



Michael F. Easley, Governor

William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director  
Division of Water Quality

**DIVISION OF WATER QUALITY  
AQUIFER PROTECTION SECTION  
February 15, 2006**

**RECEIVED**  
**FEB 23 2006**

Mr. Larry Daw  
UNC at Chapel Hill  
212 Finley Golf Course Road  
CB# 1650  
Chapel Hill, North Carolina 27517

**Subject:** Well Construction Permit  
Permit. # WR 0500107  
Airport Road Waste Disposal Area  
Municipal Drive  
Chapel Hill, North Carolina  
Orange County

Dear Mr. Daw

In accordance with the application received on February 09, 2006 we are forwarding herewith Well Construction Permit No. # **WR0500107** dated February 15, 2006 issued for the construction of a recovery well system.

This Permit will be effective from the date of its issuance and shall be subject to the conditions and limitations as specified therein. Please note the addition of stipulation #3 to the permit enclosed.

Sincerely,

S. Jay Zimmerman, L.G.  
Environmental Regional Supervisor  
Raleigh Regional Office

SJZ-JWG  
Enclosure

cc: Aquifer Protection Files  
Orange County Health Department  
ARCADIS G&M of North Carolina  
801 Corporate Center Drive, Suite 300  
Raleigh, North Carolina 27607  
Att: Mr. J. Alan Pinnix, L.G.

Aquifer Protection Section - Raleigh Regional Office

1628 Mail Service Center  
3800 Barrett Dr.

Raleigh, NC 27699-1628  
Raleigh, NC 27609

Phone (919) 791-4200  
FAX (919) 571-4718

Customer Service 1-877-623-6748  
Internet: <http://h2o.enr.state.nc.us>

One  
North Carolina  
*Naturally*

**NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
RALEIGH, NORTH CAROLINA  
PERMIT FOR THE CONSTRUCTION OF A WELL**

---

In accordance with the provisions of Article 7, Chapter 87, North Carolina General Statutes, and other applicable Laws, Rules and Regulations.

PERMISSION IS HEREBY GRANTED TO

**UNC at Chapel Hill**

FOR THE CONSTRUCTION OF A RECOVERY WELL SYSTEM on property owned by the above and located at Municipal Drive, Chapel Hill, North Carolina, Orange County. This permit is issued in accordance with the application received on February 09, 2006 and in conformity with specifications and supporting data, all of which are filed with the Department of Environment and Natural Resources and are considered a part of this permit.

This Permit is for **Well Construction Only** and does not waive any provision or requirement of any other applicable law or regulation.

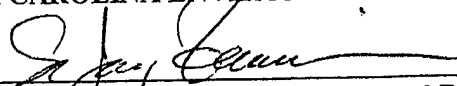
Construction of a well under this Permit shall be in compliance with the North Carolina Well Construction Regulations and Standards (15A NCAC 2C .0108), other State and Local laws and regulations pertaining to recovery well construction.

This permit will be effective from the date of its issuance until February 09, 2007 and shall be subject to other specified conditions, limitations, or exceptions as follows:

1. Issuance of this permit does not obligate reimbursement from state trust funds, if these wells are being installed as part of an investigation for contamination from an underground storage tank.
2. Issuance of this permit does not supersede any other agreement, permit, or requirement.
3. In the event that additional recovery wells are to be constructed on the subject property, this permit shall be valid for said well construction upon receipt of the following documentation:
  - a) Proof of notification to the appropriate property owner(s) stating intention to construct additional wells, the number of wells to be constructed, and signatures by the property owner(s) and subject applicant(s) or their agent(s).
  - b) Revised site map with information as required by the original well construction application.
  - c) Well construction diagram for additional wells with information as required by the original well construction application.

Permit issued this the 15th day of February 2006

**FOR THE NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION**

  
\_\_\_\_\_  
**S. Jay Zimmerman, L. G. Environmental Regional Supervisor**  
**Division of Water Quality**

By Authority of the Environmental Management Commission

Permit No. # **WR0500107**



March 8, 2006

Anna A. Wu  
Facilities Planning Department  
The University of North Carolina at Chapel Hill  
CB#1090 Giles F. Horney Building  
Chapel Hill, NC 27599-1090

**Subject:** Application for Zoning Compliance Permit – UNC Martin Luther King Jr. Blvd.  
(former Airport Road) Waste Disposal Area Remediation (File No. 7.29..1B)

Dear Ms. Wu:

The Town staff has reviewed the above application and finds the development proposed therein to be in general compliance with the Land Use Management Ordinance. I hereby approve the above application for a Zoning Compliance Permit with the conditions noted on the attached permit.

