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526 South Church St.  
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SOLID WASTE SECTION  
ASHEVILLE REGIONAL OFFICE

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Permit No.	Date	Document ID No.
36-12	June 16, 2008	4869

June 13, 2008

North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Solid Waste Section  
Asheville Regional Office  
2090 US Highway 70  
Swannanoa, N.C. 28778

APPROVED DOCUMENT  
Division of Waste Management  
Solid Waste Section  
Date September 2, 2008 By LY Frost

Attention: Mr. Larry Frost  
  
Subject: Duke Energy – Allen Steam Station  
Retired Ash Basin CP Landfill  
Permit to Construct Application  
Response to Comments

Dear Mr. Frost:

Included here are Duke Energy's responses to NCDENR's preliminary comments on the Permit to Construct (PTC) Application for the proposed Retired Ash Basin – Ash Landfill at the Allen Steam Station. This information was submitted electronically to you on June 10, 2008.

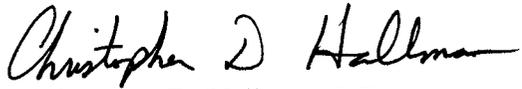
Attachment 1 includes information provided to Duke Energy by our landfill consultant, S&ME, Inc. S&ME has summarized the NCDENR comments as understood by Duke and has addressed certain comments in their response. Also, included in Attachment 1 is a revised Operations Plan for the landfill, dated June 9, 2008. The Operations Plan was revised to address various operational questions raised by NCDENR.

Attachment 2 includes information from Gaston County to address local government approval requirements for a new landfill on the Allen property.

Attachment 3 contains a copy of the current Allen NPDES permit per your request.

Please let me know if there are any questions or if a follow-up meeting would be helpful to discuss any remaining issues or concerns with the application. I can be reached at 980-373-7892. Thanks again for the feedback and your assistance with this important project.

Sincerely,



Christopher D. Hallman, P.E.  
Waste and Remediation Management  
Duke Energy Corporate EHS

**Attachments**

**Attachment 1 – Response Letter from S&ME and revised Operations Plan**

**Attachment 2 – Gaston County Approval**

**Attachment 3 – Allen Steam Station NPDES Permit**

**cc (letter only):**

**Ted Manes  
Ken Daly – S&ME, Inc.  
Don Scruggs – Allen SS  
Bill McCabe**

---

**From:** "Hallman, Christopher D" <cdhallman@duke-energy.com>  
**To:** "Larry Frost" <Larry.Frost@ncmail.net>  
**Cc:** "Manes, Theodore A" <tamanes@duke-energy.com>; "Kenneth Daly" <KDaly@smeinc.com>; "Stowe, Jimmie A Jr" <jastowe@duke-energy.com>; "Scruggs, Donald L" <dscruggs@duke-energy.com>; "McCabe, William J" <wjmcabe@duke-energy.com>  
**Sent:** Tuesday, June 10, 2008 11:36 AM  
**Attach:** 06.09.08 Letter.pdf; Operations Plan Rev 06.09.08.pdf; Gaston LF.pdf; Allen NPDES.pdf  
**Subject:** Plant Allen CCP Landfill Permit To Construct Application Comments

Larry – Thanks for the earlier feedback on your and Ed's review of the PTC application for the Plant Allen CCP landfill. I will follow this up with a formal letter with the same attachments to your attention.

As we discussed last week, I wanted to go ahead and get this information back to you in order to address any concerns as soon as they are identified and to also offer a follow-up meeting or any additional information you may need.

Attached are four files with information relative to concerns and omissions that we had in our original submittal. Included is:

1. A letter from S&ME summarizing items that I understood required further input. S&ME's letter provides some additional information on the action leakage rate. If a meeting or more information is needed to assist with this issue, please let me know. The letter also addresses six other items that you had passed along to me.
2. The second attachment is the revised landfill Operations Plan in which we have submitted additional information relative to 1) potential for landfill gases; 2) potential for nuisance odors from the landfill wastes; 3) leachate monitoring responsibility clarifications; and 4) leachate alarm system inspection requirements.
3. The third attachment includes information associated with required local government approvals from Gaston County as required by NCAC 15A.13B.0504(1)(e).
4. The fourth attachment is a copy of the current Allen NPDES permit which includes the station's NPDES permitted ash basin. In conjunction with this, information has been submitted to NCDWQ outlining the landfill leachate discharge plans, estimated leachate quantity and quality and its projected impact on the ash basin discharge. We currently plan to seek approval from DWQ via a minor modification of the NPDES permit to discharge the leachate to the ash basin. The basin is already permitted for both ash and FGD wastewater waste streams.

I will submit paper copies of this information later in the week. Thanks again for your feedback and let me know if there is anything else that is needed.

Chris Hallman  
Duke Energy Corp. EHS  
980-373-7892



June 9, 2008

Duke Energy  
526 South Church Street  
Mail Code: EC13k  
Charlotte, North Carolina 28201-1006

Attention: Mr. Chris Hallman

**Reference: Permit to Construct Application Response to NCDENR Comments**  
Retired Ash Basin (RAB) – Ash Landfill  
Duke Energy - Allen Steam Station, Belmont, NC  
S&ME Project No. 1356-06-825

Dear Chris:

S&ME Inc. (S&ME) has prepared this letter and related information in support of the Permit to Construct Application for the proposed Retired Ash Basin (RAB) Ash Landfill at Duke Energy's Allen Steam Station. Specifically, this letter provides responses to North Carolina Department of Environment and Natural Resources (NCDENR) comments on the subject application provided to Duke Energy as summarized in the Wednesday, April 23, 2008 email from you to S&ME. The comments summarized in your email (in *italics font*) and S&ME's responses to those comments follow.

Comment 1: *Required approvals from Gaston County must be submitted.*

Response 1: We understand Duke Energy will provide this information.

Comment 2: *The ALR proposed for the landfill is still under review as well as the potential for modifications to the Response Plan .*

Response 2: We understand that the proposed action leakage rate (ALR) of 500 gallons per acre per day (gpad) may seem high at first glance. We believe that this is a reasonable ALR, especially once the technical basis is explained. The ALR was estimated based on the flow rate resulting in a depth of flow equal to the geocomposite drainage layer thickness. This method is consistent with typical landfill design practice as we understand it and generally consistent with methods used and approved by NCDENR at other facilities (e.g. Johnston County, International Paper Reiglewood). As summarized in Section 3.4.3.1 of the Engineering Plan, we propose using a high-flow

geocomposite drainage layer that uses a thicker geonet core and provides higher flow capacity, resulting in the proposed ALR of 500 gpad.

*Comment 3: A more in depth discussion on landfill gas is needed.*

Response 3: We understand that the coal combustion products slated for landfill disposal do not contain degradable organic materials capable of generating methane gas. We have not identified literature or precedent regarding hydrogen sulfide gas that may be associated with the flue gas desulfurization (FGD) residue. However, we understand that wall-board disposal in construction and demolition landfills has been reportedly associated with odor and hydrogen sulfide gas generation. In the absence of definitive information one way or the other, we have revised the Operations Plan (attached) to include Section 3.4, titled Landfill Gas Management, that provides for gas monitoring during active operations with proposed contingency actions.

*Comment 4: A narrative on nuisance odors that could arise from FGD residue is also needed.*

Response 4: This is addressed in revisions to the Operations Plan (attached), Section 3.4, as discussed in Response 3.

*Comment 5: A copy of the Allen NPDES permit is requested.*

Response 5: We understand that Duke Energy will provide a copy of the NPDES permit.

*Comment 6: Language should be deleted in the Ops. Plan that the contractor will have responsibility for leachate monitoring, etc. This must be an Owner/Operator responsibility.*

Response 6: This is addressed in revisions to the Operations Plan (attached), Sections 3.2.1 and 3.3.

*Comment 7: Weekly inspections of the leachate monitoring alarm systems are requested.*

Response 7: This is addressed in revisions to the Operations Plan, Sections 3.2.1 and 3.3.1.

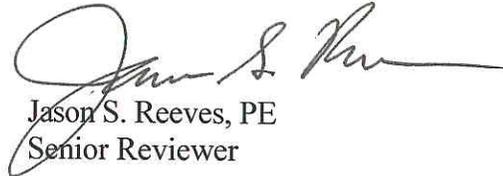
S&ME sincerely appreciates the continued opportunity to be of service to Duke Energy. Please contact us at your convenience if you have any questions. Thank you for choosing S&ME.

Respectfully submitted,

**S&ME, Inc.**



Kenneth R. Daly, PE  
Senior Project Engineer



Jason S. Reeves, PE  
Senior Reviewer

Attachments: Operations Plan, Revised June 9, 2008  
Cc: Ted Manes, Duke Energy

OPERATIONS PLAN  
RETIRED ASH BASIN (RAB) - ASH LANDFILL  
ALLEN STEAM STATION  
BELMONT, NORTH CAROLINA  
**S&ME Project No. 1356-06-825**



Prepared for:  
526 South Church Street  
Charlotte, North Carolina 28202



Prepared by:  
S&ME, Inc.  
9751 Southern Pine Boulevard  
Charlotte, North Carolina 28273

March 11, 2008  
Revised June 9, 2008

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## 1. GENERAL FACILITY OPERATIONS

### 1.1 Overview

This Operations Plan is part of the Permit to Construct Application for the Retired Ash Basin (RAB) ash landfill at Duke Energy's Plant Allen Steam Station and presents the landfill's operational requirements for: (1) general facility operation; (2) waste handling and landfill sequencing; and (3) leachate and storm water management. This Operations Plan was prepared consistent with requirements of Rules .0505 of 15A NCAC 13B of the North Carolina Solid Waste Management Rules.

The proposed RAB ash landfill is owned by Duke Energy. The operations of the facility will either be overseen by a Duke Energy Operations Manager or subcontracted to an outside company.

### 1.2 Contact Information

Correspondence and questions concerning the operation of the RAB ash landfill should be directed to the appropriate entity as follows:

- ***OWNER***  
Duke Energy – Allen Steam Station  
253 Plant Allen Road, Belmont, NC 28012  
(704) 829-2423  
Facility Contact: Don Scruggs
  
- ***STATE REGULATORY AGENCY***  
North Carolina Department of Environment and Natural Resources  
Division of Waste Management, Solid Waste Section  
Asheville Regional Office  
2090 US Highway 70, Swannanoa, NC 28778  
(828) 296-4500  
Regional Engineer: Larry Frost
  
- ***ENGINEER***  
S&ME, Inc.  
9751 Southern Pine Blvd., Charlotte, NC 28273  
(704) 523-4726  
Project Engineer: Ken Daly, P.E.

### 1.3 Safety

Landfill operations at the RAB ash landfill were developed considering the health and safety of the facility's operating staff. Duke Energy will provide each of the operating staff with site specific safety training prior to landfill operations and designate safety protocol on-site in accordance to Duke Energy's Safe Work Practices.

## **1.4 Access and Security Requirements**

Access roads to the landfill will be of all weather construction (asphalt and gravel) and maintained in good condition. To prevent unauthorized entry, access to the Duke Energy property is controlled by means of perimeter fencing and a guarded security entrance.

## **1.5 Signs**

Signs providing information on disposal procedures, the permit number, stating that no hazardous or un-permitted waste can be received without written permission from the State Division of Waste Management, Solid Waste Section (Division) and other pertinent information will be posted at the site entrance. Traffic signs and markers will be provided as necessary to promote an orderly traffic pattern to and from the active disposal area and maintain efficient operating conditions.

## **1.6 Dust Control**

Dust generated on haul roads will be controlled through the application of water, road maintenance, and a truck wash. Mud and dirt from the haul and access roads will be removed by washing or with heavy construction equipment. Dust and windblown ash will be controlled through the use of cover soils and interim spray applied coverings such as cement-based coverings (i.e. posi-shell) and hydroseed mulch. Additionally, interim and final covers will be vegetated as soon as practical in order to minimize the blowing of dust on-site.

## **1.7 Fire Control**

No open burning shall be permitted at the RAB ash landfill. Ash is a non combustible material and the threat of fire is minimal. However, if a fire occurs at the landfill the local fire department shall be notified and equipment and stockpiled soil shall be provided to control accidental fires. Any fire that occurs at the landfill shall be reported to the Division within 24 hours and a written notification will be submitted within 15 days by the Operations Manager.

## **1.8 Training**

Due to the diversity and nature of job tasks required at the landfill, personnel should be adequately trained to handle facility operations and maintenance.

The Operations Manager should have a general understanding of all the tasks required for site operations. Individuals performing the various tasks should have adequate training for the specific tasks they are assigned. Duke Energy will establish and provide a site specific training program for facility personnel.

Noteworthy operations and maintenance tasks to be addressed in training include:

- maintaining accurate records of waste loading (quantitative and qualitative);
- operating requirements for storm water segregation from exposed waste areas;  
and
- operating and maintaining leachate collection system and leak detection system.

