges and synchronized reserve charges for the year have been greater than the historical charges. PJM's day ahead operating reserve charges, total daily payment to PJM's cleared reserve generators are highest cost to City of Dover year-to-date. Finally, PJM continues to charge



for Generation Deactivation for PJM to pay NRG for Units 1 & 2 at the Indian River coal plant.

• Unit Capacity Costs resulted in an unfavorable variance of \$2.77 per MWh due to substantial difference in budget and actual load; and the difference in how the budgeted capacity cost was allocated on a monthly basis and how PJM calculates this cost. PGAM expects these monthly differences to net out to a negligible variance at year end.

PJM Power Balancing and Load Related Fees

Purchased Power (Hedges): 53,040 MWh's @ \$65.92/MWh:	\$3,496,536
Power Balancing and Additional PJM and Energy Manager Fee ⁴ :	<u>\$1,884,043</u>
Total Cost to Serve Load (56,785 MWh's)	\$5,380,579

ALL IN \$/MWH LOAD COST INCLUSIVE OF ENERGY MANAGER FEES: \$94.75/MWH

⁴ Includes estimated Incentive Fees.



3.2 - GENERATION MANAGEMENT

• During the month, neither the McKee Unit 3 nor VanSant units were called to operate for PJM. However VanSant operated for 0.60 hours in order to test the plant after successfully completing stack repairs and other scheduled maintenance activities, generating 13 MWh 3,354 MWh and realizing negative \$1,364 total Generation Production Margin for City of Dover.







Generation Management Variance Report

	Budget May-08	Actual May-08	Variance May-08
Generation Production Margin	1124	11 24 5 00	1124 9 00
Power Sales			
Power Sales (MWh)	0	13	(13)
Sales Revenue (\$ per MWh)	\$0.00	(\$98)	\$98
Power Sales Revenue	\$0	(\$1,222)	\$1,222
Fuel Expense			
Variable Gas Expense			
Spot Gas Purchases (Dth)	0	227	(227)
Gas Price (\$ per Dth)	\$0.00	\$11.39	(\$11.39)
Total - Spot Gas Purchases	\$0	\$2,586	(\$2,586)
Variable Gas Transport Expense (\$)	\$0	\$0	\$0
Total - Variable Gas Expense	\$0	\$2,586	(\$2,586)
Fuel Oil Consumption			
#2 Fuel Oil Consumed (Gallons)	0	0	0
#6 Fuel Oil Consumed (Gallons)	0	0	0
#2 Fuel Oil Price (\$ per Gallon)	\$0.00	\$0.00	\$0.00
#6 Fuel Oil Price (\$ per Gallon)	\$0.00	\$0.00	\$0.00
#2 Fuel Oil Cost of Goods Sold (\$)	\$0.00	\$0	\$0
#6 Fuel Oil Cost of Goods Sold (\$)	\$0	\$0	\$0
Total - Fuel Oil Purchases	\$0	\$0	\$0
Total - Generation Production Margin	\$0	\$1,364	(\$1,364)
Generation Capacity Payment			
Total - Generation Capacity Payment	(\$971,589)	(\$1,013,533)	\$41,944



Generation Management Variance Analysis

Power Sales

• Net generation for the month of May credited by PJM was 13 MWhs compared to zero MWh budgeted due to Van Sant operating for 0.60 hours to test after successfully completing stack repairs and other scheduled maintenance activities. The test for VanSant Unit 11 produced revenues of \$1,222 and it resulted in a margin after fuel costs⁵ of negative \$1,364 or negative \$108.82/MWh.

Fuel Expense

- The Van Sant stack repair testing onto PJM network consumed 227 Dth of gas, costing \$2,586 on May 23, 2008.
- Natural gas was consumed for heating the residual resulting in a fuel cost of \$27,968 which includes commodity costs and firm transport.

Generation Production Margin			
Transaction	Volumes	Revenue/(Cost)	
PJM Invoice for Power Sold	13 MWh's	\$1,222	
Fuel and Transport	227 dth gas/0 gal #2 oil 0 gal #6 oil	(\$2,586)	
Generation Production Margin	13 MWh's	(\$1,364)	

⁵ Margin after fuel costs does not account for the variable Operations and Maintenance costs nor does this margin account for the value of the emission allowances.



The following non-production energy revenues and costs are generally fixed and not directly related to generation dispatch and power production.

PJM Invoice (Black Start)	\$5,729
Fuel Oil Tank Heating & Black Start Gas Supply	(\$18,600)
Eastern Shore Demand Charge	(\$4,374)
Eastern Shore Transport and Imbalance Charge	(\$576)
Transco Demand Charge	(\$4,417)
Non-Production Energy Revenue/Costs	(\$22,238)



Fuel and Transportation

No natural gas commodity purchases were necessary to operate McKee Run Unit 3 and Van Sant Unit 11 during PJM dispatches in the Real Time market. In addition to Base Load gas for McKee Run oil tank, additional 227 Dth was consumed and settled at the end of the month for testing of Van Sant stack repair.