Construction and activity will not be allowed to deviate from approved plans dated November 4, 2005 and revised February 29, 2006. If you wish to revise the approved plans, you must first submit and have approved an application for Modification of Zoning Compliance Permit that includes the proposed revisions.

If you have not started construction or activity authorized by this approval within twelve (12) months of this date, the approval shall automatically expire and any permit issued pursuant to the approval shall be void.

Should you have questions, please call the Planning Department at 968-2728.

Sincerely,

A handwritten signature in black ink, appearing to read "J. B. Gupepper".

J. B. Gupepper  
Planning Director

cc: Lance Norris, Director of Chapel Hill Inspections Department  
George Small, Director of Chapel Hill Engineering Department  
Gene Poveromo, Development Coordinator  
Sue Burke, Town Stormwater Engineer  
Mike Taylor, Town Engineering Design Specialist  
Curtis Brooks, Town Urban Forester  
Larry Tucker, Senior Engineering Coordinator



**THIS CERTIFIES THAT A  
ZONING COMPLIANCE PERMIT  
HAS BEEN ISSUED TO**

Name of Applicant: University of North Carolina at Chapel Hill

Name of Development: Martin Luther King Jr. Blvd. (former Airport Road) Waste Disposal Area Remediation

For: Installation of groundwater monitoring wells and construction of a treatment building for the purpose of groundwater remediation as identified on the approved plans dated November 4, 2005 and revised February 28, 2006 on file at the Chapel Hill Planning Department.

Located at: Located on the Horace Williams property owned by the University north of Municipal Drive and west of Martin Luther King Jr. Boulevard and as identified as Chapel Hill Township Tax Map 29, Lot 1B.

**Conditions:**

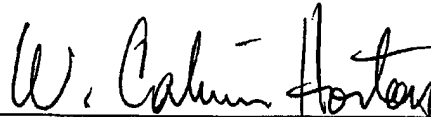
1. Following construction, all exposed disturbed areas will be seeded with straw to stabilize soils.

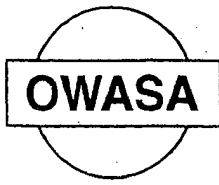
Reviewed / Approved by:  X  Administration Date 03/08/06

March 8, 2006  
(Date Issued)

  
Issued By J. B. Culpepper, Planning Director

Endorsed by:

  
W. Calvin Horton, Town Manager



# ORANGE WATER & SEWER AUTHORITY

*Quality Service Since 1977*

January 25, 2006

J. Laurence Daw, L.G.  
Geophysicist/Licensed Geologist  
The University of North Carolina at Chapel Hill  
Department of Environment, Health & Safety  
212 Finely Golf Course Road, CB# 1650  
Chapel Hill, NC 27517

Subject: Discharge Permit for Airport Road Waste Disposal Area, Permit #010

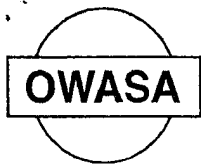
Dear Mr. Daw,

As discussed, we have approved your request to discharge groundwater from the Airport Road Waste Disposal Area, located in Chapel Hill, North Carolina for a period of five years beginning on June 1, 2006. This permit is renewable in accordance with Section 5.7 of the OWASA Sewer Use Ordinance, dated April 27, 1995 and Part II.R. of this permit.

Please contact me, if you have any questions at (919) 537-4206.

Sincerely,

Sandra F. Bradshaw  
Laboratory Manager, OWASA



**ORANGE WATER & SEWER AUTHORITY**

*Quality Service Since 1977*

**GROUNDWATER DISCHARGER PERMIT**

Issued by

**OWASA**

In compliance with the provisions of the Orange Water and Sewer Authority (OWASA) Sewer Use Ordinance, North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission and OWASA.