## 1.9 Record Keeping

An operating record will be maintained on-site and will include the following:

- Leak Detection System (LDS) monitoring information;
  - documentation of an approved response action plan from the Division;
  - records of the amount of liquids removed at each sump;
  - notice of exceedence of action leakage rate for sumps (if any);
  - preliminary assessment report for exceedence of action leakage rate (if any);
  - reports documenting remedial actions (if any);
- closure and post-closure LDS monitoring plan and results;
- closure cost estimate and financial assurance documentation; and
- Operations Plan.

The above records will be kept in the operating record for the active life of the landfill and the post-closure care period. Information contained in the operating record must be furnished upon request to the Division or made available for inspection by the Division. Additional records kept on-site will include:

- Facility Permits;
  - solid waste facility permits;
  - National Pollutant Discharge Elimination System (NPDES) storm water discharge permit;
  - Erosion and Sediment Control Plan;
- regulatory agency inspection reports;
- Site Suitability Study;
- employee training program and records;
- internal vehicle maintenance records; and
- site drawings and specifications.

## 1.10 Erosion and Sedimentation Control

Erosion and sedimentation control features include temporary and permanent sediment basins, rain gutters, road ditches, outlet protection aprons, downchute piping, and direct runoff to perimeter ditches. Prior to landfill closure, sediment basins shall be checked weekly. During post closure, sediment basins shall be checked quarterly and within 24-hours of a 1-inch rainfall event. Sediment shall be removed from each structure to its original dimensions when sediment accumulates to one half of the design depth. The sediment basins, embankments, spillways and outlets shall also be checked for erosion damage. Necessary repairs shall be made as soon as practical. Any trash or debris within the riser structures or outfalls shall be removed.

Prior to closure, channels shall be monitored after each runoff event. Post closure, channels shall be checked after each 1-inch rainfall event. Riprap-lined channel sections and outlet protection aprons shall be checked for washouts. Riprap shall be added to these areas as needed to maintain the integrity of the structure.

Slopes shall be periodically checked for erosion and fertilized in the first year. To aid in fertilization and vegetative establishment, soil samples from the slopes should be analyzed for nutrient content to aid in selection of fertilizers, soil amendments, and vegetation. Slopes shall be fertilized annually. The slopes shall be mowed at least once a year. Damaged areas shall be reseeded, fertilized, and mulched immediately. Seeding, fertilizing and mulching shall be in accordance with the North Carolina Erosion and Sedimentation Control Guidelines.

Vegetative ground cover sufficient to control erosion must be established within 15 working days or 90 calendar days upon completion of any phase of landfill development as per the North Carolina Erosion and Sedimentation Control Guidelines.

The landfill operation shall not cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirement of the Clean Water Act, including, but not limited to, NPDES requirements, pursuant to Section 402. In addition, under the requirements of Section 404 of the Clean Water Act, the discharge of dredged or fill material into waters of the state that would be in violation of the requirements shall not be allowed by landfill operations.

Operations at the landfill shall not cause the discharge of a non-point source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or statewide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.

## 2. WASTE HANDLING AND LANDFILL SEQUENCING

### 2.1 Landfill Capacity

The RAB ash landfill is comprised of two Phases (Phase 1 and Phase2). The landfill phases are divided into cells and the cells are further divided into subcells. Landfill sequencing is further described in Section 2.4 of this Operations Plan. The landfill is estimated to have a storage life of approximately 12 years, based on a projected 500,000 tons per year disposal rate. The disposal rate assumes no beneficial ash reuse.

The landfill capacity was estimated using the proposed grading and closure plans in conjunction with the anticipated annual disposal rates. The gross volume of the landfill, which consists of the airspace between the protective cover soil and the proposed final cover surface, was estimated to be on the order of 2,082,500 cubic yards for Phase 1 and 3,958,200 cubic yards for Phase 2 for a total volume of 6,040,700 cubic yards. The approximate final cover soil volume considering a 3-foot thick cover (2-ft final cover and 1-ft interim cover) over an approximate 50 acre footprint is approximately 242,200 cubic yards. Deducting the approximate final cover soil volume, the airspace available for waste placement (including operational soils) is 5,789,500 cubic yards. Using an assumed in-place waste density of 75 lb/ft<sup>3</sup> (1.01 tons/yd<sup>3</sup>), the available dry tonnage of waste to be placed in the landfill was estimated to be on the order of 5,856,500 tons.

### 2.2 Waste Acceptance, Disposal and Screening Requirements

The landfill will only accept combustion products residuals including fly ash, bottom ash, boiler slag, mill rejects, and flue gas desulfurization (FGD) residue generated at the Allen Steam Station. The landfill owner or operator shall notify the Division within 24 hours of attempted disposal of any wastes the landfill is not permitted to receive. Hazardous, liquid or infectious wastes shall not be disposed of in the landfill.

The proposed landfill will be receiving a relatively consistent and homogeneous waste stream of combustion products residuals generated solely from the Allen Steam Station. Waste will be hauled and disposed of by dedicated and consistent operators from the waste source to the landfill. As hauling and disposal operations are wholly contained within the site, random inspections are not proposed. Rather loads will be monitored continuously through operations. Based on the consistent and homogeneous waste stream it is anticipated that municipal solid waste, hazardous, liquid, or non-permitted wastes will be readily distinguished from the ordinary waste stream.

### 2.3 Operating Concepts

The primary objective of the RAB ash landfill is to operate safely and efficiently while minimizing leachate generation and controlling storm water. The landfill development will be sequenced in Phases as indicated on Figure 1. The Facility's final closure grading plan is presented on Figure 2. Landfilling operations will generally proceed from the west towards the east by the use of cells. Each cell is divided into smaller subcells. In general, waste

placement will be performed in 10-foot lifts with operations usually being focused within a particular cell area. Subsequent landfilling operations in the cell will generally be limited to an exposed surface area of approximately 2 acres, at the operator's discretion, with waste in other areas covered with daily, intermediate, or final cover as appropriate. Soil diversion berms will be used to collect and divert the non-contact storm water runoff to areas where the runoff will be directed to a sediment basin. When the desired waste elevations are obtained within the cell, waste placement will move to the next cell where the process will be repeated.

## **2.4 Landfill Sequencing**

The general steps for the operation of the landfill are summarized below and are shown on the operations diagrams provided as Figures 1 through 5.

Waste placement shall begin in Cell 1, Subcell 1A as illustrated in Figure 3 and shall progress sequentially, as illustrated in the cross section provided in Figure 4. The first 10-foot lift shall be placed in Subcell 1A. After the first lift is placed in Subcell 1A, the raincover shall be removed from Subcell 1B and the first 10-foot lift shall be placed in Subcell 1B. After the first 10-foot lift of waste is placed across Cell 1, waste placement shall then continue across Cell 1 in 10-foot lifts until the Cell 1 final grades are achieved, as shown on Figure 3.

Once final grades are achieved in Cell 1, waste placement shall begin in Cell 2 following the same general format as Cell 1, where a 10-foot lift is placed in Subcell 2A, then the rain cover is removed from Subcell 2B, then a 10-foot lift is placed into Subcell 2B. Waste placement in Cell 2 shall continue in 10-foot lifts until Phase 1 final grades are achieved. Final grades for Cell 2 shall piggyback onto Cell 1, as shown on Figure 5, for the completion of Phase 1.

## **2.5 Waste and Cover Material Placement**

Prior to waste placement, stakes indicating the limits of waste placement, as shown on the Engineering Plan Drawings, shall be located. The waste shall be compacted as densely as practical using compactors and dozers in approximate 1-foot lifts to achieve a vertical operational lift thickness of 10 feet. Initially the waste shall be placed from up-gradient to down-gradient, but as higher waste elevations are achieved, the waste may be placed from down-gradient to up-gradient on the active face slope as long as landfill surfaces are graded to allow proper drainage and segregation. A minimum five percent slope shall be graded on the landfill surface to promote surface water runoff. Waste shall not be disposed of in water, and surface water shall not be impounded over or in the waste.

Flue gas desulfurization (FGD) residue will be spread in 6-inch lifts in the center of the operational area. No FGD residue shall be placed within 25 feet of the exterior slope. Prior to placement of the next lift material should be adequately blended with the other waste. The waste stream was assumed for design to be comprised predominantly of ash. Should the waste stream change at some time during operations, the design slope stability analyses must be reviewed for the changed conditions.

The landfill active face should, at the operator's discretion, generally be approximately a 2-acre area to reduce the amount of exposed waste. Operational soil cover should be applied at least once a week or when the active area reaches approximately a 2-acre area. Operational soil cover shall be 6-inch thick on-site soil or an approved alternative such as tarps, spray applied cement based applications (i.e. posi-shell), or spray applied hydroseed mulch. A 12-inch thick interim cover shall be placed on areas where final grades have been reached or where waste placement will be inactive for 12 months or more.

## **2.6 Final Cover**

The final cover system for a completed phase will be finished within 180 days following the beginning of closure activities unless otherwise approved by the Division.

The proposed final cover will consist of a compacted interim soil cover, 40-mil LLDPE geomembrane liner, geocomposite drainage layer, an 18-inch thick earthen barrier layer, and a 6-inch earthen vegetative layer. A proposed alternative is to use a 50-mil structured geomembrane with integral drainage layer overlain with a geotextile. The geomembrane will provide a barrier layer to reduce leachate generation. The vegetative layer will be on-site soil suitable for maintaining a grass cover and controlling erosion. Surface water that percolates through the vegetative layer and 18-inch thick earthen barrier layer will drain through the geocomposite drainage layer. The geocomposite will day-light periodically across the cover system and at the toe of the landfill final cover slope to provide drainage.

### 3. ENVIRONMENTAL MANAGEMENT

#### 3.1 Storm Water Collection and Conveyance

Storm water runoff from the landfill will be directed via a system of rain gutters, road ditches, downchute piping, and direct runoff to perimeter ditches surrounding the landfill limits. The perimeter ditches and southern downchute pipes discharge directly to a sediment basin on the south side of the landfill. Final and interim erosion and sediment control plans are contained within the Permit to Construct Application.

During initial operations of each cell within the non-active subcell, a geomembrane raincover will be used to reduce leachate generation. The collected water can then be pumped into the sediment basin.

The storm water collection and conveyance system shall be checked regularly and maintained such that necessary repairs will be made as early as practical.

#### 3.2 Leachate Collection System (LCS)

The leachate collection system (LCS) consists of a geocomposite drainage layer with a series of lateral collection pipes. The lateral pipes are connected to a header pipe that provides gravity drainage of the leachate to sumps. From the sumps, the leachate is pumped to the active ash basin by forcemain then discharged under the plant's existing NPDES permit.

The general operation required to begin waste placement includes the activation of the LCS. This task is accomplished by removing the sacrificial geomembrane cover to expose the LCS corridor. The opened LCS corridor flows directly into the sumps such that rain water entering the cell will now enter the LCS. The Operations Manager shall document LCS activation within each cell and file the documentation in the facility operation records. The design engineer will be on-site to monitor and document the removal of the sacrificial geomembrane cover and the activation of the LCS in the sump area.

Clean-out pipes have been provided at the ends of the LCS leachate lateral and header pipes. If clogging is suspected, the LCS pipes can be cleaned out by the use of a clean-out snake or high pressure water flushing or monitored with camera equipment.

##### 3.2.1 Maintenance, Record Keeping and Sampling

The maintenance of the leachate management system's physical facilities (consisting of HDPE piping, sumps, and pumps) and records will be performed by or under the direct supervision of Duke Energy.

Leachate will be pumped to the active ash basin on-site then discharged under the plant's existing NPDES permit. Water leaving the active ash basin will be sampled in accordance with the requirements of the plant's NPDES discharge permit. Periodic equipment maintenance shall be performed as recommended by the manufacturer. Equipment maintenance will consist of checking equipment for corrosion,

leakage, wear, scale build-up, improper functioning, and other improper operations. Appropriate corrective measures shall be taken when equipment is not operating properly.

Each LCS sump shall be equipped with a dedicated pump system. The pump system shall operate automatically based on level switches. The LCS sumps will have a low level cutoff at 0.5 ft and a high level run-start at 1.5 ft. Additionally, a visual and audible high level alarm shall be in place which will activate at 2 ft. The LCS system control panels will be equipped with audible and visual alarms programmed to identify sump liquid levels. LCS audible and visual alarms will be checked and tested for proper function weekly.

Records shall be maintained documenting the amounts of leachate generated and disposed of at the active ash basin.

