

**NEW HOPE POWER COMPANY
OPERATIONS PLAN
FOR
PROPOSED ASH MONOFILL**

Prepared for:

NEW HOPE POWER COMPANY
21250 US Highway 27
South Bay, Florida 33493

Prepared by:

NEW HOPE POWER COMPANY
21250 US Highway 27
South Bay, Florida 33493

and

JONES EDMUNDS & ASSOCIATES, INC.
730 NE Waldo Road
Gainesville, Florida 32641

Certificate of Authorization #1841

May 2008


George A. Reinhart III, P.E.
Florida P.E. No. 66516

TABLE OF CONTENTS

1.0	<u>GENERAL INFORMATION</u>	1-1
1.1	HEALTH AND SAFETY.....	1-2
1.2	ACCESS AND TRAFFIC CONTROL	1-2
1.3	VEHICLE WEIGHING AND UNLOADING	1-2
1.4	WASTE INSPECTION	1-3
1.5	OPERATING RECORD.....	1-3
2.0	<u>ASH MONOFILL EQUIPMENT AND OPERATION FEATURES</u>	2-1
2.1	UTILIZATION	2-1
2.2	COMMUNICATIONS EQUIPMENT	2-2
2.3	DUST CONTROL	2-2
3.0	<u>SOLID WASTE DISPOSAL PROCEDURES</u>	3-1
3.1	DISPOSAL UNITS.....	3-1
	3.1.1 <u>Placement, Compaction, and Sequence of Filling</u>	3-1
	3.1.2 <u>Cover</u>	3-2
	3.1.3 <u>Litter Control and Access Roads</u>	3-3
3.2	FIRE PROTECTION AND CONTROL	3-3
4.0	<u>LEACHATE MANAGEMENT</u>	4-1
4.1	TREATMENT SYSTEM DESCRIPTION.....	4-1
	4.1.1 <u>Submersible Pumps</u>	4-1
	4.1.2 <u>Leachate Storage</u>	4-1
4.2	LEACHATE MANAGEMENT CONTINGENCY PLAN	4-1
4.3	FLOW MEASUREMENT	4-1
4.4	LEACHATE COLLECTION AND REMOVAL AND LEAK DETECTION SYSTEMS.....	4-2
	4.4.1 <u>Operation</u>	4-2
	4.4.2 <u>Inspections and Maintenance</u>	4-2
	4.4.3 <u>Record Keeping</u>	4-3
4.5	LEACHATE STORAGE.....	4-3
	4.5.1 <u>Storage Tank Construction</u>	4-3
	4.5.2 <u>Tank Interior and Exterior Inspections</u>	4-3
	4.5.3 <u>Secondary Containment System</u>	4-3
	4.5.4 <u>Liquid Level Monitoring</u>	4-5
5.0	<u>LANDFILL GAS MANAGEMENT</u>	5-1
6.0	<u>STORMWATER MANAGEMENT AND EROSION CONTROL</u>	6-1
6.1	STORMWATER MANAGEMENT	6-1
6.2	EROSION CONTROL	6-1

7.0	<u>WATER QUALITY MONITORING</u>	7-1
8.0	<u>CONTINGENCY PLANS</u>	8-1
8.1	WET WEATHER OPERATIONS	8-1
8.2	EMERGENCY OPERATIONS PROCEDURES FOR NATURAL DISASTERS	8-1
8.3	SHORT-NOTICE HEAVY EQUIPMENT	8-2
8.4	EMERGENCY LIGHTING.....	8-2
8.5	COMMUNICATIONS	8-2

ATTACHMENTS

ATTACHMENT 1 LEACHATE DISPOSAL AGREEMENT

1.0 GENERAL INFORMATION

This Operations Plan describes the operations of the New Hope Power Company (NHPC) Ash Monofill Disposal Area (Ash Monofill) located at the NHPC Site (Site), which also contains the Okeelanta Cogeneration Facility (Facility). The proposed Ash Monofill is approximately 15.4 acres and will accept ash residue from the Facility. Two leachate storage tanks with a capacity of approximately 45,000 gallons each will serve the Ash Monofill.

The Site is in Palm Beach County, Florida, Section 15 of Township 45S, Range 36E. The address of the Site is 21250 Highway 27, South Bay, Florida 33493.

The operation of the Ash Monofill is governed by the Conditions of Certification established under the Florida Electrical Power Plant Siting Act (PPSA). The Conditions of Certification will contain requirements based on the rules of the Florida Department of Environmental Protection (FDEP) and South Florida Water Management District (SFWMD), the applicable laws and regulations of the State of Florida, and the regulations of the United States Environmental Protection Agency (EPA). An updated Operations Plan will be submitted at the time of permit renewal for each of the disposal areas. The State of Florida regulations that govern Solid Waste Management Facilities, Chapter 62-701 FAC, are also incorporated by reference in this document but for reasons of brevity have not been included. A current copy of Chapter 62-701, FAC, is maintained at the Site office at the Facility. These documents will be updated as necessary to provide the most current information.