The University of North Carolina at Chapel Hill  
Department of Environment, Health & Safety  
212 Finley Golf Course Road, CB #1650  
Chapel Hill, North Carolina, 27517

PERMIT NUMBER 010

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



Airport Road Waste Disposal Area  
Chapel Hill, North Carolina 27516

into the OWASA Sanitary Sewer System in accordance with effluent limitations, monitoring requirements and other conditions set forth in the Supplement to Permit Cover Sheet Parts I, II, and III hereof.

This permit shall become effective June 1, 2006.

This permit and the authorization to discharge shall expire at midnight on May 31, 2011 and is renewable in accordance with Section 5.7 of the OWASA Sewer Use Ordinance, dated April 27, 1995 and Part II.R. of this permit.

Signed:

  
\_\_\_\_\_  
Ed Kerwin  
Executive Director  
OWASA 

Date:

1/23/06

## **SUPPLEMENT TO PERMIT COVER SHEET**

The University of North Carolina at Chapel Hill

is hereby authorized to:

1. Discharge the effluent from on-site groundwater monitoring wells installed at the Airport Road Waste Disposal Area (latitude: 35° 56' 18.0"N and longitude: 79° 03' 22.0"W), Chapel Hill, North Carolina into the manhole #47C4001 (see map attachment). The site consists of 2.75 acre wooded parcel of University property that is located adjacent to the entrance road for the Airport Road Inactive Sanitary Landfill. Manhole #47C4001 and the eight-inch sewer collection system are owned by OWASA and located adjacent to the site. Such discharge is treated at the Mason Farm Wastewater Treatment Plant (WWTP), NPDES Permit Number NC0025241.

**Part I. Effluent Limitations and Monitoring Requirements**

A. Description of Discharge

Pipe	Description
01	Discharge of contaminated groundwater after pre-treatment consisting of the following: a knockout pot into a settling tank followed by a shallow-tray air stripper subject to the limitations noted with this permit.

B. Effluent Limitations and Monitoring Requirements

Effective immediately and lasting until the expiration of this permit, the permittee shall meet the discharge limitations set forth below. Any condition not specified below shall be discharged in compliance with OWASA's Sewer Use Ordinance.

<i>Parameter</i>	<i>Maximum Daily Concentration</i> (at a WWTP flow of 8.0 MGD)	<i>Sample Type</i>	<i>Monitoring Frequency</i>
Flow (not to exceed)	43,200 gpd	Continuous	Monthly Average
Temperature (C)	NA	Instantaneous	Monthly
pH (SU)	NA	Grab	Monthly
<u>METAL (USEPA Method 1631E), ng/l</u>			
Mercury	50.0	Grab	Monthly
<u>METALS (USEPA Method 6010B), ug/l</u>			
Arsenic	16.0	Grab	Monthly
Chromium	50.0	Grab	Monthly
Copper	60.0	Grab	Monthly
Lead	49.0	Grab	Monthly
Zinc	535.0	Grab	Monthly
<u>VOC (USEPA Method 8260B, Level II Data Package), ug/l</u>			
Benzene	100.0	Grab	Monthly
Chloroform	100.0	Grab	Monthly
1,2-Dichloroethane	71.0	Grab	Monthly
Methylene chloride	930.0	Grab	Monthly
1,1,2,2-Tetrachloroethane	30.0	Grab	Monthly

Reports shall be completed and submitted on a monthly basis for the first year and quarterly thereafter.



C. Schedule of Compliance

**NOT APPLICABLE**

D. Monitoring and Reporting

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit (treatment system effluent sampling port at site, prior to entering manhole # 47C4001) and, unless otherwise specified, before the effluent joins or is diluted by any other wastestreams, or substance. Monitoring points shall not be changed without notification to and approval by, OWASA.

2. Reporting

Monitoring results obtained by the permittee and all other reports required herein shall be submitted to OWASA at the following address:

400 Jones Ferry Road  
PO Box 366  
Carrboro, NC 27510-0366  
ATTN: Laboratory Manager

If no discharge occurs during a reporting period as specified in Part 1.B, a report with the phrase "no discharge" shall be submitted.