Leachate from the LCS system shall be sampled in accordance with the approved monitoring plan. Leachate will be sampled semiannually from dedicated sample ports located on the LCS system. Leachate quality will be analyzed and reported consistent with the requirements of the approved monitoring plan. The following constituents will be analyzed for semi-annually:

Temperature	Arsenic	Barium
Boron	Cadmium	Chloride
Chromium	Copper	Fluoride
Iron	Lead	Manganese
Mercury	Nickel	Nitrate
pH	Selenium	Silver
Sulfate	Zinc	Total Dissolved Solids

### 3.2.2 Contingency Plan

In the unlikely event that leachate can not be pumped to the active ash basin (i.e. a power outage), leachate flow will be temporally stored within the landfill until such time that pumping operations to the active ash basin can be restored. Note that the design provides for redundant electrical supply from the power plant, such that the system will switch to the backup power supply line in the event that primary power is lost. In such an event, the Division shall be notified in writing, within 30 days, about the events and corrective actions taken.

### 3.3 Leak Detection System (LDS)

A leak detection system (LDS) has been incorporated into the design of the RAB ash landfill. The LDS consists of a secondary 60 mil HDPE liner system overlain by a secondary geocomposite drainage layer connected to LDS sumps. To aid in determining the location of a possible leak source and to reduce the likelihood of premature closure of an entire landfill cell as a consequence of excessive leakage, the LDS of each landfill cell is subdivided into two subcells, each with a dedicated LDS sump. Flow collected in the sumps will be transferred to the active ash basin via the leachate force main.

Each LDS sump shall be equipped with a dedicated pump system. The pump system shall operate automatically based on level switches. The LDS sumps will have a low level cutoff at 0.5 ft and a high level run-start at 1.5 ft. Additionally, a visual and audible high level alarm shall be in place which will activate at 2 ft.

The LDS has been designed with an action leakage rate (ALR) of 500 gallons per acre per day. Should fluid collected in the LDS exceed the ALR based on routine flow meter readings, the owner or operator shall take steps as indicated in the facility's Response Action Plan presented in Section 3.3.3.

The management of the leak detection system's physical facilities (consisting of piping and flow meters) and records of monitoring will be performed by or under the direct supervision of Duke Energy.

### *3.3.1 LDS Maintenance*

Periodic equipment maintenance shall be performed as recommend by the manufacturer. Equipment maintenance will consist of checking equipment for corrosion, wear, scale build-up, improper functioning, and other improper operations. Appropriate corrective measures shall be taken when equipment is not operating properly. The LDS system control panels will be equipped with audible and visual alarms programmed to identify sump liquid levels. LCS sump controls will be checked and tested for proper function weekly.

### *3.3.2 Record Keeping and Monitoring*

Flow will be measured at the discharge of each LDS sump by a totalizing flow meter. The facility shall maintain records of monthly flow rate data from each LDS sump from the activation of the cell drainage system and until the waste height reaches approximately 40 ft. From that point, flow rate data shall be collected on a quarterly basis until landfill closure.

During the post-closure care period, semiannual monitoring is required. If the liquid levels in the sumps stay below the pump high level run-start (no pump flow) for more than 1 year, then flow rates can be recorded annually. However, if at any time during post-closure care the pump high level run-start is exceeded on the semi-annual or annual schedules, the facility must return to monthly monitoring, until such time as the liquid level remains below the pump high-level run start for two consecutive months.

The purpose of LDS monitoring is to monitor if the action leakage rate has been exceeded. The calculated action leakage rate for the RAB ash landfill is 500 gallons per acre per day. To determine if exceedances of the action leakage rate have occurred, the facility must convert monitored data to an average daily flow rate for each sump (gallons per acre per day). If the ALR is exceeded, then the Division must be notified as set forth in the Response Action Plan presented in Section 3.3.3.

### *3.3.3 Response Action Plan*

The purpose of the response action plan is to describe the necessary course of action in

the event the action leakage rate (ALR) is exceeded. The following steps must be taken and documented in the event of an exceedance:

*Step 1:*

Review physical equipment (pump and flow meter) function and data to confirm ALR exceedance. Review operations to evaluate where operating equipment may have contacted the landfill liner or how landfill operations may have influenced the exceedance.

If ALR exceedance is confirmed, the cell LDS flow shall be recorded daily. Should the daily monitored LDS flow exceed the ALR after the initial exceedance, additional waste placement into the subcell shall be reduced if possible, and if necessary, alternative placement location prepared. Operational responses may include: the reduction of active face area; grading to provide improved drainage; and/or, the addition of interim soil cover.

*Step 2:*

Within 14 days of identifying that the action leakage rate has been exceeded, the facility shall contact the Division in writing. Daily LDS flow recording shall continue. Should none of the daily measured LDS flow rates exceed the ALR within 14 days of initial identification of ALR exceedance, monthly LDS flow averaging shall resume.

*Step 3:*

Within 30 days of identifying that the action leakage rate has been exceeded, the facility shall submit to the Division a written preliminary assessment which shall include at a minimum:

- the amount of the liquid exceedance including initial measurement and daily measurements, if necessary, to date;
- likely sources of the liquids;
- the possible leak location;
- the possible leak size;
- the probable cause of the leak; and
- an outline of the short-term actions being taken and planned.

*Step 4:*

To the extent practicable, evaluate the location, size and cause of the leak; and assess the potential for escaping into the environment and its mobility. Leachate quality shall be sampled including a chemical analysis of LDS fluids to evaluate potential hazards (pH and RCRA metals).

*Step 5:*

Establish whether or not the unit should be closed or receipt of waste be curtailed; and conclude whether waste should be removed from the unit for inspection, engineered controls, or repair of the subcell liner and drainage system. Evaluate and prepare to implement what other short-term or long-term measures shall be

taken to mitigate or stop any leaks according to the stage (early operations, middle operations, or closed) of landfill development, as detailed in Section 3.3.2, the discussion on LDS flow measurement.

***Step 6:***

Within 60 days of identifying that the action leakage rate has been exceeded, submit to the Division the results of the evaluation performed in Step 4, any actions taken according to Step 5, and any further measures planned. For as long as there is an exceedance of the action leakage rate, the owner or operator shall submit monthly reports to the Division summarizing the results of the remedial actions taken and further actions planned.

### **3.4 Landfill Gas Management**

Waste will consist of combustion products residuals including fly ash, bottom ash, boiler slag, mill rejects, and flue gas desulfurization (FGD) residue generated at the Allen Steam Station. The majority of the waste stream (approximately 95% or more) will consist of fly ash. A small portion of the remaining waste stream will consist of FGD residue. Based on the nature of the waste it is not anticipated that methane or hydrogen sulfide gas will be generated or that odor will be an issue. However, Duke Energy proposes to monitor for the presence of these gases throughout active landfill operations as summarized in the following sections.

#### ***3.4.1 Monitoring Program***

Duke Energy will monitor for the presence of methane and hydrogen sulfide gas on an annual basis during landfill operations. Monitoring will be conducted by sampling/measuring within 12 to 24 inches of the landfill surface with a handheld gas meter. Monitoring shall be conducted continuously while traversing the landfill cell and active face on an approximate 100-foot wide grid pattern.

#### ***3.4.2 Record Keeping***

Results of the gas monitoring program will be maintained in the operating record.

#### ***3.4.3 Contingency Plan***

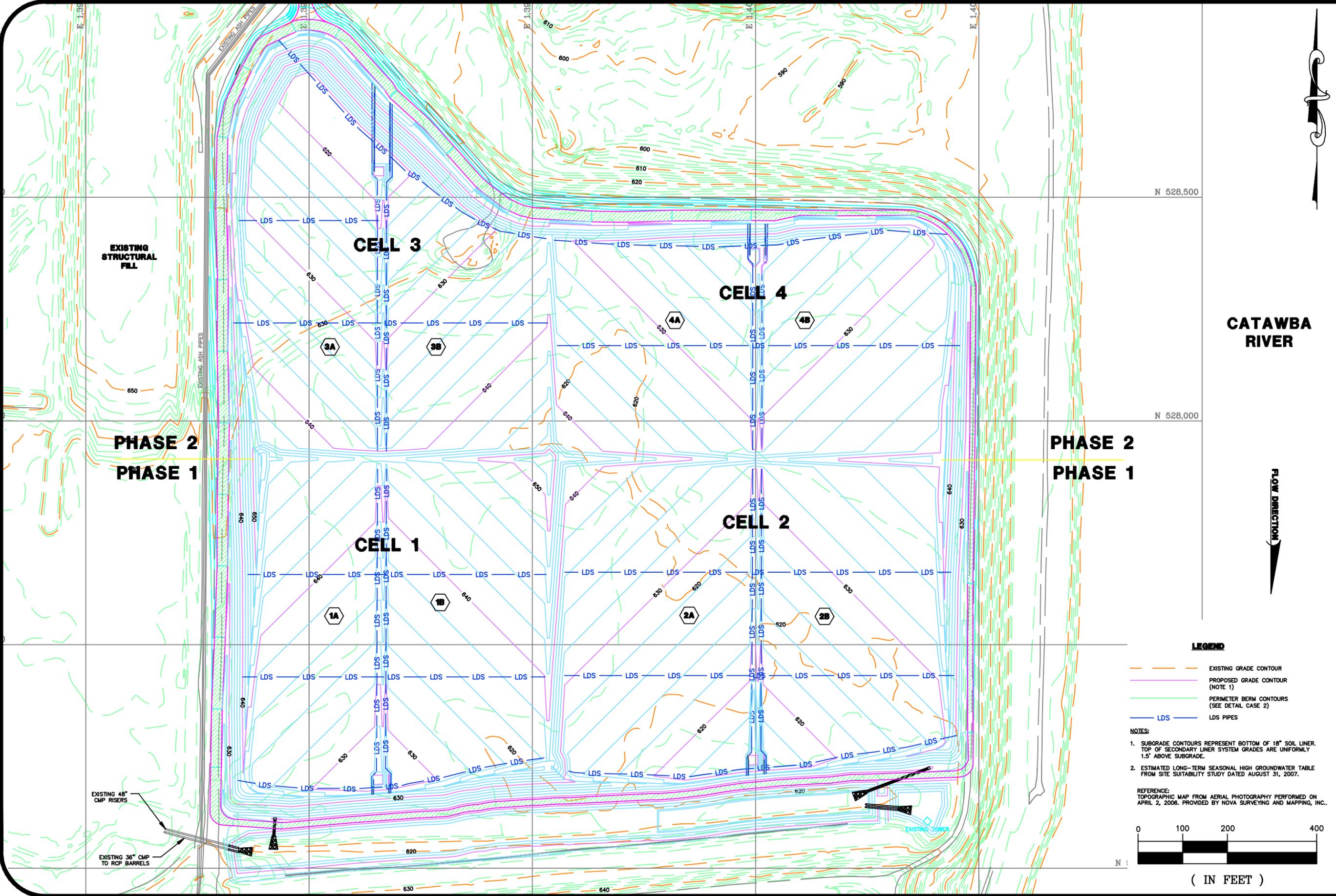
In the event that methane or hydrogen sulfide gases are detected appropriate actions will be taken. In the event that gases are regularly detected during active landfill operations, the final closure and post closure plan will be developed to address gas. It is anticipated that a minimum response will be to provide a passive gas venting system with the final closure. In the event that odor becomes a concern during operations, landfill operating procedures will be evaluated. Corrective measures may include reducing the active face area and placing additional or more frequent operational soil cover.