The Ash Monofill shall have a minimum of one properly trained operator, who may also serve as the spotter, at the Ash Monofill working face during operations. The number of personnel may increase depending upon the amount of ash being disposed of at the Ash Monofill. A *properly trained operator and spotter* means a person who has shown competency in his or her occupation through a combination of work experience, education, training, and successful completion of an examination in compliance with Rule 62-701.500(1), FAC, and Rule 62-701.320(15), FAC.

The Ash Monofill site supervisor or designee shall conduct training periodically. All personnel employed at the Ash Monofill shall be trained in safety practices, operating procedures, public health, and environmental protection. Operators shall be trained to operate the appropriate type of equipment for which they are employed.

The spotter shall have received training on receiving and depositing solid waste in order to inspect incoming waste and to identify and properly manage hazardous or prohibited wastes detected. He/she shall be familiar with the operating permits governing operations.

Operators shall also successfully complete the Solid Waste Landfill Operators Training Course given jointly by the Florida Chapter of the Solid Waste Association of North America (SWANA), the University of Florida-TREEO (UF-TREEO), and FDEP. This course provides 24 hours of initial training and requires the individual to pass an examination as part of the

training. Within each 3-year period following the initial certification, operators must complete at least 16 hours of continuing training by a State-approved operator training course.

Spotters shall complete 8 hours of initial training through courses provided by SWANA, UF-TREEO, FDEP, or any other State of Florida Solid Waste Management Training Committee (SWMTC) approved courses. Spotters shall also complete an additional 4 hours of continued training within 3 years after attending the initial training and every 3 years thereafter.

The site supervisor shall maintain documentation and proof of training at the Site office at the Facility. The documentation shall include records of continuing education tests or courses and shall be available for FDEP inspection.

1.1 HEALTH AND SAFETY

Ash monofills may contain health hazards that personnel should be aware of. Personnel should know general safety procedures for avoiding and/or mitigating potential hazards at ash monofills. When handling solid waste or leachate, proper attire and methods as delineated in the Occupational Safety and Health Administration (OSHA) requirements shall be used as guidelines for protection against ingestion, contamination, hearing loss, sight loss, or other mishaps. First Aid equipment will be maintained on-site. The Ash Monofill management staff will conduct regular on-site safety meetings.

The Ash Monofill accepts only ash residue from the Facility for disposal. Although unlikely, if a load of ash appears to be in the process of combustion, it will be managed in accordance with Section 3.2, Fire Protection and Control.

1.2 ACCESS AND TRAFFIC CONTROL

Fencing and gates at the entrance from US Highway 27, and natural barriers are used to prevent unauthorized access to the Ash Monofill that may result in theft of property, vandalism, or scavenging. Scavenging will not be allowed.

Traffic will be controlled by internal communications. Visitors to the Ash Monofill are to be supervised by staff.

1.3 VEHICLE WEIGHING AND UNLOADING

The working face of the Ash Monofill will be maintained in an accessible condition up to 100 feet wide to accommodate vehicles discharging waste and to reduce the exposed area and the use of cover material. Waste shall be deposited as close as possible to the adjacent lift to reduce spreading and compacting distances. Each working face will be maintained for the anticipated traffic maneuvering during waste fill operations. Typical lifts will be 8 to 10 feet high, but may be greater than 10 feet if necessary to accommodate specific operations, the daily volume of waste, the width of the working face, and good safety practices. The drivers will unload at the

designated location on the working face. Unloading will be permitted only at the designated working face of currently operating cells. The weight of ash disposed of will be estimated based on the number and volume of trucks disposing of the ash and then recorded. Scales are not proposed for this site due to the homogeneity of the ash density.

1.4 WASTE INSPECTION

The spotter will visually inspect all ash for unauthorized waste before disposal in the appropriate disposal area. A random-load checking program will not be performed in accordance with Rule 62-701.500(6), FAC due to the consistent nature of the waste disposed of and the ability to identify the nature and source of the waste. The applicant controls the type of waste received. Only ash from the Facility will be accepted. The applicant also controls the vehicles that will have access to the Ash Monofill. Consequently, no motor vehicles, shredded waste, asbestos waste, contaminated soils, biological waste, or other inappropriate materials will be accepted.

- Spotters—The Ash Monofill spotters shall visually inspect all waste deposited at the working faces.
- Spreading and Compaction—The equipment operator shall visually inspect the waste when spreading and compacting lifts. Unauthorized waste shall be removed from the working face and taken to a proper disposal location.

1.5 OPERATING RECORD

The Operating Record shall consist of records, reports, analytical results, demonstrations, construction, operation, and closure permits along with engineering drawings and supporting information, required notifications, and training records required by Rule 62-701.320(15), FAC, will be kept at the office at the Facility. The Operating Record will be available for inspection by FDEP personnel at reasonable times.

Information used to develop or support the applications and pertaining to construction and operation of each of the disposal areas, including background water quality records, will be maintained throughout the design period of the disposal areas. Records of monitoring information, including calibration and maintenance records, and copies of all records required by the Conditions of Certification will be maintained for at least 10 years. Records that are more than 5 years old may be archived at the NHPC offices. These records are filed by subject and date and are retrievable as needed within 7 days of being requested.