3. Definitions

- a) A "composite or comp." sample, for monitoring requirements, is defined as a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and where possible, proportioned according to flow.
- b) A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.
- c) An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
- d) A "metered" flow reading is defined as a flow reading taken from a totalizing flow meter at the initiation of sampling and the completion of sampling to derive the volume of the discharge over a specific time period.
- e) A "continuous" flow reading is defined as a reading taken from a meter capable of recording flow over a sustained period of time with a totalizing recorder and/or a strip chart recorder.

4. Test Procedures

Test procedures for sample collection, preservation, and analysis of pollutants shall conform to regulations published pursuant to 40 CFR Part 136 under which such procedure may be required.

5. Monitoring by the Permittee

If the permittee, other than analyzing a split of a sample obtained by OWASA during its monitoring activities, samples and analyzes any pollutant at the location(s) designated herein, using approved analytical methods as specified above, the results of such monitoring shall be submitted to OWASA. OWASA may require more frequent monitoring or the monitoring of other pollutants not required in this permit by written notification.

If such sampling and analysis performed by the permittee indicates a violation, the permittee shall notify OWASA within 24 hours of becoming aware of the violation. The permittee shall also repeat the sampling and analysis and submit results of the repeat sampling to OWASA within 30 days of becoming aware of the violation.

6. Flow Monitoring

- a) The permittee shall install appropriate discharge flow measurement devices and methods consistent with approved scientific practices to ensure the accuracy and reliability of measurements of the volume of monitored discharges. Flow measurement devices selected shall be a continuous recording totalizing flow meter capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes. 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. No discharge shall commence until the flow monitoring equipment has been installed and is operational.
- b) The permittee shall calibrate and maintain all flow measurement devices to ensure the accuracy of the measurement. Flow measurement devices shall be calibrated annually, with documentation submitted to OWASA within 15 days after the calibration event.
- c) The permittee shall install an approved OWASA flow meter on the effluent line for purposes of sewer charges in accordance with rates and fees schedule adopted by OWASA. The meter shall be located outside of any security measures.

**Part II. General Conditions**

A. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of OWASA Sewer Use Ordinance and is grounds for possible enforcement action.

B. Duty to Mitigate – Prevention of Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health, the WWTP, the waters receiving the WWTP's discharge, or the environment.

C. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible, all control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Bypass of treatment facilities is prohibited except as provided for and in accordance with the requirement set forth by this permit. Bypass approval shall be given only when such bypass is in compliance with 40 CFR 403.17.

D. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from such materials from entering the sanitary sewer system. If the permittee contracts with any person or company for the handling of waste regulated under the Federal Resource Conservation and Recovery Act, the permittee shall identify the hazardous/toxic waste hauler to OWASA and notify the authority of any change in such hauler. Upon approval from OWASA, permittee may utilize anti-fouling compounds such as sodium sulfite, chelating agents, and/or dilute mineral acids to reduce fouling due to mineral deposition and/or biological growth in the air stripper.

E. Upset Conditions

An "upset" means an exceptional incident in which there is an unintentional and temporary noncompliance with the effluent limitations of this permit because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed or inadequate treatment facilities, lack of preventative maintenance, or careless or improper operations.

The permittee has the responsibility to provide notice to the Executive Director or his designees regarding upsets within 24 hours.

An upset may constitute an affirmative defense for action brought for the noncompliance. The permittee has the burden of proof to provide evidence and demonstrate that none of the factors specifically listed above were responsible for the noncompliance. (See Part III C)

F. Right of Entry

The permittee shall allow OWASA staff and/or their authorized representatives, upon the presentation of credentials:

1. To enter upon the permittee's premises where a real or potential discharge is located or in which records are required to be kept under the terms and conditions of this permit; and
2. At reasonable times to have access to and copy records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants as authorized by OWASA Ordinance provided that EPA and OSHA approved appropriate sampling and safety protocols are followed. OWASA staff and/or their authorized representatives shall comply with the permittee's site Health and Safety Plan.

G. Availability of Reports

The permittee shall retain records of all monitoring information, including all calibration and maintenance records as well as copies of reports and information used to complete the application for this permit for at least three years. All records that pertain to matters that are subject to any type of enforcement action shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired. Information submitted to OWASA as confidential will be treated in accordance with 40 CFR Part 2.