## **FIGURES**

- 1 Facility Subgrade Grading Plan**
- 2 Facility Final Closure Grading Plan**
- 3 Cell 1 Final Grading Plan**
- 4 Phase 1 Cross Section**
- 5 Phase 1 Final Grading Plan**



**S&IME**



EXISTING STRUCTURAL FILL

PHASE 2  
PHASE 1

PHASE 2  
PHASE 1

CATAWBA RIVER

FLOW DIRECTION

**LEGEND**

- EXISTING GRADE CONTOUR
- PROPOSED GRADE CONTOUR (NOTE 1)
- PERIMETER BERM CONTOURS (SEE DETAIL CASE 2)
- LDS PIPES

**NOTES:**

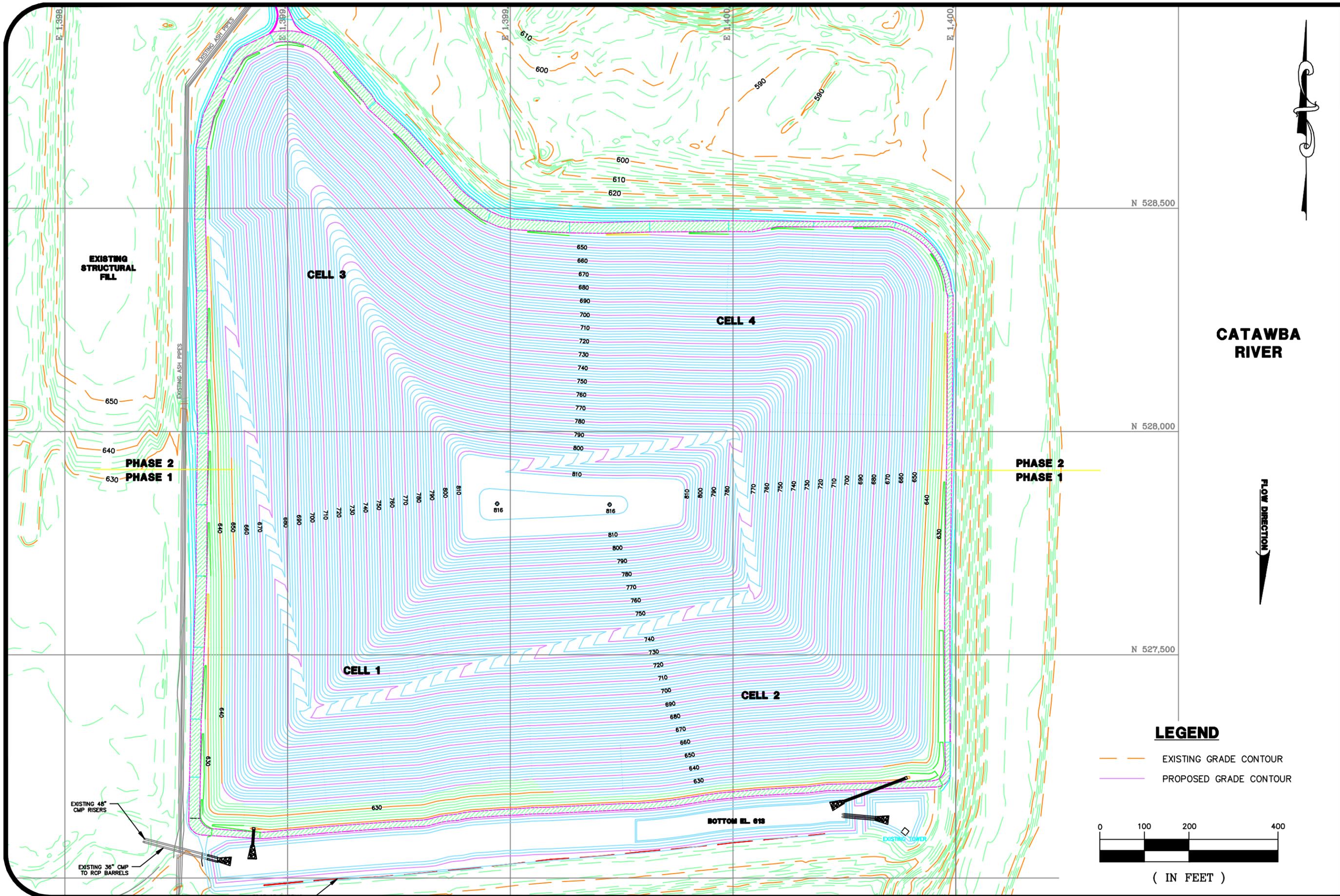
1. SUBGRADE CONTOURS REPRESENT BOTTOM OF 18" SOIL LINER. TOP OF SECONDARY LINER SYSTEM GRADES ARE UNIFORMLY 1.5' ABOVE SUBGRADE.
2. ESTIMATED LONG-TERM SEASONAL HIGH GROUNDWATER TABLE FROM SITE SUITABILITY STUDY DATED AUGUST 31, 2007.

REFERENCE:  
TOPOGRAPHIC MAP FROM AERIAL PHOTOGRAPHY PERFORMED ON APRIL 2, 2006. PROVIDED BY NOVA SURVEYING AND MAPPING, INC.



( IN FEET )

<p>SCALE: 1" = 200'</p> <p>PROJECT NO. 1356-06-825</p>	<p>DATE: 3-12-08</p> <p>DRAWN BY: ELH</p> <p>CHECKED BY:</p>
<p><b>FACILITY SUBGRADE GRADING PLAN</b></p> <p><b>RAB ASH LANDFILL</b></p> <p>ALLEN STEAM STATION BELMONT, NORTH CAROLINA</p>	
<p>FIGURE NO. <b>1</b></p>	



DATE: 3-12-08  
 DRAWN BY: CLD  
 CHECKED BY:

SCALE: 1" = 200'  
 PROJECT NO. 1356-06-825



**FACILITY CLOSURE GRADING PLAN**  
**RAB ASH LANDFILL**  
 PLANT ALLEN STEAM STATION  
 BELMONT, NORTH CAROLINA

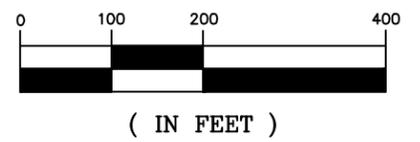
FIGURE NO.  
**2**

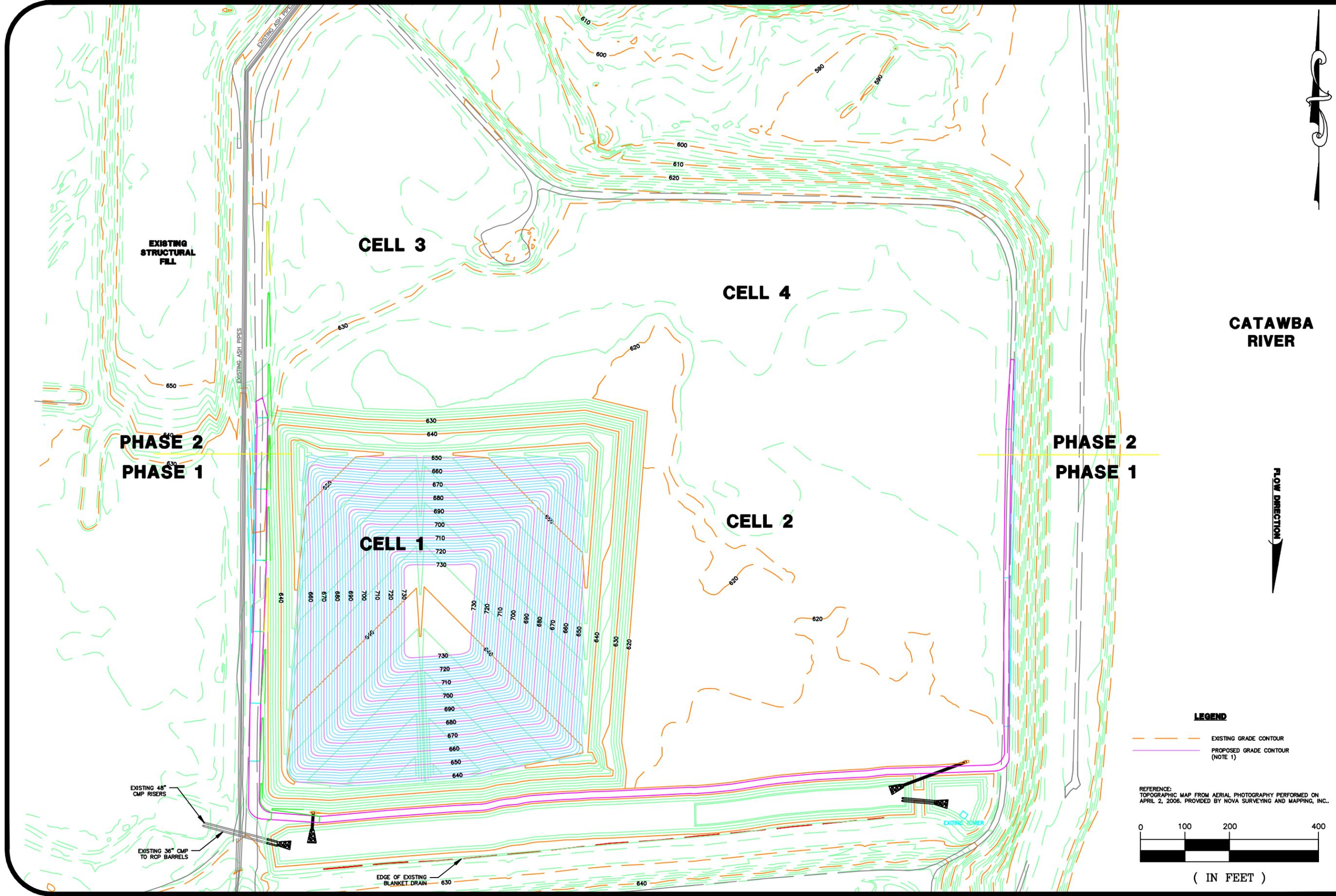
**CATAWBA RIVER**



**LEGEND**

- EXISTING GRADE CONTOUR
- PROPOSED GRADE CONTOUR





EXISTING STRUCTURAL FILL

CELL 3

CELL 4

CATAWBA RIVER

PHASE 2  
PHASE 1

PHASE 2  
PHASE 1

CELL 1

CELL 2

FLOW DIRECTION

EXISTING 48" CMP RISERS

EXISTING 36" CMP TO RCP BARRELS

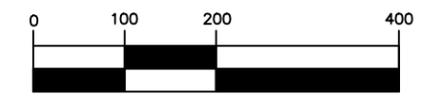
EDGE OF EXISTING BLANKET DRAIN

EXISTING TOWER

**LEGEND**

- - - - - EXISTING GRADE CONTOUR
- PROPOSED GRADE CONTOUR (NOTE 1)

REFERENCE: TOPOGRAPHIC MAP FROM AERIAL PHOTOGRAPHY PERFORMED ON APRIL 2, 2006. PROVIDED BY NOVA SURVEYING AND MAPPING, INC.



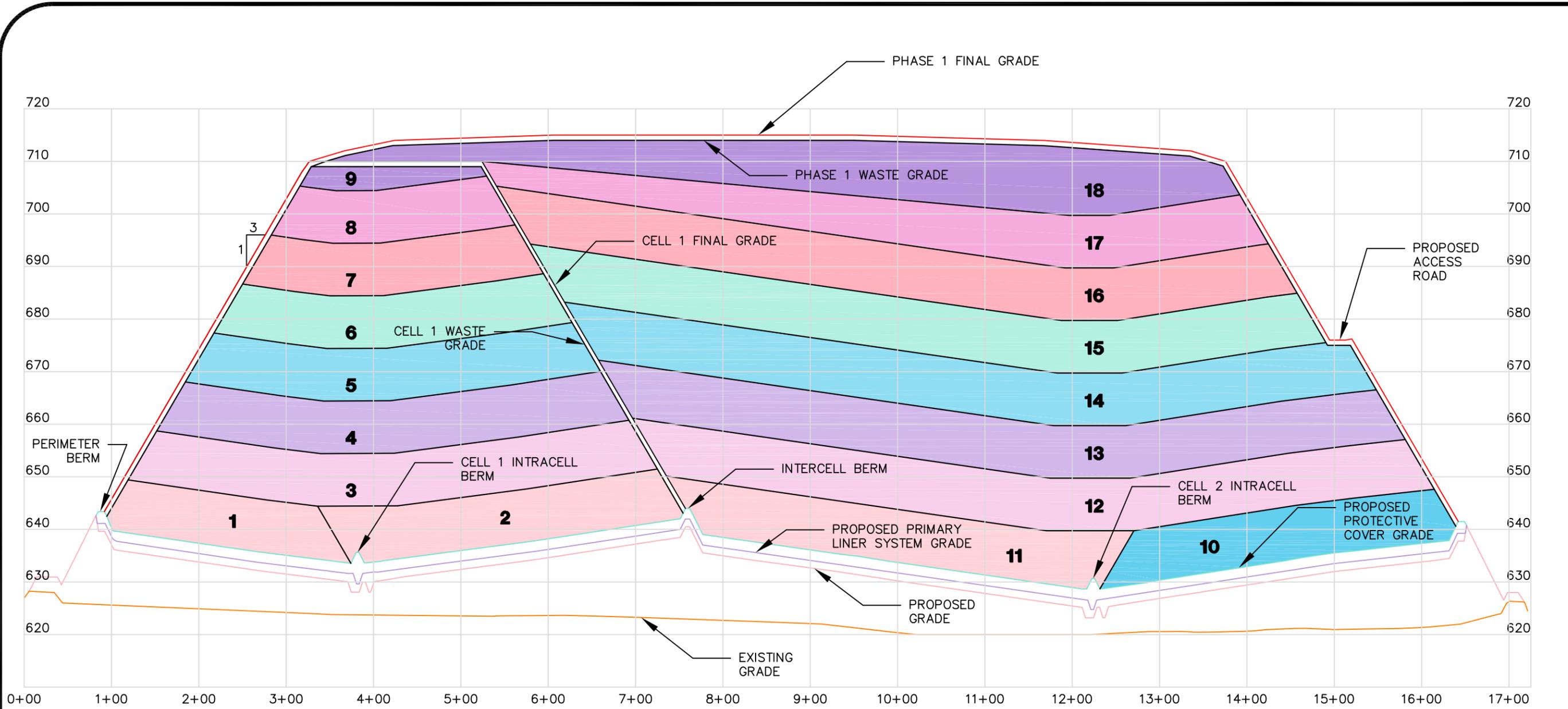
( IN FEET )