Data to be included in the Operating Record include but are not limited to the following:

- Readings taken daily from onsite rain gauges to record precipitation. Quantities of leachate collected by the leachate collection and removal system (LCRS) will be recorded in gallons per day before being transported off site and will be included in the Ash Monofill's operating record.

- Inventories estimating the remaining life and capacity in cubic yards for each disposal area as well as the remaining capacity and life of other authorized areas not yet constructed. These will be developed and reported annually to FDEP. The annual estimates will be maintained at the office at the Facility.

2.0 ASH MONOFILL EQUIPMENT AND OPERATION FEATURES

2.1 UTILIZATION

Ash Monofill equipment shall be operated or used only by qualified personnel in the employment of the Ash Monofill. Only Ash Monofill personnel are authorized to move or relocate equipment on the site or around the on-site roads.

Ash Monofill equipment is categorized into five distinct areas with uses and examples as listed below:

1. Personnel Transport Equipment—used for moving staff, tools, and supplies from place to place on the Site.

Examples: car, pickup truck, panel van, ATV, etc.

2. Waste-Hauling Equipment—used for spreading, compacting, and transporting waste.

Examples: bulldozer, front-end loader, tanker, etc.

3. Ash Monofill Cover Equipment—used for excavation, transporting, spreading, and compacting cover material from on-site stockpiles or borrow areas.

Examples: dredge, dragline, bulldozer, earth mover, dump truck, etc.

4. Support Equipment—used in every aspect that supports operations.

Examples: tools, maintenance equipment, spray vehicles, lighting, pumps, welders, clerical equipment, cleaning equipment, security equipment, mowing, road maintenance equipment, etc.

5. Communications Equipment—used for coordination between facility personnel during normal and emergency operations.

Examples: two-way radio, cellular phone, pagers, etc.

The equipment is sufficient to ensure proper operations at the Ash Monofill, including excavating, spreading, compacting, and covering ash waste. Backup equipment is available from local suppliers within 24 hours in the event of equipment breakdown.

2.2 COMMUNICATIONS EQUIPMENT

Communication equipment capable of functioning under conditions of power, phone, or utility outages is required. All supervisors shall have access to a communication device that functions on battery power. Backup shall be maintained at the site for emergency situations.

2.3 DUST CONTROL

A water tanker truck with a discharge attachment may be used to apply water to the all-weather-access roads and Ash Monofill as needed for dust control. A consumptive use permit may be required if groundwater is used to control dust during construction.

3.0 SOLID WASTE DISPOSAL PROCEDURES

3.1 DISPOSAL UNITS

3.1.1 Placement, Compaction, and Sequence of Filling

The establishment of an “active face” at the Ash Monofill will depend on the quantity of waste received for the given day. Control of surface water run-off/run-on and vehicle access must be considered when establishing the location, size, and slope geometry of the active face for the disposal area. In general, the Ash Monofill site supervisor will direct the minimum practical size active face.

The initial authorization for the Ash Monofill is requested for two cells which will be constructed sequentially. Filling will begin in Cell 1A and will continue until the maximum height is achieved. Filling will continue in Cell 1B in accordance with the general filling sequence as shown in the *Phasing Plan* drawings in Appendix B.

To protect the integrity of the leachate collection system and synthetic liner at the disposal areas, equipment is prohibited from driving directly on the 24-inch protective cover soil which acts as a protective layer. A minimum of 4 feet of ash must be in place before unrestricted access is allowed for these types of equipment.

The first layer of ash waste shall be placed over the prepared 24-inch protective cover in the following manner to minimize the risk of damage to the liner and leachate collection system:

- The first loads of ash placed on the prepared surface shall be brought into the lined Ash Monofill cell at the location designated by the Ash Monofill site supervisor. The first layer of ash waste placed on the protective layer will be a minimum of 4 feet in compacted thickness and consist of selected wastes containing no rigid or large objects that may damage the liner or leachate collection system. Ash waste shall continue to be deposited and spread outward until a working face large enough for equipment turn-around is established.

The following general guidelines should be used for ash placement and compaction:

Generally all waste materials for the Ash Monofill disposal area will be placed in approximately 2-foot-thick layers. The ash does not necessarily require continuous compaction. The volume and frequency of ash delivery may be at a rate that would not warrant a full-time equipment operator to remain in the disposal area; therefore, material will be stockpiled until there is sufficient material to effectively spread and compact or at the end of the day, whichever is more frequent. The ash will be compacted to increase the waste density. The number of passes (generally three to five passes) for compaction may be adjusted in the field. The ash will be compacted as necessary by a front-end loader or bulldozer to achieve the maximum practical density.

3.1.2 Cover

Cover material will be obtained from on-site borrow pits, stockpiles, or, if necessary, off-site pits. Sufficient suitable cover material will be stockpiled near the working face to provide an adequate supply for operations when needed.

3.1.2.1 Initial Cover

The ash is a non-putrescible waste resulting from the incineration of bagasse and wood waste. The ash is not expected to propose any adverse environmental, safety, or health effects. The ash will not attract birds or vectors. There will be no blowing litter associated with the ash. There will be no risk of odors, disease vectors, or fires. Accordingly, the applicant requests FDEP's approval to use the Facility's ash as initial cover; please refer to Attachment B.1 of Exhibit 3 for more information. Soil cover will be applied as needed to control dust and ash migration.