H. Duty to Provide Information

The permittee shall furnish to the Executive Director or his designee, within a reasonable time, any information which the Executive Director, his/her designee, or the Division of Water Quality 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, upon request, copies of records required to be kept by this permit. Information submitted to OWASA as confidential will be treated in accordance with 40 CFR Part 2.

I. Signatory Requirements

All reports or information submitted pursuant to the requirements of this permit must be signed and certified by a ranking official or duly authorized agent of the permittee.

J. Toxic Pollutants

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard prohibition) is established under Section 307 (a) of the Federal Clean Water Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit may be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

K. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

L. Federal and/or State Laws

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 established pursuant to any applicable Federal and/or State law or regulations.

M. Penalties for Violations of Permit Conditions

The OWASA Sewer Use Ordinance provides that any person who violates a permit condition is subject to a civil penalty not to exceed ten thousand dollars (\$10,000) per day of such violation, with each day as a separate violation. OWASA also reserves the right to revoke and/or permanently terminate this permit.

N. 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 to maintain compliance with the conditions of the permit.

O. Property Right

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 laws or regulations.

P. Severability

The provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

Q. Permit Modification, Revocation, Termination

This permit may be modified, revoked and reissued or terminated without cause.

R. Reapplication for Permit Renewal

The permittee is responsible for filing an application for reissuance of this permit 90 days prior to its expiration date.

S. Limitations of Permit Transfers

This permit shall not be reassigned or transferred or sold to a new owner, different premises, or a new or changed operation.

T. Dilution Prohibition

The permittee shall not increase the use of potable or process water or in any other way attempt to dilute the discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

U. Toxicity Reopener

This permit shall be modified, or alternatively, revoked and reissued, with new or modified pollutant limits based upon the scientifically validated determination by OWASA that discharges of pollutants by the permittee are causing effluent toxicity which exceeds any limitation contained in NPDES Permit Number NC0025241.

V. Categorical Standard Reopener

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 320 (b) (2) (C) and (D), 304 (b) (2), and 307 (a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved specifically requires compliance therewith by the permittee prior to the expiration of the permit and:

- (1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
- (2) controls any pollutant not limited in this permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

W. General Prohibitive Standards

The permittee shall comply with the general prohibitive discharge standards in 40 CFR 403.5 (a) and (b) of the Federal pretreatment regulations.

**Part III. Other Requirements**

A. Notification of Production Changes

The limits set forth in this permit were determined using WWTP headworks allocations and local Sewer Use Ordinance limits. The permittee shall notify OWASA immediately of any changes in production, process, generation of waste or disposal of waste, as well as any other activities that could affect the WWTP's ability to treat the waste.