SCALE: 1" = 200'	DATE: 3-12-08
PROJECT NO. 1356-06-825	DRAWN BY: CHR
	CHECKED BY:



**CELL 1 FINAL GRADING PLAN  
RAB ASH LANDFILL**  
ALLEN STEAM STATION

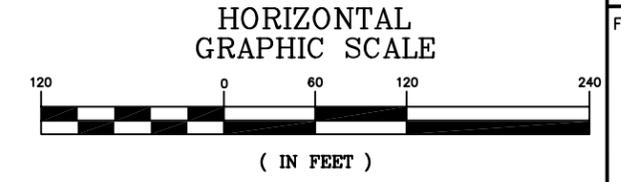
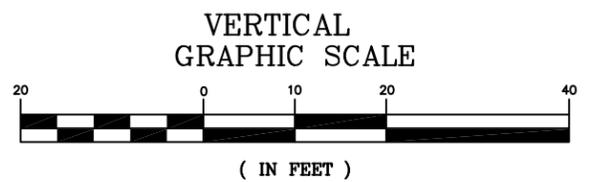
FIGURE NO. **3**



**CROSS-SECTION AA'**

**LEGEND**

- EXISTING GROUND SURFACE
- PROPOSED 10' LIFT



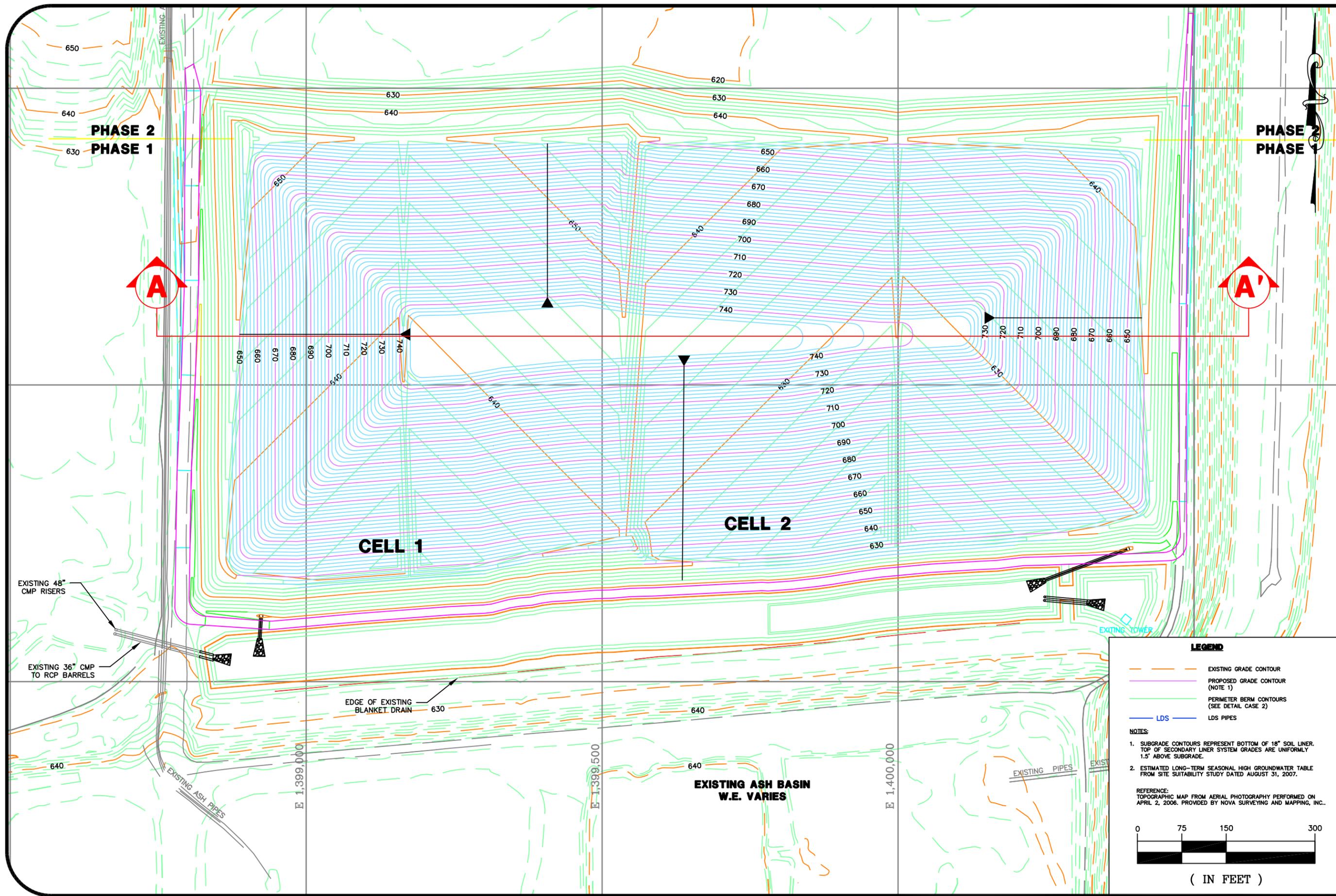
DATE: 1/25/08  
 DRAWN BY: CFS  
 CHECKED BY:

SCALE: AS SHOWN  
 PROJECT NO. 1356-06-825



**PHASE I CROSS SECTION  
 RETIRED ASH BASIN - ASH LANDFILL**  
 DUKE ENERGY - ALLEN STEAM STATION  
 BELMONT, NORTH CAROLINA

FIGURE NO.  
**4**



DATE: 3-12-08  
 DRAWN BY: ELH  
 CHECKED BY:

SCALE: 1" = 150'  
 PROJECT NO. 1356-06-825



**PHASE I FINAL GRADING PLAN**  
**RAB ASH LANDFILL**  
 ALLEN STEAM STATION  
 BELMONT, NORTH CAROLINA

FIGURE NO. **5**

**LEGEND**

- EXISTING GRADE CONTOUR
- PROPOSED GRADE CONTOUR (NOTE 1)
- PERIMETER BERM CONTOURS (SEE DETAIL CASE 2)
- LDS
- LDS PIPES

**NOTES:**

1. SUBGRADE CONTOURS REPRESENT BOTTOM OF 18" SOIL LINER. TOP OF SECONDARY LINER SYSTEM GRADES ARE UNIFORMLY 1.5' ABOVE SUBGRADE.
2. ESTIMATED LONG-TERM SEASONAL HIGH GROUNDWATER TABLE FROM SITE SUITABILITY STUDY DATED AUGUST 31, 2007.

**REFERENCE:**  
 TOPOGRAPHIC MAP FROM AERIAL PHOTOGRAPHY PERFORMED ON APRIL 2, 2006. PROVIDED BY NOVA SURVEYING AND MAPPING, INC.

0 75 150 300  
 ( IN FEET )



**RESOLUTION TITLE: PROVIDING LOCAL GOVERNMENT APPROVAL FOR DUKE ENERGY CAROLINAS LLC TO CONSTRUCT AND OPERATE THE ALLEN STEAM STATION COMBUSTION PRODUCTS LANDFILL**

WHEREAS, it is a priority of this community to protect human health and the environment through safe and effective solid waste management; and,

WHEREAS, Duke Energy's Allen Steam Plant has operated safely and efficiently, reinvested in Gaston County, creating jobs and sustaining economic development for 50 years; and,

WHEREAS, Duke Energy Carolinas LLC is constructing new environmental control equipment at the Allen Steam Station that will generate combustion products, some of which require disposal; and,

WHEREAS, Duke Energy Carolinas LLC is in the process of permitting through the North Carolina Department of Environment and Natural Resources a new landfill at the Allen Steam station for the safe disposal of combustion products; and,

WHEREAS, the Gaston County Board of Adjustment held a public hearing on April 28, 2008 on Conditional Use Permit (CU08-05) from Duke Energy Carolinas for a Major Landfill and unanimously approved the CU Permit; and,

WHEREAS, 15A NC Administrative Code 13B .0504(1)(e)(i) (Solid Waste Management Regulations) requires governing board approval from the unit of local government in which jurisdiction the proposed Industrial landfill is located.

NOW, THEREFORE, BE IT RESOLVED that the Gaston County Board of Commissioners approves the construction and operations of Duke Energy Carolinas LLC, Allen Steam Station Combustion Products Landfill.

DO NOT TYPE BELOW THIS LINE

I, Martha M. Jordan, Clerk to the County Commission, do hereby certify that the above is a true and correct copy of action taken by the Board of Commissioners as follows:

NO.            DATE    M1    M2    CARPENTER FLOYD KEIGHER BROWN PRICE TORBETT FRALEY VOTE

2008-177    5/22/2008    JT    TK

**DISTRIBUTION:** Tim Gause, Duke Power; DocuWare Users



# GASTON COUNTY

PLANNING AND DEVELOPMENT  
SERVICES

## Land Use Services

Mailing Address: P. O. Box 1578, Gastonia, NC 28053-1578  
Street Address: 128 West Main Avenue, Gastonia, NC 28052  
E-mail Address: [laura.hamilton@co.gaston.nc.us](mailto:laura.hamilton@co.gaston.nc.us)

Fax Number: (704) 866-3966  
Office Number: (704) 866-3075

April 29, 2008

**Duke Energy**  
**Theodore Manes**  
**EC10C / PO Box 1006**  
**Charlotte, NC 28202**

Re: Conditional Use Permit # CU08-05, Request for an Inert Debris Landfill Major  
Tax BMP # 15-89-20  
Tax PID # 192188

Dear Mr. Manes:

The Gaston County Board of Adjustment considered your request for a Conditional Use Permit on the above stated property parcels during their meeting on April 28, 2008. After consideration of the application and public hearing comment, the Board found the four required findings of fact in the affirmative, and based on these findings the conditional use permit was approved, with the following conditions being set on the approval:

1. The applicant shall complete the development strictly in accordance with the plans submitted to and approved (and/or modified) by the Board of Adjustment, a copy of which is filed in the Land Use Office.
2. If any of the conditions affixed hereto of any part thereof is held invalid or void, then this permit shall be void and no effect.
3. Unless the Board of Adjustment issues a Conditional Use Permit which either is specifically exempt from any time constrains or has some other specified time period for implementation, the applicant must secure a valid building permit within a twelve (12) month period from the date of issuance of the Conditional Use Permit.
4. The operational life shall be ten (10) to thirty (30) years based on plant operations as requested, with notification to the County every five (5) years paralleling the State notification requirements.

This approval letter shall not constitute a zoning permit and you should submit site plans along with appropriate documentation as required by the County Zoning Ordinance to Land Use for site plan review. Upon completion of the review and assurance that the site plan is in compliance with the Ordinance, a zoning permit will be issued for the proposed use. Should you have any questions concerning this matter, please call 704-866-3075.

Sincerely,  
A handwritten signature in black ink, appearing to read "Ronald Smith", written over a horizontal line.

Ronald Smith  
Land Use Administrator

cc: file



# APPLICATION FOR ZONING PERMIT

NON-RESIDENTIAL OR MULTI-FAMILY USE

**207-668**

OWNER DUKE ENERGY  
 ADDRESS 253 Plant Allen RD. TED  
 CITY BELMONT STATE NC ZIP 28012 DAY PHONE 704-382-8691  
 TAX ID # 15.89.20 CENSUS TRACT 324 ZONING DISTRICT IG SITE PLAN # ZP2007-19  
 WATERSHED N/A FEMA # 3592J PROPOSED USE ASH PLT  
 LOCATION 253 Plant Allen

PRINCIPLE STRUCTURE		ACCESSORY STRUCTURE		SIGN RESTRICTIONS	
PROPOSED	REQUIRED	PROPOSED	REQUIRED	PROPOSED	REQUIRED
FROM STREET RIGHT-OF-WAY AND PROPERTY LINES					
FRONT <u>50'</u>	FRONT <u>50'</u>	FRONT _____	FRONT _____	TYPE _____	TYPE _____
REAR <u>50'</u>	REAR <u>50'</u>	REAR _____	REAR _____	# OF SIGNS _____	# OF SIGNS _____
L SIDE <u>30'</u>	L SIDE <u>30'</u>	L SIDE _____	L SIDE _____	AREA _____	AREA _____
R SIDE <u>30'</u>	R SIDE <u>30'</u>	R SIDE _____	R SIDE _____	ILLUM _____	ILLUM _____
HEIGHT <u>50'</u>	HEIGHT <u>50'</u>	HEIGHT _____	HEIGHT _____	LOCATION _____	LOCATION _____
WIDTH @ BL <u>70'</u>	WIDTH @ BL <u>70'</u>	WIDTH @ BL _____	WIDTH @ BL _____		

WATER: PUB. / PRIV. / COMM. \_\_\_\_\_ SEWER: PUB. / PRIV. / COMM. \_\_\_\_\_ PARKING: REQUIRED \_\_\_\_\_ PROPOSED \_\_\_\_\_  
 # EMPLOYEES \_\_\_\_\_ # SEATS / PATRONS \_\_\_\_\_ # COMPANY VEHICLES \_\_\_\_\_  
 LOT SIZE \_\_\_\_\_ BUILDING SQFT. \_\_\_\_\_ ROAD FRONTAGE \_\_\_\_\_

MULTI-FAMILY: # 1BDRM / EFFICIENCY \_\_\_\_\_ # 2 BDRM \_\_\_\_\_ # 3 BDRM \_\_\_\_\_ TOTAL UNITS \_\_\_\_\_

COMMENTS: \_\_\_\_\_

PLOT PLAN / DIRECTIONS  
SEE SITE PLAN  
 \* The operation life shall be Ten (10) to thirty (30) years base on plant operation request  
 \* The County needs to be notified every FIVE (5) Years paralleling the State notification requirements.