Gas was purchased on a firm basis to maintain the No.6 fuel oil inventories at McKee Run at approximately 160 degrees. This firm delivery base load gas supply has been purchased from Sempra Energy. The Details of this deal are as follows:

Firm Gas Supply	Price Per dth	Total Cost
52.7 dth/day	\$11.39	\$18,599.87

Gas Transportation Purchased

Eastern Shore Natural Gas Pipeline and TransCo agreements provide for deliveries to the McKee Run and VanSant stations. These charges include a firm demand charge and prior period adjustments as follows:

ESNG FT Demand Charge	\$4,374
TransCo FT Demand Charge	<u>\$4,417</u>
Total Purchases	\$8,791

Other Gas Purchases

Commodity and transportation imbalances on Eastern Shore Pipeline for the month resulted in a charge of \$576.97 to the City, and are summarized as follows.

Imbalance 43	e (dth)	Estimated \$/dth \$12.14	Estimated Total Cost \$522.02
Transport	Volume (dth)	Estimated \$/dth	Estimated Total Cost
Firm & IT Capacity Rele	1,841 ease	\$0.03	\$54.95



Purchased Commodity Fuel Oil Summary

Since PJM did not schedule McKee Run or Van Sant in PJM market for this month, fuel oil was not consumed.

For the upcoming summer season dispatches Pace and NAES are strategizing to evaluate the economics of inventory fuel oil and purchasing gas for McKee Run and Van Sant dispatches. Given DNREC regulation Pace and NAES Inventories of No.2 at VanSant are low and PGAM has been authorized to replenish storage of up to 10 days supply, within prudency. However, the current market price of \$4.05 per gallon is viewed as too high to merit purchases at this time and the market continues to be monitored.

Tank Inventory Estimates as of May 31					
Tank	Tank Capacity	Inventory In	Days of Burn		
	(gallon)	(gallon)	(Typical Dispatch ⁶)		
#6 Oil	2,554,105	426,024	3		
#2 Oil	258,000	99,276	4		

⁶ Under typical dispatch McKee Run Unit 3 consumes approximately 49,000 gallons over an eight run. VanSant consumes 3,000 gallons per hour and under typical dispatch would be dispatched up to six hours.



3.3 - EMISSIONS AND ALLOWANCE MANAGEMENT

- Total net revenue from allowance sales for this fiscal year is \$1,068,190, exceeding the Dover 2007-08 power year budget projection of \$1,030,000.
- Additional revenue can be accrued through the sale of the remaining 549 tons of 2007 vintage SO₂ allowances.

Generation Emission Allowance Management Variance Report

	Budget	Actual	Variance
	May-08	May-08	May-08
SO2 Allowance Inventory	3,013	3,267	(254)
SO2 Annual Allowance	0	0	0
SOx - Emitted through Generation (tons)	0	0	0
SOx - Allowances Available to be Sold	3,013	3,267	(254)
SOx - Sold (tons)	0	0	0
SOx – Price	\$0	\$0	\$0
SOx – Revenue	\$0	\$0	\$0
NOx Allowance Inventory (BOY)	165	198	(33)
NOx Annual Allowance	0	0	0
NOx - Emitted through Generation (tons)	0	0	0
NOx - Allowances Available to be Sold	165	198	(33)
Nox - Sold (tons)	0	0	0
NOx – Price	\$0	\$0	\$0
NOx – Revenue	\$0	\$0	\$0
Total - Allowance Sales Revenue	\$0	\$0	\$0



Emissions and Allowance Management

As shown in **Error! Reference source not found.**, total net revenue from allowance sales for the 2007-08 fiscal year is \$1,068,190, exceeding the Dover annual budget projection of \$1,030,000. No sales have occurred in the 2008-09 fiscal year. City of Dover has a balance of 549 tons of vintage 2007 SO₂ allowances and no vintage 2007 NO_x allowances. Additionally, City of Dover holds 2,718 tons of vintage 2008 SO₂ allowances and 198 tons of vintage 2008 NO_x allowances.

			SO ₂			NOx	
Date	Action	Allowance Allocation	Sale Price	Revenue ²	Allowance Allocation	Sale Price	Revenue ²
1/1/07	Initial 2007 Allocation	2,723			198		
4/2/07	Sold 327 tons SO ₂	-327	1	1			
9/27/07	Sold 1,750 tons SO ₂	-1,750	\$556.00	\$971,250			
9/27/07	Sold 166 tons NO _x				-166	\$600.00	\$97,940
11/1/07	Purchased 1 ton NO _x ⁴				1	\$1,000.00	(\$1,000)
12/31/07	2007 YTD Emissions ³	-97 ⁶			-33		
1/1/08	Initial 2008 Allocation	2,723			198		
2/29/08	2008 YTD Emissions	-5			-0		
Totals - 2 - 2	007 Vintage Allowances 008 Vintage Allowances	549⁵ 2,718		\$971,250 	0 198		\$96,940
							\$96,94(<u>\$971</u> 25(

Exhibit 1	Emissions and Allowance Summary
	Emissions and Anowance Summary

Notes:

(1) Sale Price and Revenue are not considered for the April 2 SO_2 sale because this revenue accrued in the prior fiscal year.