3.1.2.2 Intermediate Cover

Intermediate cover (soil or mulch) will be placed on the Ash Monofill surface within 7 days of cell completion in all areas that will not receive final cover or an additional lift of refuse within 180 days. Intermediate cover will be placed to a minimum compacted thickness of 12 inches. To conserve soil and Ash Monofill space, the intermediate cover may be removed immediately before placement of additional solid waste on top of the previous lift. The removed soil can be reused as future cover material. Intermediate cover areas will be seeded, sodded, or provided with other means of controlling erosion.

3.1.2.3 Final Cover

Final cover is defined in the regulations as the material used to cover the top and sides of an ash monofill when operations cease. Final cover shall be placed over the entire surface of the completed Ash Monofill within 180 days after the final waste deposit date, once the final grades are reached. The final slope on top of each disposal area will not exceed 10%. The perimeter sides of all completed cells will have a maximum slope of 3:1 to mitigate erosion. Areas with final cover will be seeded or planted with grass or suitable cover vegetation.

In general, 3:1 sideslopes with bench terraces approximately 10 feet wide spaced a maximum of approximately every 50 feet of vertical rise for the Ash Monofill, in conjunction with adequate drainage, will reduce the potential for slope failure due to erosion. Terraces and other stormwater control structures will be constructed as required during filling operations and completed during final cover construction.

Final cover is proposed to consist of a geomembrane as the primary barrier overlain by a drainage layer and 24 inches of cover soil or approved alternative covers. The first 18 inches will be soil fill and the top 6 inches will be uncompacted and vegetated with native grasses or

other vegetation. The vegetation will be selected for low maintenance. The final cover design will be in accordance with the approved Final Cover Drawings for each disposal area.

3.1.3 Litter Control and Access Roads

The current design calls for disposal of ash residue from the on-site Facility and will not cause litter or blown debris. Therefore, the use of litter control devices is not applicable.

Dust control for roadways and ash waste surface consists of water application from a water truck as necessary and/or soil cover. Dust control measures should be anticipated during dry windy weather and in unpaved access locations that experience high traffic. Ash slopes that are covered with intermediate or final cover should be vegetated and/or provided with mulch as soon as possible to control dust on the Ash Monofill surfaces.

An all-weather access ramp into the disposal area and all disposal area access roads will be maintained to provide access to the active face of the disposal area. Routine maintenance on access roads includes the following:

- Prompt repair of potholes
- Removal of debris
- Watering of non-permanent roads during dry weather to control dust

Litter (if any) around the Ash Monofill and the entrance roadways will be collected regularly and picked up within 24 hours, in accordance with Rule 62-701.500(7)(i), FAC. Ash Monofill staff will notify the site supervisor of conditions needing immediate attention.

3.2 FIRE PROTECTION AND CONTROL

The ash waste is an incineration by-product and has very low combustion potential. Should a fire occur on-site, the procedures for controlling fires are as follows:

- Small fires on working faces will be controlled using a bulldozer to apply moist soil or ash residue to the fire to extinguish it. Onsite stockpiles of soil are available for suppressing fires.
- Water from nearby stormwater ponds can also be used for fire control. A water truck can move water from the stormwater ponds to the fire location via temporary piping. If an uncontrollable fire does occur at the Ash Monofill, the Palm Beach County Fire Department should be contacted immediately.

4.0 LEACHATE MANAGEMENT

4.1 TREATMENT SYSTEM DESCRIPTION

Leachate collected from the Ash Monofill will be pumped to the leachate storage tanks. Leachate will be pumped with self-priming centrifugal pumps from the leachate storage tanks to a tanker truck via the loading station for disposal at an approved wastewater treatment plant.

4.1.1 Submersible Pumps

Leachate collected from the Ash Monofill will be from the leachate collection/leak detection system to the leachate storage tanks using submersible pumps.

4.1.2 Leachate Storage

The proposed leachate storage tanks for the Ash Monofill will be located east of Cell 1A. There will be two adjacent fiberglass storage tanks with a total capacity of approximately 90,000 gallons.

4.2 LEACHATE MANAGEMENT CONTINGENCY PLAN

The primary method for disposing of leachate from the Ash Monofill is to haul the leachate offsite to the Belle Glade Wastewater Treatment Plant in Belle Glade, Florida, which is owned and operated by the Belle Glade Utilities Department (Attachment 1). If this primary disposal facility is unable to accept the leachate, NHPC has identified the East Central Regional Wastewater Treatment Plant in West Palm Beach, Florida, as a possible alternate leachate disposal facility.

Preliminary investigations suggest that the leachate generated at the Ash Monofill will be non-hazardous. However, if leachate testing indicates that the leachate is to be managed as a hazardous waste, the leachate will be processed and disposed of in accordance with Chapter 62-730, FAC. For additional details including monitoring, sampling, and analysis, please refer to the Water Quality Management Plan for the site.

4.3 FLOW MEASUREMENT

Inline magnetic flow meters will be used to measure the Ash Monofill leachate generation rates. In the Ash Monofill disposal area, magnetic flow meters will measure the flows from the leachate collection and detection systems separately as the leachate is pumped to the leachate storage tanks.

