



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Charles Wakild, P.E.

Director

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

December 6, 2012

KAROL KAIN GRAY – VICE CHANCELLOR FINANCE & ADMINISTRATION  
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL  
CB#1000 – 302A SOUTH BUILDING  
CHAPEL HILL, NORTH CAROLINA 27599-1000

Subject: Application No. WQ0023896  
Additional Information Request #2  
UNC-CH Bingham Facility  
Wastewater Irrigation System  
Orange County

Dear Vice Chancellor Gray:

Based on the recommendations from the Hearing Officer's Report for the subject facility, additional information is required before a final permitting decision may be made. Please address the items on the following pages no later than the close of business on January 5, 2013.

Please be aware that you are responsible for meeting all requirements set forth in North Carolina rules and regulations. Any oversights that occurred in the review of the subject application package are still the Applicant's responsibility. In addition, any omissions made in responding to the outstanding items shall result in future requests for additional information.

Please reference the subject application number when providing the requested information. All revised and/or additional documentation shall be signed, sealed and dated, with **three copies** submitted to my attention at the address below. Please note that failure to provide this additional information on or before the above requested date may result in your application being returned as incomplete.

If you have any questions regarding this request, please do not hesitate to contact me at (919) 807-6453. Thank you for your cooperation.

Sincerely,

Nathaniel D. Thornburg  
Environmental Engineer

cc: Matthew D. Fleahman, PG – Raleigh Regional Office, Aquifer Protection Section  
Charles D. Riley, Jr., PE – McKim & Creed, Inc.  
Permit Application File WQ0023896

AQUIFER PROTECTION SECTION  
1636 Mail Service Center, Raleigh, North Carolina 27699-1636  
Location: 512 N. Salisbury St., Raleigh, NC 27604  
Phone: 919-807-6464 \ FAX: 919-807-6496  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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**Notes:**

1. When providing an additional information response to the Division, please provide a letter addressing each comment and provide a reference as to the location of the requested information in the updated application package.
2. Due to the upcoming holiday season, the Division acknowledges that some of the requests in this letter may take longer to fulfill than the January 5<sup>th</sup> deadline. Therefore, if additional time is needed, the Applicant may submit a written request to the Division prior to the January 5<sup>th</sup> deadline requesting additional time and providing a reasonable expected completion date.

**General:**

1. Per the Attorney General's Office determination that a public school bus stop is a "place of public assembly," UNC-CH shall determine the exact location of this bus stop and provide setbacks accordingly. If UNC-CH intends to continue to use spray irrigation as a disposal method, then a minimum setback of 400 feet shall be provided to this bus stop. If UNC-CH elects to use drip irrigation as a disposal method in this affected area, then the setback shall be at least 100 feet. Please note that while the Division will not require a flow reduction, it is suggested that UNC-CH reevaluate the amount of wastewater generated at this facility, and potentially submit a flow reduction request in order to reduce the facility's permitted flow and subsequently the amount of irrigation area needed. Amend the application, plans, site map, etc., accordingly.
2. Amend the proposed monitoring well network to include additional wells on the review boundary to the southwest and south of the irrigation field to help ensure that any groundwater contamination flow in the direction of adjacent residences is detected prior to reaching the Bingham facility's compliance boundary located within the property boundary. Amend the application, plans and site map accordingly.
3. Amend the monitoring plan to include upstream and downstream surface water monitoring stations for all surface waters located on the property. Each monitoring location shall be at the upstream and downstream sites closest to UNC-CH's property line with adjoining neighbors. These stations shall monitor for BOD<sub>5</sub>, pH, Dissolved Oxygen, Total Nitrogen and Total Phosphorus, and are meant to quantify UNC-CH's impacts (if any) on surface waters while on their property. Amend the plans and site map to denote the location of these surface water monitoring stations.
4. Provide a Priority Pollutant Analysis on a representative sample of the Bingham Facility's currently generated wastewater.
5. Provide a disclosure and identification of any radio-isotopes or known carcinogens that may be present in the wastewater, as well as a discussion about the treatment effectiveness of these contaminants (if present) by the proposed wastewater treatment system.
6. Submit a description of the type(s) and amount(s) of surfactants used in the dishwasher, laundry washer, cage washer and wet lab facilities.
7. Based on Items #4, 5 and 6 above, submit verification that the proposed wastewater treatment system is capable of treating to secondary standards, as well as its effectiveness at removing any identified pollutants of concern.
8. Provide at least one year's worth of groundwater usage flows from the onsite water supply well. If these values are not available, UNC-CH shall at a minimum provide one year's worth of wastewater effluent flow records.

**General (continued):**

9. Provide an amended Operation and Maintenance (O&M) plan to address the following concerns:
- Description of the operation of the system in sufficient detail to show what operations are necessary for the system to function and by whom the functions are to be conducted.
  - Description of anticipated maintenance of the system.
  - Include provisions for safety measures including restriction of access to the site and equipment.
  - Include spill control provisions such as response to upsets and bypasses including control, containment and remediation, as well as contact information for plant personnel, emergency responders and regulatory agencies.

In addition, amend the O&M Plan to reflect the proposed system design that specifically addresses at a minimum: safety and notification protocols; emergency plans associated with the chlorine disinfection system; emergency contacts; and operation and maintenance of the facility during severe weather related events.