(2) Revenue calculations account for a \$1/ton broker fee for SO₂ and a \$10/ton broker fee for NO_x.

(3) NOx emissions pertain only to seasonal emissions (May 1 – Sep 30).

(4) The broker fee was waived for the 11/1/07 NO_x purchase.

(5) Dover may be charged with an additional ton of SO_2 emissions based on the rounding method employed by the EDR software.

(6)YTD 2007 SO₂ emissions reflect adjustment per NAES January Report.

Additional revenue can be accrued through the sale of the remaining 549 tons of 2007 vintage SO_2 allowances. At the June 13th asking price of \$355 per ton, this revenue would be approximately



\$195,000. The state of the market was discussed with the City in April at which point the City determined a wait and hold strategy was appropriate.

Current SO₂ allowance prices remain well below the City's threshold and at a four-year low. Prices dropped significantly in April and the first half of May to under \$200/ton as concerns intensified regarding the court challenge to the Clean Air Interstate Rule (CAIR). If the courts vacate the SO₂ portions of CAIR, the Acid Rain Program will remain in effect, eliminating the 2 to 1 allowance to emissions requirement and making future compliance easier. As temperatures warmed over the past two weeks, however, expectations of greater electric demand exerted upward pressure on prices to bring offering prices over \$350/ton for the first time since March.

The beginning of the ozone season has seen little movement in NO_x allowance prices, which are stable in the \$750/ton - \$850/ton price range on thin trading volumes. More trading is expected later in the NO_x season. Over the past month, annual NO_x allowance prices have risen to near \$5,000/ton.



4.0 – OPERATIONS MANAGEMENT

Management Highlights

- During the month of May, there were no employee or contractor related OSHA injuries, illnesses or time loss accidents. There were no operating permit deviations and no Environmental Notices of Violations issued during the month.
- During the month, no units were called upon to operate for PJM. VanSant operated for .60 hours after successfully completing repairs to the exhaust stack. A post stack inspection was completed after the test run and no damage to the stack was apparent at the time.
- Talks between NAES -Dover, Pace Global, City of Dover (COD) officials and DNREC officials have continued. The COD has withdrawn their original compliance plan (SNCR installation) with DNREC approval and has proposed converting the McKee Run Generating Station Unit boilers to burning No. 2 fuel oil in lieu of No. 6 fuel oil. A meeting was held on May 23, 2008 with the DNREC to discuss emission limits and the construction permit going forward. Progress is being made and one obstacle being that DNREC is firm on having a daily mass cap on NOx emissions for Unit 3 in order to classify McKee Run as being "Under Control". Plant staff and Pace are working together to determine the risk involved with agreeing to the limits that DNREC wishes to impose.
- Unit #11 started an annual outage on April 28, 2008 and was completed on May 23, 2008 upon the successful operation of the unit prior to clearing the outage. Stack repairs were a major part of the work scope along with equipment inspections and calibrations. Stack work was performed by the NAES Chimney Group with an assist by plant personnel to help keep costs down. At the conclusion of the project, the plant received notification from the NAES Chimney Group that they intended to supply a rebate of \$35,000 that would be deducted from their invoice.
- NAES Power Contractors Chimney Division completed the stack repairs at VanSant on May 23, 2008, two days ahead of the official ending date of May 26, 2008. The maintenance team also supported the contractors and completed all of our related outage work as well.
- A borescope inspection of the compressor section and two fuel nozzles on Unit 11 was performed during the outage by ATS, with no significant changes since the 2007 inspection.
- Annual weigh scale calibration certification was completed during the month. The scale is used to perform the required the annual calibrations for the fuel flow transmitters on all three McKee Run units. This calibration is scheduled to occur during the month of July.
- Six PCB containing capacitors, three each on Units One and Two Generators, were replaced.