All flows will be totalized and recorded in terms of gallons per day. At the same time, daily readings will be taken from a rain gauge. The quantity of leachate collected by the leachate collection/leak detection systems is recorded in gallons per day and included in the Operating

Record along with the precipitation records. The daily records of leachate flows and rainfall data shall be maintained as specified in Section 4.5.3.

4.4 LEACHATE COLLECTION AND REMOVAL AND LEAK DETECTION SYSTEMS

4.4.1 Operation

Leachate generated in the Ash Monofill is removed by pumping. The cell is designed so that leachate flows to the east perimeter berm where it is collected in a sump at the toe of the east slope. The large sump provides adequate storage volume to improve pump cycle times so the pumps can operate at increased efficiency.

Dual 24-inch HDPE riser pipes extend from the base of the sump to the top of the perimeter berm. The risers are perforated at the base of the sump to allow leachate to flow into the riser. A submersible pump is installed in each of the risers for leachate removal. The pumps are located at the base of the sump and are designed to operate while oriented horizontally. Liquid level and pump run times will be monitored at control panels located at the cell. A high-level alarm is provided to alert staff of a pump malfunction. The pumps can be removed from the HDPE riser for maintenance or replacement following the manufacturer's recommendations.

An HDPE leachate discharge line extends from each pump up the riser and is exposed at the top of the perimeter berm to provide access to valves, air release valves, and pressure gauges. Valves and piping can be set for single- or dual-pump operation and can be visually inspected. A concrete access pad provides stabilization for the HDPE risers and discharge piping at the top of the slope.

The leachate discharge line connects to a common 4-inch-diameter HDPE forcemain that runs east of the Ash Monofill to the leachate storage tanks located east of the monofill. Separation valves allow for discharge of leachate into either storage tank.

4.4.2 Inspections and Maintenance

The Ash Monofill disposal unit contains a leachate collection and removal system (LCRS) composed of HDPE piping, geotextiles, drainage sand, synthetic drainage media, and drainage rock. The HDPE leachate collection piping in each cell extends up the perimeter berm slopes to allow cleanout. These cleanouts allow for inspection by video recording as well as maintenance of the collection pipes by jet cleaning. The leachate collection system will be inspected by video recording or water-pressure cleaned after construction but before the initial placement of waste. After that the system will be inspected or cleaned as needed but, at a minimum, at the time of permit renewal. Documented results of inspections and cleanings will be maintained in files. If problems with the system are discovered during inspection and/or cleaning, the NHPC will notify the FDEP and obtain approval before beginning any remedial work.

4.4.3 Record Keeping

All inspection records for the leachate collection, detection, and storage systems will be maintained in the office at the Facility and will be available for Department review upon request.

4.5 LEACHATE STORAGE

Two aboveground leachate storage tanks proposed for Cell 1 will be located east of the Ash Monofill. Each tank will have a storage capacity of approximately 45,000 gallons.

4.5.1 Storage Tank Construction

The prefabricated storage tanks will be made of fiberglass reinforced plastic (FRP) that will be suitable for leachate storage. A pigmented gel coat containing UV inhibitors will be applied to the exterior surface of the completed tank.

4.5.2 Tank Interior and Exterior Inspections

NHPC employees or their designee will inspect the exteriors of the tanks weekly. The inspector will look for any structural damage to the tank, damage to the coating system, loose connections, corrosion, visible leaks, the exterior urethane seal at the base of the tank, and maintenance deficiencies. The inspector will also look for any structural damage to the concrete walls and floor of the secondary containment system, peeling of the paint system, and visible leaks.

Access to the inside of each tank will be provided via a man-way located at the bottom of each tank. The interiors of the tanks will be inspected whenever the tanks are drained or at least once every 3 years. The tanks cannot be emptied and cleaned if an intense storm event is forecasted. Before a tank is inspected, any sediment in the tank will be pumped out and disposed of in the Ash Monofill. The inspector will look for any damage to the interior coating system, structural damage or cracking of the tank, and visible leaks.

If inspections reveal any deficiencies with the interior and/or exterior of the tanks that could result in failure of the system to contain leachate, NHPC will take expedient action to repair the system. NHPC will notify the manufacturer, or another qualified contractor, of the situation; this manufacturer or contractor will perform a detailed damage assessment and repair the tanks.

Inspection reports and reports of remedial action measures taken will be maintained at the Facility office and will be made available to the FDEP upon request. All reports will be maintained for the lifetime of the tanks and the containment system.

4.5.3 Secondary Containment System

A secondary containment system will be in place for the storage tanks and will be capable of containing at least 110% of the total volume of both tanks. The tanks provide approximately

90,000 gallons of storage and the secondary containment system provides approximately 100,000 gallons of containment storage.

The containment system will consist of a minimum 12-inch-thick reinforced concrete floor slab, 8-inch-thick reinforced concrete and/or masonry side walls, contraction joints, and a drain. The contraction joints will be constructed with reinforcement spanning the joint for structural support and with a continuous waterstop for leakage control. In addition, a mastic coating will be provided in each joint to further protect against potential leakage.