APPLICANT NAME (if not owner): \_\_\_\_\_ PHONE# \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

The undersigned hereby certifies that he/she is either the owner or the authorized agent of the owner and hereby makes application for a permit and inspection of work described and agrees to comply with all applicable laws regulating the work. This permit expires six (6) months from date of issue if not used and validated. I also agree to allow employees of Gaston County to enter this property during reasonable hours for the purpose of making zoning and building inspections.

E. W. Adams DATE \_\_\_\_\_ APPROVED BY John D. J. DATE 11-8-07  
 TOTAL FEE \$ 100.00  
 RECEIPT# 2578

ZONE	BY _____ DATE _____ Y/N	BY _____ DATE _____ Y/N	BY _____ DATE _____ Y/N	EXPIRATION DATE: <u>5-8-08</u>
SITE	BY _____ DATE _____ Y/N	BY _____ DATE _____ Y/N	BY _____ DATE _____ Y/N	PO Box 1578, Gastonia, NC 28053, (704)266-3075

DID # 192188



Michael F. Easley, Governor  
State of North Carolina  
William G. Ross, Jr., Secretary  
Department of Environment and Natural Resources  
Alan W. Klimek, P.E., Director  
Division of Water Quality

September 11, 2006

Mr. Michael Ruhe  
Duke Energy Corporation  
P.O. Box 1006  
Mail Code EC11E  
Charlotte, North Carolina 28201

**RECEIVED**

**SEP 13 2006**

**DUKE ENERGY  
EHS**

Subject: Issuance of NPDES Permit  
NC0004979  
Allen Steam Station  
Gaston County

Dear Mr. Ruhe:

Division personnel have reviewed and approved your application for renewal of the subject permit. Accordingly, we are forwarding the attached NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated May 9, 1994 (or as subsequently amended).

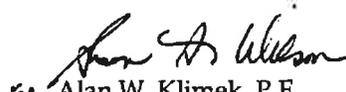
**This final permit contains no significant changes from the draft you were sent on July 5, 2006.**

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, the Coastal Area Management Act or any other Federal or Local governmental permit that may be required.

If you have any questions concerning this permit, please contact Toya Fields at telephone number (919) 733-5083, extension 551.

Sincerely,

  
Alan W. Klimek, P.E.

cc: Central Files  
Mooresville Regional Office/Surface Water Protection  
NPDES Unit  
Aquatic Toxicology  
Marshall Hyatt, EPA Region IV

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Duke Energy Corporation

is hereby authorized to discharge wastewater from a facility located at the

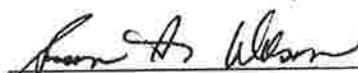
Plant Allen Steam Station  
253 Plant Allen Road (NCSR 2525)  
Belmont  
Gaston County

to receiving waters designated as the Catawba and South Fork Catawba Rivers in the Catawba River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof.

This permit shall become effective **October 1, 2006**.

This permit and authorization to discharge shall expire at midnight on **May 31, 2010**.

Signed this day **September 11, 2006**.

for   
\_\_\_\_\_  
Alan W. Klimek, P.E. Director  
Division of Water Quality  
By Authority of the Environmental Management Commission

## SUPPLEMENT TO PERMIT COVER SHEET

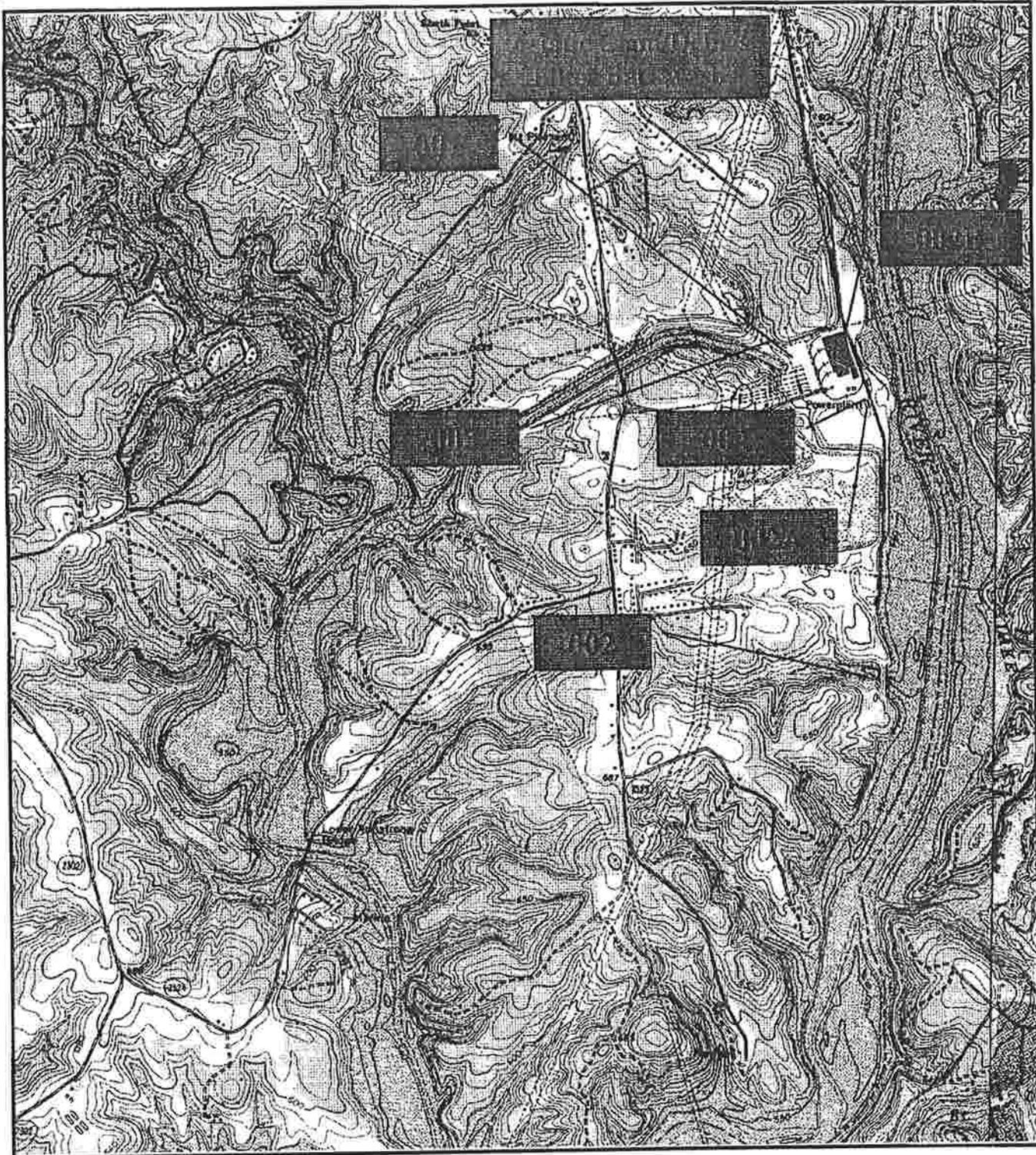
All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

Duke Energy Corporation is hereby authorized to:

1. Continue to discharge:
  - Once through cooling water (outfall 001)
  - Operate a septic tank and ash pond with pH adjustment and discharge domestic wastewater, stormwater runoff, ash sluice, water treatment system wastewaters, FGD system blowdown, and miscellaneous cleaning and maintenance wash waters (002).
  - Coal yard sump overflow (002A) and power house sump overflow (002B)
  - Miscellaneous equipment non-contact cooling and sealing water (003)
  - Miscellaneous non-contact cooling water, vehicle washwater, and intake screen backwash (004)

From a facility located at the Plant Allen Steam Station on Plant Allen Road (NCSR 2525), south of Belmont in Gaston County, and

2. Without adding detergents or chemicals of *any kind*, discharge Asiatic clam/debris filter backwash (of the intake filter screen) (see Part A.7); and
3. After receiving an Authorization to Construct from the Construction Grants and Loans Section, construct and operate a FGD wet scrubber wastewater treatment system discharging to the ash settling basin through internal outfall 005; and
4. Discharge from said treatment works at the location specified on the attached map into the Catawba River (outfalls 002, 002A, 002B and 004) and the South Fork Catawba River (outfalls 001 and 003) which are classified Class WS-V B waters, respectively, in the Catawba River Basin.



## Duke Energy Corporation Allen Steam Station

<b>State Grid/Quad:</b>	G14NE/Belmont	<b>Permitted Flow:</b>	Not limited
<b>Receiving Streams:</b>	Catawba and South Fork Catawba Rivers		
<b>Stream Class:</b>	WS-V & B		
<b>Drainage Basin:</b>	Catawba River Basin	<b>Sub-Basin:</b>	03-08-34
<b>Latitude (001):</b>	35° 11' 23" N	<b>Longitude (001):</b>	81° 00' 45" W
<b>Latitude (002):</b>	35° 10' 30" N	<b>Longitude (002):</b>	81° 00' 23" W
<b>Latitude (002A):</b>	35° 11' 34" N	<b>Longitude (002A):</b>	81° 00' 22" W
<b>Latitude (002B):</b>	35° 11' 36" N	<b>Longitude (002B):</b>	81° 00' 30" W
<b>Latitude (004):</b>	35° 11' 35" N	<b>Longitude (004):</b>	81° 00' 22" W
<b>Latitude (A. Clam):</b>	35° 11' 36" N	<b>Longitude(A. Clam):</b>	81° 00' 30" W

*Map not to scale*



North

Facility  
Location



NPDES Permit No. NC0004979  
Gaston County

**A. (1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001- Condenser Cooling Water (CCW). Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Daily	Pump Logs	Effluent
Temperature (June 1 – September 30) <sup>1</sup>	38.9 °C (102 °F)		Daily	Grab or Instantaneous	Effluent
Temperature (October 1 – May 31) <sup>1</sup>	35 °C (95 °F)		Daily	Grab or Instantaneous	Effluent

**Notes:**

1. The Regional Administrator has determined pursuant to Section 316(a) of the Act that the thermal component of the discharge assures the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the receiving body of water.

**Chlorination of the once through condenser cooling water, discharged through outfall 001, is not allowed under this permit. Should Duke Power wish to chlorinate its condenser cooling water, a permit modification must be requested and received prior to commencing chlorination.**

**A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 002 – ash pond effluent. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow				Weekly	Instantaneous or Estimate	Influent or Effluent
Oil and Grease	15.0 mg/l		20.0 mg/l	Quarterly	Grab	Effluent
Total Suspended Solids	30.0 mg/l		100.0 mg/l	Monthly	Grab	Effluent
Total Copper <sup>2</sup>			1.0 mg/l	2/Month	Grab	Effluent
Total Iron <sup>2</sup>			1.58 mg/l	Monthly	Grab	Effluent
Total Selenium <sup>2,3</sup>		31.0 µg/L		2/Month	Grab	Effluent
Total Selenium <sup>2,4</sup>		21.0 µg/L		2/Month	Grab	Effluent
Total Nitrogen (NO <sub>2</sub> + NO <sub>3</sub> + TKN)				Semi-annually	Grab	Effluent
Chronic Toxicity <sup>1</sup>				Quarterly	Grab	Effluent
pH <sup>5</sup>				Monthly	Grab	Effluent

**Notes:**

1. Whole Effluent Toxicity shall be monitored by chronic toxicity (Ceriodaphnia) P/F at 24%. Tests shall be conducted in January, April, July and October (see Part A.(9.) for details)
2. Total metals are defined by 40 CFR 136. Any method specified by 40 CFR 136 is considered acceptable for analysis.
3. 31 µg/L selenium limit shall be in effect October 1, 2006 through September 30, 2009.
4. 21 µg/L selenium limit shall take effect October 1, 2009.
5. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

**There shall be no discharge of floating solids or foam visible in other than trace amounts.**

**A. (3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002A)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 002A – Coal Yard Sump Overflows. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Episodic	Estimate	Effluent <sup>1</sup>
pH			Episodic	Grab	Effluent
Oil and Grease <sup>2</sup>	15.0 mg/l	20.0 mg/l	Episodic	Grab	Effluent
Total Suspended Solids <sup>2</sup>	30.0 mg/l	100.0 mg/l	Episodic	Grab	Effluent
Fecal Coliform			Episodic	Grab	Effluent
Total Iron <sup>3</sup>		1.0 mg/l	Episodic	Grab	Effluent

**Notes:**

1. Effluent sampling shall be conducted at a point upstream of discharge to the receiving stream.
2. Monthly average limits for total suspended solids and oil and grease only apply if the overflow occurs for more than 24 hours.
3. Sampling for iron is required only when TSS is reported as greater than 100 mg/L.