- Plant staff has received drafts of Title V Permit from DNREC during April. Monica Lopes from the NAES ESS group worked with plant staff to provide comments regarding the drafts back to DNREC in April 2008. The plant was informed by Mr. Tom Lilly, DNREC contact for the plant, that due to the number of revisions that had to be made to the draft, the permit had to be sent to the EPA again in order to allow them to comment on it before it goes into effect.
- A draft of the NPDES permit was received. Plant staff has evaluated the new permit and have set up a meeting on June 4, 2008 with DNREC to clarify some points and some minor mistakes in the permit, prior to it going out for public comment.
- We received a letter from DNREC giving us a heads up that we will be required to start reporting CO2 emissions in the future and that we need to develop a monitoring plan.
- We currently have two vacant Operator positions. A number of possible operator candidates have been found and after a thorough analysis, an offer was made contingent on a satisfactory background check and employment physical. The new hire is expected to start work sometime in June, 2008.
- The station continues to work on compliance with NERC and RFC standards for generator operator (GOP).
- The following is the NAES Monthly Report as submitted to PGAM



North American Energy Services Dover, DE May 2008 Monthly Report



VanSant Generation Station Stack Repairs



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- **1.0** Environmental, Health and Safety
- 2.0 Financial
- **3.0 Operations**
- 4.0 Maintenance
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- 6.0 Summary of NAES Performance



1.0 Environmental, Health and Safety

During the month of May, there were no employee or contractor related OSHA injuries, illnesses or time loss accidents. There were no operating permit deviations and no Environmental Notices of Violations issued during the month

Plant staff has received drafts of Title V Permit from DNREC in the middle of the month. Monica Lopes from the NAES ESS group worked with plant staff to provide comments regarding the drafts back to DNREC in April 2008. The plant was informed by Mr. Tom Lilly, DNREC contact for the plant, that due to the number of revisions that had to be made to the draft, the permit had to be sent to the EPA again in order to allow them to comment on it before it goes into effect.

A draft of the NPDES permit was received. Plant staff has evaluated the new permit and have set up a meeting on June 4, 2008 with DNREC to clarify some points and some minor mistakes in the permit, prior to it going out for public comment.

We received a letter from DNREC giving us a heads up that we will be required to start reporting CO2 emissions in the future and that we need to develop a monitoring plan. We have asked Monica Lopes, NAES ESS, to assist in this effort.

Environmental, Health and Safety Statistics				
	Month (May 2008)	Fiscal Year to Date (7/1/07-6/30/08)		
NOVs	0	0		
Opacity Deviations	0	35		
Environmental Deviations	0	0		
OSHA Recordable	0	0		
OSHA LTA's	0	0		
First Aid cases	0	0		
Restricted Workday Accident	0	0		
Near Miss	0	0		
Man Hours Worked	4,727.50	52,235.1		
Date last OSHA Recordable		4/05/05		
Date last Lost Time Accident		4/05/05		
Days since last OSHA recordable		1,152		
Days since last Lost Time Accident		1,152		



NOx Summary - Year (May-Sept.)Tons						
<u>Year</u>	<u>Unit #1</u>	<u>Unit #2</u>	<u>Unit #3</u>	<u>Unit #11</u>	<u>TOTAL</u>	
2005	20.16	20.64	103.3	2.19	146.29	
2006	1.82	1.78	19.25	1.72	24.57	
2007	3.3	2.7	25.9	0.7	32.6	
2008	0.0	0.0	0.0	0.01	0.01	

Emissions (NOx & SO2) All data thru 9/30/07

NOx Allowances Summary					
NOx Allowance	NOx NOx All Allowances (Per Fac	NOx Allowan (Per Facility, l	ces Available Prior to Sale)	Total NOx Tons Emitted	NOx Allowance
Vintage	Sold YTD	<u>McKee Run</u>	<u>VanSant</u>	(NOx Season)	Balance
2007	165	191	7	33	0
2008	0	191	7	0	198
2009	0	191	7	0	198

Note: NOx Season is May 1 to September 30.

SO ₂ Summary - Year (JanDec.)Tons					
Year	<u>Unit #1</u>	<u>Unit #2</u>	<u>Unit #3</u>	<u>Unit #11</u>	<u>TOTAL</u>
2005	49.91	52.08	530.24	2.30	634.69
2006	3.69	1.51	50.7	0.40	56.30
2007	6.28	5.31	97.69	0.28	109.56
2008	0	0	5.29	0.07	5.36

	SO ₂ Al	llowances	Summary		
SO ₂ Allowance Vintage	SO ₂ Allowances Sold - YTD	SO ₂ Allowances Available (Per Unit, Prior to Sale & Reconciliation) Unit #3 Unit #11		Total SO ₂ Tons Emitted – U3 and U11 YTD	SO ₂ Allowances Balance
2006	2725	2586	139	51	0
2007	2076	2585	138	98	549
2008	0	2585	138	5	2718
2009	0	2585	138	0	2723

1.1 Training

Members of the plant continue to use the General Physics safety training and power plant courses to satisfy the OSHA requirements and enhance their overall knowledge of power plant equipment. During the month of May, plant personnel began training on the Accidental Release Prevention Program for natural gas and on the Respirator Protection Program which includes respirator fit testing. Topics discussed during the monthly safety committee meeting were reviewed by the entire staff during their team meetings.