The floor slab of the containment system area will be sloped toward a drain. The drain is used to collect accumulated precipitation or leaking leachate and will serve as a sump. The sump pump discharge piping will be equipped with a valve so that the pump can be used to transfer spilled leachate into the storage tanks. Stormwater may also be pumped into the adjacent stormwater management system. The pump will be manually operated; therefore, the operator will determine the point of discharge by adjusting the pump's discharge valves before starting the pump. The operator shall always set the sump pump to pump into the storage tanks for a minimum of 1 minute to purge the system of any leachate residues before pumping stormwater into the stormwater management system.

NHPC employees or their designee will inspect the surfaces of the secondary containment weekly. If inspections reveal deficiencies with the secondary containment system that could result in the system's failing to contain the leachate, NHPC will take expedient action to repair the system.

4.5.3.1 Leachate Storage in Secondary Containment

The existing concrete floor slab of the secondary containment system is designed to drain toward a trench drain to collect accumulated precipitation or leachate. The trench drain will drain toward a sump pump. Accumulated precipitation or leachate shall be removed within 24 hours or when 10% of the trench drain volume is reached, whichever occurs first. Leachate will be pumped back into the storage tanks.

4.5.3.2 Stormwater Removal from Secondary Containment

Stormwater collected in secondary containment will be inspected to determine if the stormwater has been contaminated. Signs of contamination include the following:

- An oily sheen on the surface of the liquid.
- A dark or non-transparent appearance of the liquid.
- An excess of suspended solids in the liquid.
- An odor coming from the liquid.

If no contamination is noted, the stormwater will be pumped to the stormwater collection system. If it is contaminated, the stormwater will be treated as leachate and pumped to the storage tanks.

4.5.4 Liquid Level Monitoring

The storage tanks will be equipped with float-operated liquid-level indicators with a direct readout. The level gauge boards will be mounted in a highly visible location on the exterior of the tanks. A visual and audible alarm will be located on the control panel to alert staff to potential problems with the pump system if a high leachate level (before overflow) is reached. The high level in the leachate tanks is designed at 56.50 feet or 1.0 foot below overflow. The overfill prevention system will be inspected weekly by NHPC to ensure it is operating properly.

5.0 LANDFILL GAS MANAGEMENT

In accordance with Rule 62-701.500(9), FAC, due to the non-degradable nature of the ash waste, gas monitoring and management systems and a gas management plan are not proposed.

6.0 STORMWATER MANAGEMENT AND EROSION CONTROL

6.1 STORMWATER MANAGEMENT

The stormwater management system, which will be operated and maintained by NHPC personnel, has been specifically designed for ease of operation and maintenance. The application for the construction and operation of the Ash Monofill's surface/stormwater management system is submitted as part of this PPSA request. The stormwater management system was designed, constructed, and is maintained to prevent stormwater from the peak discharge of the 25-year storm event from running onto those portions of the disposal areas which have not been closed and to isolate surface water from waste-filled areas. Sediment in the swales shall be removed monthly or quarterly and after large storm events to keep the stormwater management system at the designated grades and elevations. In addition, operational methods are implemented on the Ash Monofill to preclude excessive stormwater run-on to the active face and to control stormwater run-off (e.g., berms). Temporary stormwater liners (rain tarps) will be used in inactive areas of each disposal unit to prevent stormwater from entering into the LCRS. Stormwater that accumulates in these inactive areas, separated by berms, will be pumped using portable pumps or gravity drain out of each cell into the perimeter stormwater management system. Stormwater that has been in contact with ash or leachate is directed to the LCRS using berms and/or ditches and will not be discharged to the environment.

6.2 EROSION CONTROL

The earth berms, slopes, swales, and catch basins will be inspected weekly and after heavy rains for signs of erosion. A visual inspection of erosion-control devices such as silt fences or mulch on recently graded slopes will be conducted, and such devices will be replaced or repaired as required.

Erosion-affected areas shall be reported to the site supervisor for repair as required. Repairs may include excavation and re-grading of ditches, removal of obstructions, construction of temporary silt checks, and establishment of vegetation.

7.0 WATER QUALITY MONITORING

The Water Quality Monitoring Plan, a copy of which is maintained on-site, includes monitoring of groundwater, surface water, and leachate. The plan was designed based upon the information obtained in the hydrogeological reports for each disposal area and was prepared and submitted to the Department in accordance with Rule 62-701.510(2)(a), FAC, with the application for the Ash Monofill. Laboratories selected to perform environmental sampling and analysis required by Department permits or rules will hold a valid certification from the Department of Health's Environmental Lab Certification Program as required by Rule 62-160, FAC. All field and laboratory records will be made available to the Department and will be retained for the design period of the respective disposal area.

The proposed groundwater monitoring network consists of two background wells, six downgradient detection wells, and three piezometers. The monitoring network includes one leachate sampling point and two surface water sampling points. The monitoring network is summarized below:

Background Wells: MW-7A, and MW-8A

Detection Wells: MW-1A, MW-2A, MW-3A, MW-4A, MW-5A, and MW-6A

Leachate: L-1

Surface Water: SW-1, and SW-2

Semi-annual water quality monitoring reports will be prepared in accordance with Rule 62-701.510, FAC, and submitted to FDEP as required. The reports will include the information listed in Rule 62-701.510(9)(a)1-10, FAC. A technical report prepared and signed by a professional engineer or geologist with experience in hydrogeological investigations will be submitted to the Department every 2 years as required by Rule 62-701.510(9)(b), FAC. The report will summarize all water level and water quality data collected in the previous 2 years plus, at a minimum, all information listed in Rule 62-701.510 (9)(b)1-8, FAC.