**There shall be no discharge of floating solids or foam visible in other than trace amounts**

**All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR. Episodic sampling is required per occurrence when sump overflows occur for longer than one hour. All samples shall be of a representative discharge.**

**A. (4.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002B)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **outfall 002B – Power House Sump Overflows**. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Episodic	Estimate	Effluent <sup>1</sup>
pH			Episodic	Grab	Effluent
Oil and Grease <sup>2</sup>	15.0 mg/l	20.0 mg/l	Episodic	Grab	Effluent
Total Suspended Solids <sup>2</sup>	30.0 mg/l	100.0 mg/l	Episodic	Grab	Effluent
Total Copper <sup>3</sup>		1.0 mg/l	Episodic	Grab	Effluent
Total Iron <sup>3</sup>		1.0mg/l	Episodic	Grab	Effluent

**Notes:**

1. Effluent sampling shall be conducted at a point upstream of discharge to the receiving stream.
2. Monthly average limits for total suspended solids and oil and grease only apply if the overflow occurs for more than 24 hours.
3. The limits for total copper and total iron only apply during a chemical metals cleaning.

**There shall be no discharge of floating solids or visible foam in other than trace amounts**

**All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR. Episodic sampling is required per occurrence when sump overflows occur for longer than one hour. All samples shall be of a representative discharge.**

**A. (5.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 003)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 003 – miscellaneous equipment non-contact water and sealing water. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Estimate	Effluent

Chlorination of the once through cooling water, discharged through outfall 003, is not allowed under this permit. Should Duke Power wish to chlorinate its once through cooling water, a permit modification must be requested and received prior to commencing chlorination.

**A. (6.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 004)**

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 004- miscellaneous non-contact cooling water, vehicle washwater, and intake screen backwash. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Estimate	Effluent
Oil and Grease	15.0 mg/l	20.0 mg/l	Quarterly	Grab	Effluent

Chlorination of the once through cooling water, discharged through outfall 004, is not allowed under this permit. Should Duke Power wish to chlorinate its condenser cooling water, a permit modification must be requested and received prior to commencing chlorination.

### A. (7.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Internal Outfall 005)

During the period beginning upon submittal of an engineer's certification and lasting until permit expiration, the Permittee is authorized to discharge from internal outfall 005- treated FGD wet scrubber wastewater to ash settling basin. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Flow	Monitor & Report		Monthly	Pump logs or similar readings	Effluent
Total Suspended Solids	Monitor & Report		Weekly	Grab	Effluent
Carbonaceous Oxygen Demand (COD)	Monitor & Report		Weekly	Grab	Effluent
Total Arsenic	Monitor & Report		Weekly	Grab	Effluent
Total Cadmium	Monitor & Report		Weekly	Grab	Effluent
Total Chromium	Monitor & Report		Weekly	Grab	Effluent
Chloride	Monitor & Report		Weekly	Grab	Effluent
Total Mercury	Monitor & Report		Weekly	Grab	Effluent
Total Nickel	Monitor & Report		Weekly	Grab	Effluent
Total Selenium	Monitor & Report		Weekly	Grab	Effluent
Total Silver	Monitor & Report		Weekly	Grab	Effluent
Total Zinc	Monitor & Report		Weekly	Grab	Effluent
Total Beryllium	Monitor & Report		Weekly	Grab	Effluent

**Notes:**

1. "Effluent" shall be defined as the discharge from the FGD wastewater treatment system prior to discharge to the ash settling basin.

All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" shall be clearly written on the front of the DMR. All samples shall be of a representative discharge. DMRs for this outfall shall be submitted only after discharge commences from the FGD system.

Sampling is only required when this outfall is discharging.

### A. (8.) SPECIAL CONDITION FOR THE DISCHARGE OF ASIATIC CLAM/DEBRIS FILTER BACKWASH

The permittee may backwash the intake filter for Unit 5 condenser cooling water on an as-needed basis. It is understood that this wash water will contain materials indigenous to the Catawba River such as Asiatic clams and light debris. As these are naturally occurring in the river environment, they may be discharged with no adverse affects to the receiving stream. The Permittee may not add any detergent, chemicals or other non-indigenous material to the wash water without explicit permission of the Division of Water Quality.

**A. (9.) CHRONIC TOXICITY PASS/FAIL PERMIT LIMIT (QUARTERLY)**

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 24%.

The permit holder shall perform at a minimum, *quarterly* monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. **The tests will be performed during the months of January, April, July and October.** Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

**If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.**

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code TGP3B for the pass/fail results and THP3B for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

**Attention: North Carolina Division of Water Quality  
Environmental Sciences Section  
1621 Mail Service Center  
Raleigh, North Carolina 27699-1621**

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Branch no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Branch at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

**A. (10.) BIOCIDES CONDITION**

The permittee shall not use any biocides except those approved in conjunction with the permit application. The permittee shall notify the Director in writing not later than ninety (90) days prior to instituting use of any additional biocide used in cooling systems which may be toxic to aquatic life other than those previously reported to the Division of Water Quality. Such notification shall include completion of Biocide Worksheet Form 101 and a map locating the discharge point and receiving stream. Completion of Biocide Worksheet Form 101 is not necessary for those outfalls containing toxicity testing. Division approval is not necessary for the introduction of a new biocide into an outfall currently being tested for toxicity.

**A. (11.) SPECIAL CONDITIONS**

The following special conditions are applicable to all outfalls regulated by NC0004979:

- There shall be no discharge of polychlorinated biphenyl compounds.
- It has been determined from information submitted that the plans and procedures in place at Allen Steam Station are equivalent to that of a BMP.
- The permittee shall report the presence of cenospheres observed in any samples.
- The applicant is permitted to discharge chemical metal cleaning wastes to the ash basin under the conditions outlined in the 1976 Riverbend Ash Basin Equivalency Demonstration and the 1994 Allen Steam Station permit application
- The permittee shall check the diked areas for leaks by a visual inspection and shall report any leakage detected
- If the permittee, after monitoring for at least six months, determines that he/she is consistently meeting the effluent limits contained herein, the permittee may request of the Director that the monitoring requirement be reduced to a lesser frequency.
- Nothing contained in this permit shall be construed as a waiver by the permittee or any right to a hearing it may have pursuant to State or Federal laws or regulations.
- Low volume waste is defined as follows (as per 40 CFR 423.11(b):  
 "Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included."

**A. (12.) SECTION 316 (B) OF CWA**

The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95.

## PART II

# STANDARD CONDITIONS FOR NPDES PERMITS

### Section A. Definitions

#### 2/Month

Samples are collected twice per month with at least ten calendar days between sampling events.

#### 3/Week

Samples are collected three times per week on three separate calendar days.

#### Act or "the Act"

The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.

#### Annual Average

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar year. In the case of fecal coliform, the geometric mean of such discharges.

#### Arithmetic Mean

The summation of the individual values divided by the number of individual values.

#### Bypass

The known diversion of waste streams from any portion of a treatment facility including the collection system, which is not a designed or established or operating mode for the facility.

#### Calendar Day

The period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

#### Calendar Quarter

One of the following distinct periods: January through March, April through June, July through September, and October through December.

#### Composite Sample

A sample collected over a 24-hour period by continuous sampling or combining grab samples of at least 100 ml in such a manner as to result in a total sample representative of the wastewater discharge during the sample period. The Director may designate the most appropriate method (specific number and size of aliquots necessary, the time interval between grab samples, etc.) on a case-by-case basis. Samples may be collected manually or automatically. Composite samples may be obtained by the following methods:

- (1) Continuous: a single, continuous sample collected over a 24-hour period proportional to the rate of flow.
- (2) Constant time/variable volume: a series of grab samples collected at equal time intervals over a 24-hour period of discharge and combined proportional to the rate of flow measured at the time of individual sample collection, or
- (3) Variable time/constant volume: a series of grab samples of equal volume collected over a 24-hour period with the time intervals between samples determined by a preset number of gallons passing the sampling point. Flow measurement between sample intervals shall be determined by use of a flow recorder and totalizer, and the preset gallon interval between sample collection fixed at no greater than 1/24 of the expected total daily flow at the treatment system, or
- (4) Constant time/constant volume: a series of grab samples of equal volume collected over a 24-hour period at a constant time interval. This method may only be used in situations where effluent flow rates vary less than 15 percent. The grab samples shall be taken at intervals of no greater than 20 minutes apart during any 24-hour period and must be of equal size and of no less than 100 milliliters. Use of this method requires prior approval by the Director.

In accordance with (4) above, influent grab samples shall not be collected more than once per hour. Effluent grab samples shall not be collected more than once per hour except at wastewater treatment systems having a detention time of greater than 24 hours. In such cases, effluent grab samples may be collected at intervals evenly spaced over the 24-hour period that are equal in number of hours to the detention time of the system in number of days. However, the interval between effluent grab samples may not exceed six hours nor the number of samples less than four during a 24-hour sampling period.

Continuous flow measurement

Flow monitoring that occurs without interruption throughout the operating hours of the facility. Flow shall be monitored continually except for the infrequent times when there may be no flow or for infrequent maintenance activities on the flow device.

Daily Discharge

The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. The "daily discharge" concentration comprises the mean concentration for a 24-hour sampling period as either a composite sample concentration or the arithmetic mean of all grab samples collected during that period. (40 CFR 122.3)

Daily Maximum

The highest "daily discharge" during the calendar month.

Daily Sampling

Parameters requiring daily sampling shall be sampled 5 out of every 7 days per week unless otherwise specified in the permit. The Division expects that sampling shall be conducted on weekdays except where holidays or other disruptions of normal operations prevent weekday sampling. If sampling is required for all seven days of the week for any permit parameter(s), that requirement will be so noted on the Effluent Limitations and Monitoring Page(s).

DWQ or "the Division"

The Division of Water Quality, Department of Environment and Natural Resources.

EMC

The North Carolina Environmental Management Commission.

Facility Closure

The cessation of wastewater treatment at a permitted facility, or the cessation of all activities that require coverage under the NPDES. Completion of facility closure will allow this permit to be rescinded.

Geometric Mean

The Nth root of the product of the individual values where N = the number of individual values. For purposes of calculating the geometric mean, values of "0" (or "< [detection level]") shall be considered = 1.

Grab Sample

Individual samples of at least 100 ml collected over a period of time not exceeding 15 minutes. Grab samples can be collected manually. Grab samples must be representative of the discharge (or the receiving stream, for instream samples).

Hazardous Substance

Any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

Instantaneous flow measurement

A measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

Monthly Average (concentration limit)

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar month. In the case of fecal coliform, the geometric mean of such discharges.

Permit Issuing Authority

The Director of the Division of Water Quality.

Quarterly Average (concentration limit)

The average of all samples taken over a calendar quarter.

Severe property damage

Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage excludes economic loss caused by delays in production.

Toxic Pollutant

Any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act.

Upset

An incident beyond the reasonable control of the Permittee causing unintentional and temporary noncompliance with permit effluent limitations and/or monitoring requirements. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Weekly Average (concentration limit)

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar week. In the case of fecal coliform, the geometric mean of such discharges.

**Section B. General Conditions**

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

- a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- b. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. [40 CFR 122.41 (a) (2)]
- c. The Clean Water Act provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [40 CFR 122.41 (a) (2)]

- d. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. [40 CFR 122.41 (a) (2)]
- e. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions. [40 CFR 122.41 (a) (2)]
- f. Under state law, a civil penalty of not more than \$25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]
- g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000. [40 CFR 122.41 (a) (3)]

## 2. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41 (d)].

## 3. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II. C. 4), "Upsets" (Part II. C. 5) and "Power Failures" (Part II. C. 7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

## 4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USC 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

## 5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41 (g)].

## 6. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information

The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41 (h)].

9. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41 (b)].

10. Expiration of Permit

The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date. Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements

All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41 (k)].

a. All permit applications shall be signed as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures
- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;
2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
3. The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

- c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]
- d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]:  
*"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."*
12. Permit Actions  
This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41 (f)].
13. Permit Modification, Revocation and Reissuance, or Termination  
The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. al.
14. Annual Administering and Compliance Monitoring Fee Requirements  
The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H.0105 (b) (4) may cause this Division to initiate action to revoke the permit.