2.0 Financial

Financial – Current Month					
	Month –May 2008				
	Actual	Budget	Variance		
Personnel	349,115	252,936	(96,179)		
Administrative	31,133	37,002	5,869		
EH & S	935	7,000	6,065		
Maintenance Expense	12,573	41,850	29,277		
Operations Expense	3,420	78,510	75,090		
Total	\$397,175	\$417,298	\$20,123		

Financial – Fiscal Year to Date

	Number of Months – 11						
	Actual Budget Variance						
Personnel	2,693,591	2,964,622	271,031				
Administrative	780,488	835,222	54,734				
EH & S	17,433	48,000	30,567				
Maintenance Expense	183,698	505,350	321,652				
Operations Expense	725,714	1,011,234	285,520				
Total	\$4,400,924	\$5,364,428	\$963,504				

2.1 Variance analysis

For the month of May, a favorable variance of \$20,123 was achieved due to the following:

<u>PERSONNEL EXPENSES</u> - An unfavorable variance of \$96,179 was due to three pay periods booked in May when only two pay periods had been originally budgeted.

<u>ADMINISTRATIVE EXPENSES</u> - A favorable variance of \$5,869 was achieved due to Contract Services – Engineering (Reactive Power Filing) being billed in April, not May as originally budgeted.

ENVIRONMENTAL, HEALTH, AND SAFETY EXPENSES - A favorable variance of \$6,065 was achieved due to reduced spending in Safety Supplies and Materials Testing. Non-Hazardous Waste Disposal budgeted for May has not been invoiced although it is expected to be in June.

MAINTENANCE EXPENSES- Favorable variance of \$29,278 was gained due to reduced spending in the following accounts: Boiler Systems, DCS Control System, Power Distribution System, Fuel Oil System, Plant Insulation Removal / Installation and Turbine Generator Systems.

<u>OPERATING EXPENSES</u> – A favorable variance of \$75,090 was achieved for not receiving the electric bills in time to be booked in May. It is anticipated that double billing for electric will occur in June.

<u>YEAR-TO-DATE EXPENSES-</u> A favorable variance of \$963,504 has been achieved due to low unit(s) operating time which lead to lower operating and maintenance expenses. In addition, three staff positions have been unfilled for several months.

YEAR-END PROJECTED EXPENSES- A continued favorable variance is expected at year end. The year to date variance of \$963,504 is expected to be reduced by an unbudgeted amount of an estimated \$300,000 for exhaust stack repairs to the VanSant combustion turbine. The year end variance is expected to be favorable by approximately \$700,000.

3.0 Operations

Month – May 2008							
		McKee	McKee	McKee	MRS	VanSant	Total
		Unit 1	Unit 2	Unit 3	Facility	Unit 11	All Units
Capacity	MW	17	17	102	136	39	175
On Line Hours	Hrs	0	0	0	0	.600	.600
Starts	#	0	0	0	0	1	1
Gross Generation	MWh	0	0	0	0	12.383	12.383
Net Generation	MWh	0	0	0	0	12.357	12.357
Total Auxiliaries	MWh	21.583	21.583	160.115	203.280	.940	.940
Auxiliaries purchased	MWh	21.583	21.583	160.115	203.280	.914	.914
Fuel Gas Used	MMBTU	0	0	0	0	229,913	229,913
Fuel Oil Used	MMBTU	0	0	0	0	0	0
Fuel Oil Used	Gallons	0	0	0	0	0	0
Total Fuel	MMBTU	0	0	0	0	229,913	229,913
Net Heat Rate	BTU/KWh	NA	NA	NA	NA	18,606	18,606
Unit Trips	#	0	0	0	0	0	0
Capacity Factor	%	0	0	0	0	0.04	0.01
Availability Factor	%	100	100	100	100	27.08	81.77
Commercial Unavailability (CU)	%	0	0	0	0	0	0
Planned Outage Hours	Hours	0	0	0	0	542.5	542.5
Maintenance Outage Hours	Hours	0	0	0	0	0	0
Forced Outage Hours	Hours	0	0	0	0	0	0
Reserve Shutdown Hours	Hours	744.0	744.0	744.0	2,232.0	200.900	200.900
HW Boiler Gas Usage	MMBTU				1,614		1,614
Pilot Gas Usage	MMBTU	0	0		0		0

Note: Does not include HWB or Pilot Gas. Fuel usage numbers are taken from fuel flow instruments

VanSant Lifetime through 5/31/08							
	Actual Starts	Factored Starts	Fired Hours				
VanSant	1179	1970.85	3,856.8				
Since HGP - Dec 2004	130	303.15	473.215				

Note: As measured by tank level instruments. Tank levels may change due to oil temperature.