NHPC will implement the evaluation monitoring, prevention measures, and corrective action programs in accordance with the requirements of Rule 62-701.510(7), FAC, as required based upon the groundwater monitoring results.

8.0 CONTINGENCY PLANS

If Ash Monofill operations are interrupted due to an emergency or natural disaster, ash may be temporarily stored in a concrete bunker adjacent to the boiler building at the NHPC Cogeneration Facility. If operations are interrupted for an extended period, ash may be disposed of off-site at the Belle Glade Transfer Station (approximately 10 miles from the site at 1701 State Road 15, Belle Glade, Florida) where the ash will be loaded into transfer trailers and taken to a Class I Landfill for disposal. Alternate and contingency operation methods for severe wet weather, equipment failure, power failure, and emergency contact information are provided below.

8.1 WET WEATHER OPERATIONS

Perimeter and intermediate berms protect the waste within each disposal area from exposure to severe wet weather and flood waters. Steps to be taken for accommodating wet weather ash disposal may include the following: 1) elevated areas with all-weather access roads (e.g., limestone) will be set aside as needed to allow vehicle or equipment staging adjacent to access roads, 2) elevated sandy cover materials and mulch will be set aside, and 3) the stormwater system and surface drainage will be monitored more frequently.

8.2 EMERGENCY OPERATIONS PROCEDURES FOR NATURAL DISASTERS

Emergency contacts are listed below:

Emergency Response:

Palm Beach County Fire/Rescue	911
National Response Center	800-424-8802
Florida Marine Patrol (spills in waterway)	239-332-6966
American Red Cross	239-278-3401
Poison Control Center	800-222-1222

Waste Oil/Solvent Disposal/Recovery:

(Including oil filters, water and antifreeze)	
Siemens Corporation, Plant City, Florida	813-478-7737

Hazardous Waste Clean-Up And TSD Facilities:

EG Floirda, Inc.	800-624-5302
Perma-Fix of Orlando, Inc., Orlando, Florida	407-859-4441
Chemical Waste Management, Pompano Beach, Florida	800-432-4526

Helpful Information:

EPA "Federal RCRA Hotline"	800-424-9346
Florida Department of Environmental Protection (FDEP)	
State Office – Tallahassee, Florida	850-245-8735
Local Office – West Palm Beach, Florida	561-681-6600
FDEP Emergency	850-413-9911
FDEP Emergency	800-320-0519
Florida Fish and Wildlife Conservation Commission	800-282-8002
Asbestos Information	800-368-5888

Palm Beach County Agencies:

Health Department – Environmental Health	561-355-3022
Sheriff	561-996-1670
Fire Marshall	561-616-7030
Emergency Management Department	561-712-6400
Solid Waste Authority of Palm Beach County	561-640-4000

8.3 SHORT-NOTICE HEAVY EQUIPMENT

Ash Monofill operations require the use of heavy equipment for placing, compacting, and relocating ash waste and cover. Below are two sources of heavy equipment that may be drawn from on short notice in an emergency or in case of equipment failure:

Kelly Tractor Co.
5460 Okeechobee Boulevard
West Palm Beach Florida 33417
(561) 683-2015 ext. 122

United Rentals
3250 45th Street
West Palm Beach, Florida
(561) 616-5000

8.4 EMERGENCY LIGHTING

Mobile generators will be obtained to support pumps and portable light stands in case of a power outage. All of the heavy equipment should have a minimum of two front headlights and one rear light.

8.5 COMMUNICATIONS

The site supervisor and operators should be equipped with radios that have cellular phone capabilities.

ATTACHMENT 1

LEACHATE DISPOSAL AGREEMENT



City of Belle Glade

Department of Public Works

Public Works

2050 West Canal Street South
Belle Glade, FL
33430-1646
Tel: 561-992-2216
Fax: 561-992-2202

City Hall Complex
110 Dr. Martin Luther King Jr.
Boulevard West
Belle Glade, FL
33430-3900
561-996-0100

www.belleglade-fl.com

Commissioners

Donald D. Garrett
Mayor

M. S. Kendall
Vice Mayor

Gwendolyn J.L. Asia-Holley
Treasurer

Shelly S. Miller

Dr. Ray Torres Sanchez

William F. Underwood, II,
City Manager

March 13, 2008

Ms. Rebecca Kelner, P.E.
Project Engineer
Jones Edmunds & Associates, Inc.
730 NE Waldo Road
Gainesville, FL 32641