### Section C. Operation and Maintenance of Pollution Controls

#### 1. Certified Operator

Upon classification of the permitted facility by the Certification Commission, the Permittee shall employ a certified water pollution control treatment system operator in responsible charge (ORC) of the water pollution control treatment system. Such operator must hold a certification of the grade equivalent to or greater than the classification assigned to the water pollution control treatment system by the Certification Commission. The Permittee must also employ one or more certified Back-up ORCs who possess a currently valid certificate of the type of the system. Back-up ORCs must possess a grade equal to (or no more than one grade less than) the grade of the system [15A NCAC 8G.0201].

The ORC of each Class I facility must:

- Visit the facility at least weekly
- Comply with all other conditions of 15A NCAC 8G.0204.

The ORC of each Class II, III and IV facility must:

- Visit the facility at least daily, excluding weekends and holidays
- Properly manage and document daily operation and maintenance of the facility
- Comply with all other conditions of 15A NCAC 8G.0204.

Once the facility is classified, the Permittee shall submit a letter to the Certification Commission designating the operator in responsible charge:

- a. Within 60 calendar days prior to wastewater being introduced into a new system

- b. Within 120 calendar days of:
- Receiving notification of a change in the classification of the system requiring the designation of a new ORC and back-up ORC
  - A vacancy in the position of ORC or back-up ORC.

2. Proper Operation and Maintenance

The Permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40 CFR 122.41 (e)].

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit [40 CFR 122.41 (c)].

4. Bypassing of Treatment Facilities

a. Bypass not exceeding limitations [40 CFR 122.41 (m) (2)]

The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.

b. Notice [40 CFR 122.41 (m) (3)]

- (1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.
- (2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Part II. E. 6. (24-hour notice).

c. Prohibition of Bypass

- (1) Bypass from the treatment facility is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for bypass, unless:
  - (A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
  - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  - (C) The Permittee submitted notices as required under Paragraph b. of this section.
- (2) Bypass from the collection system is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for a bypass as provided in any current or future system-wide collection system permit associated with the treatment facility.
- (3) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph c. (1) of this section.

5. Upsets

2. Effect of an upset [40 CFR 122.41 (n) (2)]: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph b. of this condition are met. No determination made during administrative review of claims that

noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- b. Conditions necessary for a demonstration of upset: A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- (1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
  - (2) The Permittee facility was at the time being properly operated; and
  - (3) The Permittee submitted notice of the upset as required in Part II. E. 6. (b) (B) of this permit.
  - (4) The Permittee complied with any remedial measures required under Part II. B. 2. of this permit.
- d. Burden of proof [40 CFR 122.41 (n) (4)]: The Permittee seeking to establish the occurrence of an upset has the burden of proof in any enforcement proceeding.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of in accordance with NCGS 143-215.1 and in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States. The Permittee shall comply with all existing Federal regulations governing the disposal of sewage sludge. Upon promulgation of 40 CFR Part 503, any permit issued by the Permit Issuing Authority for the utilization/disposal of sludge may be reopened and modified, or revoked and reissued, to incorporate applicable requirements at 40 CFR 503. The Permittee shall comply with applicable 40 CFR 503 Standards for the Use and Disposal of Sewage Sludge (when promulgated) within the time provided in the regulation, even if the permit is not modified to incorporate the requirement. The Permittee shall notify the Permit Issuing Authority of any significant change in its sludge use or disposal practices.

7. Power Failures

The Permittee is responsible for maintaining adequate safeguards (as required by 15A NCAC 2H.0124 - Reliability) to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is characteristic of the discharge over the entire period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41 (j)].

2. Reporting

Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 11, 2, 3) or alternative forms approved by the Director, postmarked no later than the 28th day following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DENR / Division of Water Quality / Water Quality Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

3. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the Federal Water Pollution Control Act (as Amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention

Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:

- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation
- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;

- e. The analytical techniques or methods used; and
- f. The results of such analyses.

8. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

- a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location [40 CFR 122.41 (f)].

Section E Reporting Requirements

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41 (f)]. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29 (b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42 (a) (f).
- c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alternation, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41 (f) (2)].

4. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to document the change of ownership. Any such action may incorporate other requirements as may be necessary under the Clean Water Act [40 CFR 122.41 (f) (3)].

5. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41 (f) (4)].

- a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II. D. 2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.
- b. If the Permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting

- a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41 (f) (6)].
- b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.
- c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

7. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Part II. E. 5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II. E. 6. of this permit [40 CFR 122.41 (f) (7)].

8. Other Information

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41 (f) (8)].

9. Noncompliance Notification

The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
- b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
- c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence.

10. Availability of Reports

Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division of Water Quality. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1 (b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports

The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of

not more than \$25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

**12. Annual Performance Reports**

Permittees who own or operate facilities that collect or treat municipal or domestic waste shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

## **PART III OTHER REQUIREMENTS**

**Section A. Construction**

The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless the Division has issued an Authorization to Construct (AtC) permit. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

**Section B. Groundwater Monitoring**

The Permittee shall, upon written notice from the Director of the Division of Water Quality, conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater standards.

**Section C. Changes in Discharges of Toxic Substances**

The Permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe (40 CFR 122.42):

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five times the maximum concentration value reported for that pollutant in the permit application.
  
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
  - (1) Five hundred micrograms per liter (500 µg/L);
  - (2) One milligram per liter (1 mg/L) for antimony;
  - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

**Section D. Evaluation of Wastewater Discharge Alternatives**

The Permittee shall evaluate all wastewater disposal alternatives and pursue the most environmentally sound alternative of the reasonably cost effective alternatives. If the facility is in substantial non-compliance with the terms and conditions of the NPDES permit or governing rules, regulations or laws, the Permittee shall submit a report in such form and detail as required by the Division evaluating these alternatives and a plan of action within 60 days of notification by the Division.

**Section E. Facility Closure Requirements**

The Permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent

adverse impacts to waters of the State. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

## PART IV SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES

### Section A. Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced by an indirect discharger as influent to that POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on (1) the quality and quantity of effluent introduced into the POTW, and (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

### Section B. Municipal Control of Pollutants from Industrial Users.

1. Effluent limitations are listed in Part I of this permit. Other pollutants attributable to inputs from industries using the municipal system may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants in accordance with best practicable technology or water quality standards.
2. Under no circumstances shall the Permittee allow introduction of the following wastes in the waste treatment system:
  - a. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
3. With regard to the effluent requirements listed in Part I of this permit, it may be necessary for the Permittee to supplement the requirements of the Federal Pretreatment Standards (40 CFR, Part 403) to ensure compliance by the Permittee with all applicable effluent limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.
4. The Permittee shall require any industrial discharges sending influent to the permitted system to meet Federal Pretreatment Standards promulgated in response to Section 307(b) of the Act. Prior to accepting wastewater from any significant industrial user, the Permittee shall either develop and submit to the

Division a Pretreatment Program for approval per 15A NCAC 2H .0907(a) or modify an existing Pretreatment Program per 15A NCAC 2H .0907(b).

5. This permit shall be modified, or alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under Section 402(b)(8) of the Clean Water Act and implementing regulations or by the requirements of the approved State pretreatment program, as appropriate.

### Section C. Pretreatment Programs

Under authority of sections 307(b) and (c) and 402(b)(8) of the Clean Water Act and implementing regulations 40 CFR Part 403, North Carolina General Statute 143-215.3 (14) and implementing regulations 15A NCAC 2H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the Pretreatment Program Submittal are an enforceable part of this permit.

The Permittee shall operate its approved pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR Part 403, the State Pretreatment Regulations 15A NCAC 2H .0900, and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division approved modifications thereof. Such operation shall include but is not limited to the implementation of the following conditions and requirements:

1. Sewer Use Ordinance (SUO)  
The Permittee shall maintain adequate legal authority to implement its approved pretreatment program.
2. Industrial Waste Survey (IWS)  
The Permittee shall update its Industrial Waste Survey (IWS) to include all users of the sewer collection system at least once every five years.
3. Monitoring Plan  
The Permittee shall implement a Division approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits. Effluent data from the Plan shall be reported on the DMRs (as required by Part II, Section D, and Section E.5.).
4. Headworks Analysis (HWA) and Local Limits  
The Permittee shall obtain Division approval of a Headworks Analysis (HWA) at least once every five years, and as required by the Division. Within 180 days of the effective date of this permit (or any subsequent permit modification) the Permittee shall submit to the Division a written technical evaluation of the need to revise local limits (i.e., an updated HWA or documentation of why one is not needed) [40 CFR 122.42]. The Permittee shall develop, in accordance with 40 CFR 403.5(c) and 15A NCAC 2H .0909, specific Local Limits to implement the prohibitions listed in 40 CFR 403.5(a) and (b) and 15A NCAC 2H .0909.
5. Industrial User Pretreatment Permits (IUP) & Allocation Tables  
In accordance with NCGS 143-215.1, the Permittee shall issue to all significant industrial users, permits for operation of pretreatment equipment and discharge to the Permittee's treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain a current Allocation Table (AT) which summarizes the results of the Headworks Analysis (HWA) and the limits from all Industrial User Pretreatment Permits (IUP). Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA.

6. **Authorization to Construct (A to C)**  
The Permittee shall ensure that an Authorization to Construct permit (AtC) is issued to all applicable industrial users for the construction or modification of any pretreatment facility. Prior to the issuance of an AtC, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all Industrial User Pretreatment Permit (IUP) limitations.
7. **POTW Inspection & Monitoring of their SIUs**  
The Permittee shall conduct inspection, surveillance, and monitoring activities as described in its Division approved pretreatment program in order to determine, independent of information supplied by industrial users, compliance with applicable pretreatment standards. The Permittee must:
  - a. Inspect all Significant Industrial Users (SIUs) at least once per calendar year; and
  - b. Sample all Significant Industrial Users (SIUs) at least twice per calendar year for all permit-limited pollutants, once during the period from January 1 through June 30 and once during the period from July 1 through December 31, except for organic compounds which shall be sampled once per calendar year;
8. **SIU Self Monitoring and Reporting**  
The Permittee shall require all industrial users to comply with the applicable monitoring and reporting requirements outlined in the Division approved pretreatment program, the industry's pretreatment permit, or in 15A NCAC 2H .0908.
9. **Enforcement Response Plan (ERP)**  
The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the Clean Water Act (40 CFR 405 et. seq.), prohibitive discharge standards as set forth in 40 CFR 403.5 and 15A NCAC 2H .0909, and specific local limitations. All enforcement actions shall be consistent with the Enforcement Response Plan (ERP) approved by the Division.
10. **Pretreatment Annual Reports (PAR)**  
The Permittee shall report to the Division in accordance with 15A NCAC 2H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 2H .0904 (b) may be required to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a Pretreatment Annual Report (PAR) describing its pretreatment activities over the previous twelve months to the Division at the following address:

NC DENR / DWQ / Pretreatment Unit  
1617 Mail Service Center  
Raleigh, NC 27699-1617

These reports shall be submitted according to a schedule established by the Director and shall contain the following:

- a.) **Narrative**  
A brief discussion of reasons for, status of, and actions taken for all Significant Industrial Users (SIUs) in Significant Non-Compliance (SNC);
- b.) **Pretreatment Program Summary (PPS)**  
A pretreatment program summary (PPS) on specific forms approved by the Division;
- c.) **Significant Non-Compliance Report (SNCR)**  
The nature of the violations and the actions taken or proposed to correct the violations on specific forms approved by the Division;
- d.) **Industrial Data Summary Forms (IDSF)**

Monitoring data from samples collected by both the POTW and the Significant Industrial User (SIU). These analytical results must be reported on Industrial Data Summary Forms (IDSF) or other specific format approved by the Division;

e.) Other Information

Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of SIUs in SNC, and any other information, upon request, which in the opinion of the Director is needed to determine compliance with the pretreatment implementation requirements of this permit;

11. Public Notice

The Permittee shall publish annually a list of Significant Industrial Users (SIUs) that were in Significant Non-Compliance (SNC) as defined in the Permittee's Division approved Sewer Use Ordinance with applicable pretreatment requirements and standards during the previous twelve month period. This list shall be published within four months of the applicable twelve-month period.

12. Record Keeping

The Permittee shall retain for a minimum of three years records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW.

13. Funding and Financial Report

The Permittee shall maintain adequate funding and staffing levels to accomplish the objectives of its approved pretreatment program.

14. Modification to Pretreatment Programs

Modifications to the approved pretreatment program including but not limited to local limits modifications, POTW monitoring of their Significant Industrial Users (SIUs), and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 15 NCAC 2H .0114 and 15A NCAC 2H .0907..