Fuel Oil Inventory							
	Monthly	Monthly	Fuel	Monthly	FY 07-08	Fuel	FY 07-08
	Inventory	Inventory	Purchases	Inventory	Inventory	Purchases	Inventory
	(Start)	(End)	(Month)	(Change)	(Start)	(YTD)	(Change)
McKee Run (#6 Fuel Oil)	425,849	426,024	0	175	921,770	536,487	(495,746)
VanSant (#2 Fuel Oil)	99,276	99,276	0	0	117,816	0	(18,540)

2007-2008 Fiscal Year-to-Date (11 Months)							
		McKee Unit 1	McKee Unit 2	McKee Unit 3	MRS Facility	VanSant Unit 11	Total All Units
Capacity	MW	17	17	102	136	39	175
On Line Hours	Hrs	163.851	152.301	324.469	640.621	94.441	735.062
Starts	#	3	4	23	30	24	54
Gross Generation	MWh	1,180.747	1,072.111	16,894.605	19,147.463	3,104.640	22,252.103
Net Generation	MWh	1,102.130	976.691	15,398.067	17,476.888	3,096.081	20,572.969
Total Auxiliaries	MWh	372.900	389.704	3,638.417	4,401.020	64.281	4,465.301
Auxiliaries purchased	MWh	294.284	294.284	2,141.879	2,730.446	55.747	2,786.193
Fuel Gas Used	MMBTU	3,287	3,435	53,477	60,199	269,626	329,825
Fuel Oil Used	MMBTU	14,758	10,851	126,976	152,586	2,421	155,007
Fuel Oil Used	Gallons	98,525	72,420	846,829	1,017,774	17,763	1,035,537
Total Fuel	MMBTU	18,046	14,287	180,453	212,785	272,047	484,838
Net Heat Rate	BTU/KWh	16,374	14,628	11,789	12,020	18,606	12,172
Unit Trips	#	0	0	0	0	0	0
Capacity Factor	%	0.50	0.61	2.32	1.87	1.26	1.74
Availability Factor	%	98.16	98.73	97.45	98.11	91.79	96.53
Commercial Unavailability (CU)	%	0	0	0	0	0	0
Planned Outage Hours	Hours	101.6	75.3	171.0	347.9	662.1	1,010.0
Maintenance Outage Hours	Hours	0	0	0	0	0	0
Forced Outage Hours	Hours	0	0	0	0	0	0
Reserve Shutdown Hours	Hours	7,819.752	7,851.603	7,477.964	23,149.319	7,822.179	30,971.498
HW Boiler Gas Usage	MMBTU				18,800		18,800
Pilot Gas Usage	MMBTU	632.25	632.25		1,264		1,264

Capacity Testing							
Summer 2007-2008 (June 1- Aug 31) Winter 2007-2008 (Dec 1- Mar 1)							
Unit	Rated NetReported NetUnitRated NetReported NetCapability (MW)Capability (MW)Capability (MW)Capability (MW)						
1	17	17.23	1	17	*		
2	17	17.0	2	17	*		
3	102	103.44	3	102	103.32		
VanSant	39	39.20	11	40	46.02		
Total	175	176.87	Total	176	176		

Note: * depicts that the unit has been accepted into the PJM Winter Capacity Test Exemption Program for the Winter Period 2007-2008.



3.1 Training

Plant employees continue working on their General Physics topics during the month. The inclusion of these courses will provide increased knowledge of plant operations and build a solid foundation for cross training employees at the City of Dover project. These courses are included in the Employee Qualification program that will help prepare operators for advancement within the line of progression jobs. Also included in the training program are PJM computer based training courses. For the coming year, several Seniors Operators have been tasked with achieving PJM Generation Systems Operator certification. Operations staff members continue to help calibrate gauges in an effort to aid maintenance and provide cross training in different areas of the plant. Operations personnel continue dry run training on the units as part of our Plant Readiness program.

3.2 Personnel

We currently have two vacant Operator positions. Plant management has evaluated the need to fill the positions, gained approval from the City of Dover. Several staff members are conducting applicant interviews for the open operator position at the plant. A number of possible operator candidates have been found and after a thorough analysis, an offer was made contingent on a satisfactory background check and employment physical. The new hire is expected to start work sometime in June, 2008.



4.0 Maintenance

During the month of May, plant maintenance staff continued addressing the backlog of work orders, focused on keeping all units available to our client and PJM along with completing the annual outage work at VanSant Station on time and ahead of the anticipated schedule. Forty orders were issued during the month and forty-four work orders were completed during the month.

The table below summarizes the monthly work order activities.