Re: New Hope Power Partnership Ash Monofill
Leachate Disposal

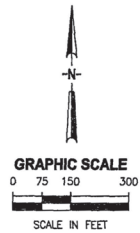
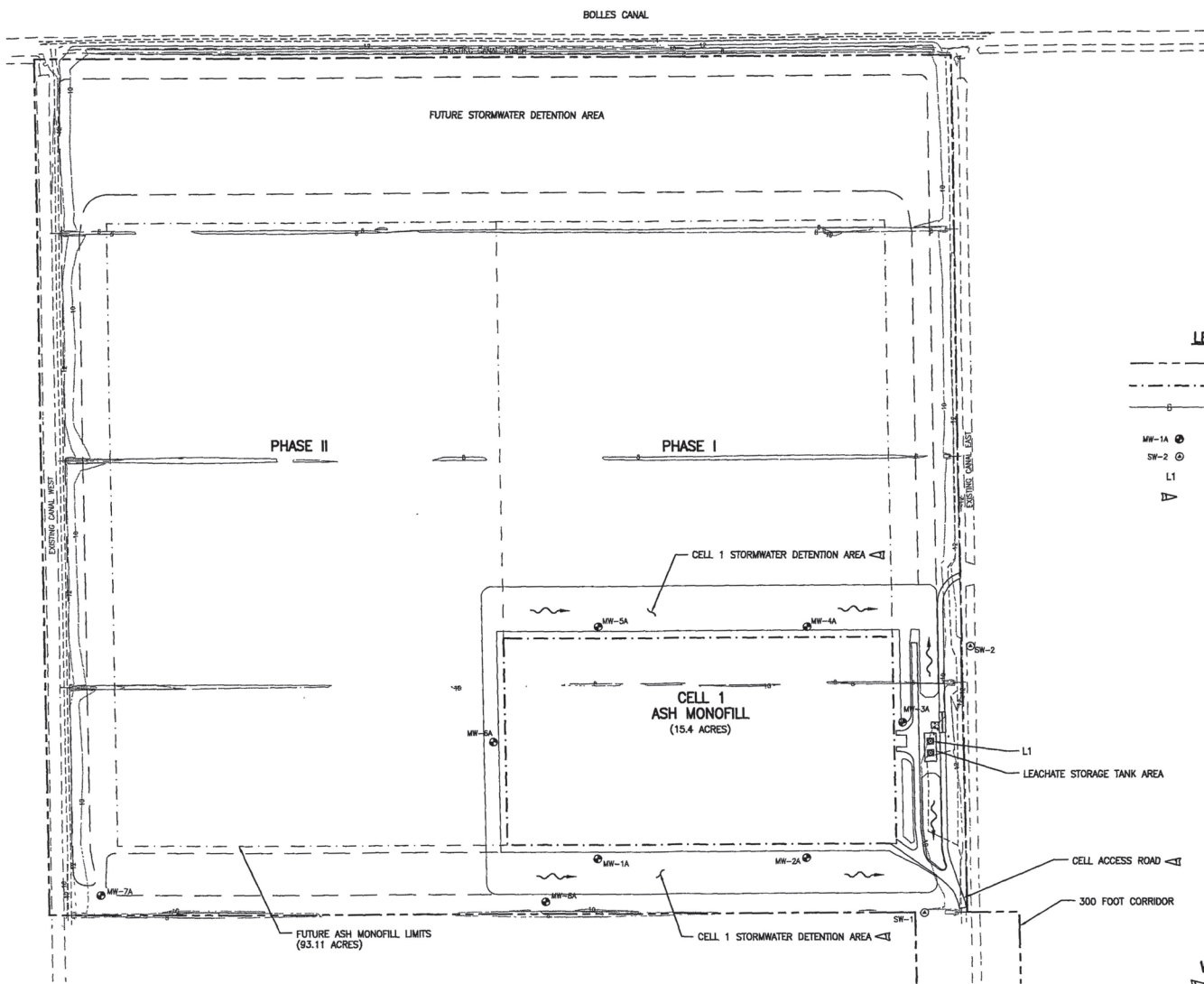
Ms. Kelner,

The City of Belle Glade owns and operates the Belle Glade wastewater treatment facility. We are willing to accept a wastewater stream from the referenced ash monofill facility, provided the flows and loads meet the requirements of the Belle Glade Facility. An analysis of the wastewater stream will be required for our review and approval when the data becomes available. It is our understanding that New Hope Power Partnership will provide pre-treatment of the wastewater stream, if required.

Sincerely,

Larry A. Peters, P.E.
Director of Public Works and Utilities

cc: William F. Underwood II, City Manager
Mark Kutney, Deputy City Manager



- LEGEND**
- PROPERTY BOUNDARY
 - - - CELL 1 LIMITS
 - - - EXISTING 2 FOOT CONTOUR (FROM SURVEY PROVIDED BY PAG SURVEYORS, INC. DATED 10/1/88)
 - MONITORING WELL
 - SURFACE WATER SAMPLING POINT
 - △ LEACHATE SAMPLING POINT
 - ▽ REVISED PER FDEP RA 1.

- NOTES:**
1. ELEVATIONS DEPICTED HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 2. FOR AN APPROXIMATE CONVERSION FROM NAVD 88 TO NGVD 29 USE: NAVD 88 + 1.38'.

FIGURE M.1
WATER QUALITY MONITORING PLAN
PALM BEACH COUNTY, FLORIDA