B. Construction

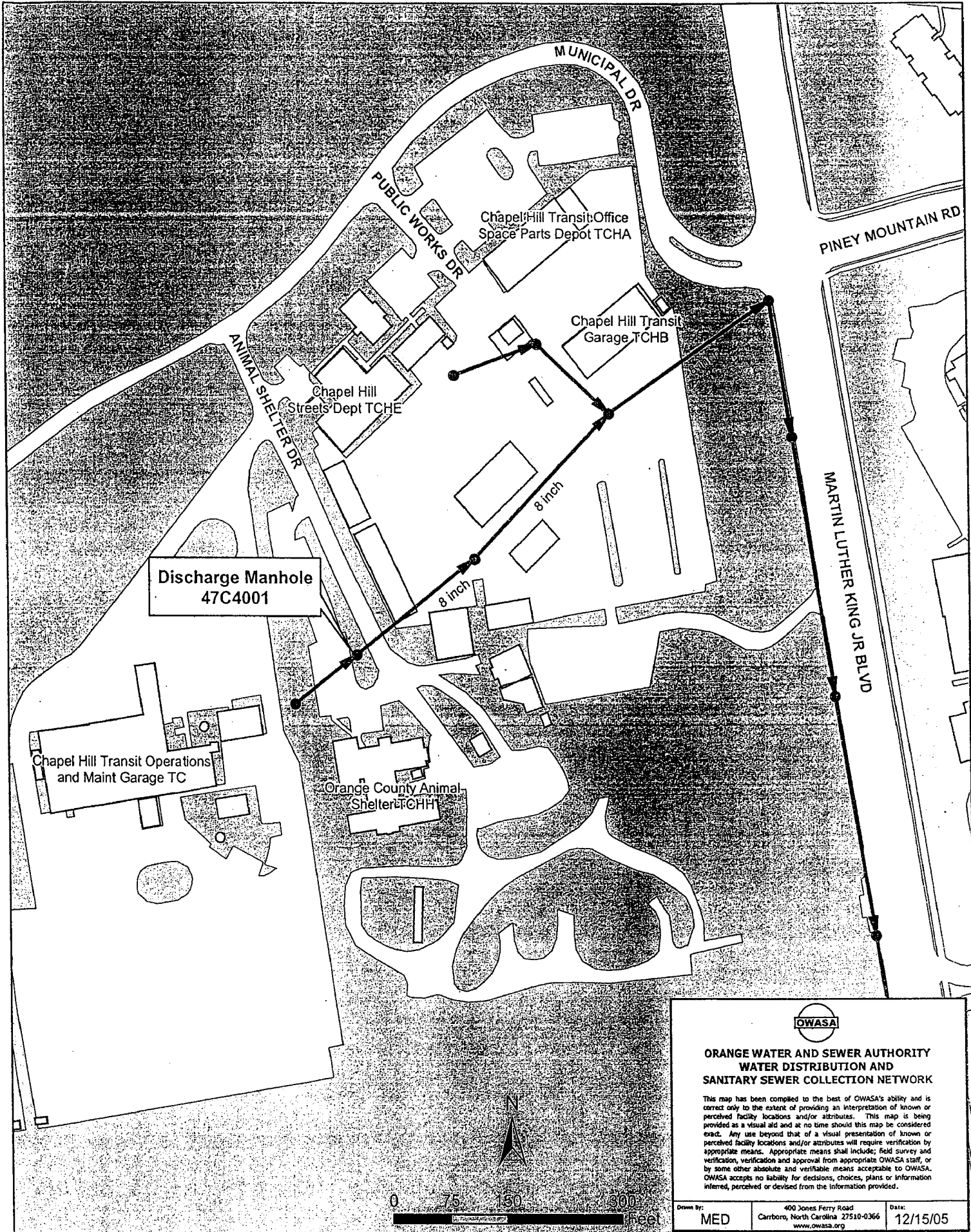
All construction of pretreatment facilities must meet all federal and/or state regulations.

C. Accidental Discharges

The permittee shall provide protection from accidental and/or slug discharges of prohibited materials or other substances regulated by this permit.

The permittee shall notify OWASA immediately of any known discharges that could reasonably be believed to cause problems at the WWTP, including any slug loading as defined by 40 CFR 403.5 (b). If the permittee experiences such a discharge, the permittee shall immediately inform OWASA [Tel. #919-929-4747 (WWTP main), #919-537-4357 (Wastewater Plant Manager), #919-537-4206 (Laboratory Manager)] upon becoming aware of the discharge. A written follow-up report thereof shall be submitted to OWASA by the permittee within five (5) days describing the cause of the discharge, to the extent that such cause can be determined, and measures taken, or which will be taken, to prevent similar future occurrences. Such notification shall not relieve the permittee from any liability which may be incurred as a result of the discharge.

# Airport Road Waste Disposal Site Discharge Location



**ORANGE WATER AND SEWER AUTHORITY  
WATER DISTRIBUTION AND  
SANITARY SEWER COLLECTION NETWORK**

This map has been compiled to the best of OWASA's ability and is correct only to the extent of providing an interpretation of known or perceived facility locations and/or attributes. This map is being provided as a visual aid and at no time should this map be considered exact. Any use beyond that of a visual presentation of known or perceived facility locations and/or attributes will require verification by appropriate means. Appropriate means shall include: field survey and verification, verification and approval from appropriate OWASA staff, or by some other absolute and verifiable means acceptable to OWASA. OWASA accepts no liability for decisions, choices, plans or information inferred, perceived or derived from the information provided.

Drawn By: <b>MED</b>	400 Jones Ferry Road Carrboro, North Carolina 27510-0366 <a href="http://www.owasa.org">www.owasa.org</a>	Date: <b>12/15/05</b>
-------------------------	---	--------------------------