Work Order Report							
May - 08							
Priority #	Outstanding at the end of the month						
$\mathbf{D1}$	∩						
P1 D2	3	0	0	3			
P2	2	10	7	5			
PJ D/	2/	10	24	10			
P4	24	19	24 5	19			
FJ P6	1	4	0	0			
P0 P7	15	0	6	12			
P7	15	4	1	7			
FO	0	2	1	0			
P9 De 1	9	0	1	0			
P6 - 1	0	0	0	0			
P6 - 2	0	0	0	0			
P6 - 3	0	0	0	0			
P6 – 4	2	1	0	3			
P6 – 5	0	0	0	0			
P6 – 6	2	0	0	2			
P6 – 7	0	0	0	0			
P6 - 8	0	0	0	0			
PM	23	16	24	15			
Totals	70	40	44	66			
Note: PM's are included in the priority totals							

Notable activities during the month include:

- 1) NAES Power Contractors Chimney Division completed the stack repairs at VanSant on May 23, 2008, two days ahead of the official ending date of May 26, 2008. The maintenance team also supported the contractors and completed all of our related outage work as well.
- 2) A borescope inspection of the compressor section and two fuel nozzles on Unit 11 was performed during the outage by ATS, with no significant changes since the 2007 inspection.
- 3) Annual weigh scale calibration certification was completed during the month. The scale is used to perform the required the annual calibrations for the fuel flow transmitters on all three McKee Run units. This calibration is scheduled to occur during the month of July.



4) Six PCB containing capacitors, three each on Units One and Two Generators, were replaced. The capacitors were original equipment on the generators (1961) that until recently, no replacements had been available. The removal and replacement of the capacitors was completed by plant personnel and with assistance from Diamond Electric, a local vendor. Proper disposal of the old capacitors is scheduled for June 2008. The replacement of the capacitors now completes the PCB equipment removal process of all known PCB contaminated equipment in the plant.

4.1 Training

- 1) Aaron Jester and Eric Carrow continue to work with the maintenance department when they are not needed for operations support.
- 2) Rich Newman attended the May Safety Meeting as the maintenance team's safety committee representative. Team members also participated in the monthly team safety meeting given by Rich Newman.
- 3) Franklin Hurley, Phil Marvel, Robert Morris, Chuck Luton, Aaron Jester and Eric Carrow all received fork lift training form Boyd Lord, Materials Management Coordinator.
- 4) Chuck Luton received new employee orientation from Phil Kosek, EHS and Admin Manager. He also received training and orientation on the plant by maintenance team members.

4.2 Personnel

We welcomed Mr. Charles "Chuck" Luton to our team on May 20, as the new IC&E technician. This is a new position that was created to better meet our needs. Mr. Luton was chosen after numerous interviews by several staff members.



5.0 General Plant Information

Unit Trips/Outages/Operations

During the month, no units were called upon to operate for PJM. VanSant operated for .60 hours after successfully completing repairs to the exhaust stack. A post stack inspection was completed after the test run and no damage to the stack was apparent at the time.

Other Events

Talks between NAES -Dover, Pace Global, City of Dover (COD) officials and DNREC officials have continued. The COD has withdrawn their original compliance plan (SNCR installation) with DNREC approval and has proposed converting the McKee Run Generating Station Unit boilers to burning No. 2 fuel oil in lieu of No. 6 fuel oil. A meeting was held on May 23, 2008 with the DNREC to discuss emission limits and the construction permit going forward. Progress is being made and one obstacle being that DNREC is firm on having a daily mass cap on NOx emissions for Unit 3 in order to classify McKee Run as being "Under Control". Plant staff and Pace are working together to determine the risk involved with agreeing to the limits that DNREC wishes to impose. Elimination of the cyclone separators was also discussed although no definite decision was made and will probably include some type of performance testing before DNREC would approve the removal. A consulting engineering firm, Stantec has been engaged to develop scope, schedule and cost for the oil conversion. Their report is due the first week of June, 2008.

Ken Beard, O & M Manager, attended the O & M Managers Conference in Las Vegas, Nevada. A number of topics were discussed including root cause analysis, NFPA 70E, manpower issues and equipments issues.

The station continues to work on compliance with NERC and RFC standards for generator operator (GOP). Ken Beard is scheduled to attend a RFC seminar on June 9-10 in Cleveland and June 10-11, 2008 in Baltimore, MD. Vince Scire will also attend the June 10-11 Seminar in Baltimore.

Unit #11 started an annual outage on April 28, 2008 and was completed on May 23, 2008 upon the successful operation of the unit prior to clearing the outage. Stack repairs were a major part of the work scope along with equipment inspections and calibrations. Stack work was performed by the NAES Chimney Group with an assist by plant personnel to help keep costs down. At the conclusion of the project, the plant received notification from the NAES Chimney Group that they intended to supply a rebate of \$35,000 that would be deducted from their invoice. The rebate was to recognize the teamwork and cooperation that occurred between their group and plant personnel as well as share savings achieved due to plant support provided during the course of the stack repairs.



Calendar of Events	
	Date
Unit 11 Annual Outage / Stack Repairs	April 28 – May 26, 2008
EIA-923 Survey Due	May 15, 2008
Toxic Release Inventory (TRI) Due	June 1, 2008
PJM Summer Capacity Demonstration Period	June 1, 2008 – August 31, 2008
Fiscal Year 2007-2008 Ends	June 30, 2008
EIA-860 Survey Due	July 10, 2008
Title V Semi-Annual Certification due	August 1, 2008

6.0 Summary of NAES Performance to Date

Measure	Month		Year to Date		YTD Incentive
Commercial Unavailability (CU)	0%		0%		\$83,120
Budget (Actual vs. Budget)	95.18%		90.96%		\$20,780
Safety	0		0		\$15,585
Environmental	0		0		\$15,585
Capacity Tests Completed	Summer	Winter	Summer	Winter	
Unit 1	No	No	Yes	Yes*	\$1,039*
Unit 2	No No		Yes	Yes*	\$1,039*
Unit 3	No	No	Yes	Yes	\$6,234
Unit 11	No	No	Yes	Yes	\$2,078
			Total YTD Incentive		\$145,460

Note: * - depicts unit has been accepted into the PJM Winter Capacity Test Exemption Program



APPENDIX 1

PJM INVOICE BREAKDOWN

The PJM bill is a record of all Electricity Transactions, Transmission Services, Ancillary Services and Miscellaneous fees that allow the PJM to operate. Below is a list of the line items on the PJM bill including all generator activity.

PJM Bill Line Items	Load	<u>Gen</u>	Net
Day Ahead Energy	\$0.00	(\$158,748.00)	(\$158,748.00)
Realtime Energy	\$1,222.00	(\$207,425.60)	(\$206,203.60)
Transmission Losses Credits	\$0.00	\$84,516.81	\$84,516.81
Network Integration Transmission Service Charges	\$0.00	(\$210,555.41)	(\$210,555.41)
Inadvertent Interchange Charges	\$0.00	\$413.55	\$413.55
Regulation Charges	\$0.00	(\$49,429.98)	(\$49,429.98)
Synchronized Reserve Charges	\$0.00	(\$8,988.58)	(\$8,988.58)
Balancing Operating Reserves Charges	\$0.00	(\$5,786.21)	(\$5,786.21)
Day Ahead Operating Reserves Charges	\$0.00	(\$9,107.03)	(\$9,107.03)
Synchronous Condensing Charges	\$0.00	(\$209.20)	(\$209.20)
Reactive Services Charges	\$0.00	\$0.00	\$0.00
Meter Correction Charges	\$0.00	\$924.64	\$924.64
Day-ahead Economic Load Response Program Charges	\$0.00	\$0.00	\$0.00
Real-time Economic Load Response Program Charges	\$0.00	\$0.00	\$0.00
Balancing Operating Reserves Credits	\$0.00	\$0.00	\$0.00
Day Ahead Operating Reserves Credits	\$0.00	\$0.00	\$0.00
Locational Reliability Charges	\$0.00	(\$1,162,223.79)	(\$1,162,223.79)
Capacity Transfer Rights Credits	\$0.00	\$118,847.80	\$118,847.80
Capacity Resource Deficiency Credits	\$0.00	\$337.39	\$337.39
Demand Response and ILR Compliance Penalty Credits	\$0.00	\$0.00	\$0.00
RPM Auction Credits	\$1,013,533.22	\$0.00	\$1,013,533.22
Auction Revenue Rights Credits	\$0.00	\$45,454.37	\$45,454.37
Synchronized Reserve Credits	\$0.00	\$0.00	\$0.00
PJM Scheduling System Control and Dispatch Service Charges	\$0.00	(\$7,828.71)	(\$7,828.71)
Transmission Owner Scheduling System Control and Dispatch	\$0.00	(\$4 301 53)	(\$4 301 53)
Reactive Supply and Voltage Control from Generation Sources	φ0.00	(\$4,301.33)	(\$4,301.33)
Service Charges	\$0.00	(\$24,087.00)	(\$24,087.00)
Black Start Service Charges	\$0.00	(\$1,399.68)	(\$1,399.68)
North American Electric Reliability Corporation (NERC) Charge	\$0.00	(\$324.21)	(\$324.21)
Reliability First Corporation (RFC) Charges	\$0.00	(\$567.36)	(\$567.36)
Expansion Cost Recovery Charges	\$0.00	(\$451.00)	(\$451.00)
Transmission Enhancement Charges - Jan 2008	\$0.00	(\$2,521.08)	(\$2,521.08)
Black Start Service Credits	\$5,728.89	\$0.00	\$5,728.89
Non-Firm Point-to-Point Transmission Service Credits	\$0.00	\$2,298.72	\$2,298.72
Generation Deactivation	\$0.00	(\$12,923.28)	(\$12,923.28)
PPA	\$0.00	(\$512.10)	(\$512.10)
	\$1,020,484.11	(\$1,614,596.47)	(\$594,112.36)