



Fac/Perm/Co ID #	Date	Dist
57-03	10/21/09	8813

North Carolina Department of Environment and Natural Resources

Division of Water Quality

Coleen H. Sullins

Director

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

September 24, 2009

Mr. Jack Horton, County Manager  
County of Macon  
5 West Main Street  
Franklin, North Carolina 28734



**Subject:** Macon County  
Modified Permit Number WQ0022711  
Conjunctive Reclaimed Water System Permit  
at the Macon County Landfill  
Project Nos. E-SRG-T-02-0134, E-SRL-T-02-0051

Dear Mr. Horton:

In accordance with your permit application received August 20, 2009, we are forwarding herewith Permit No. WQ0022711, dated September 24, 2009, to the Macon County for the construction and operation of the subject reclaimed water generation and utilization facility. This permit operates in conjunction with NPDES Permit NC0021547 for the Town of Franklin wastewater treatment facility.

This permit shall be effective from the date of issuance until September 23, 2014, shall void Permit No. WQ0022711 issued March 13, 2007, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements listed in Attachments A, B and C. Failure to establish an adequate system for collecting and maintaining the required operational information will result in future compliance problems.

The following modifications to the subject permit are as follows: The reclaimed water wetted acreage has been reduced from 42.62 acres to 7.22 acres.

The Division of Waste Management, Solid Waste Section has issued Permit 57-03 for the operation of the Macon County Landfill. The Solid Waste Section has approved the modification of Permit 57-03 to allow for spray irrigation of reclaimed wastewater onto certain identified fields in the landfill (see attached letters from the Solid Waste Section dated October 26, 2006 and August 17, 2009). This permit shall become void if the Solid Waste Section terminates the spray irrigation modification of Permit 57-03. This permit cannot be altered in any way (with the exception of simple permit renewal) without prior approval from the Solid Waste Section.

If any parts, requirements or limitations contained in this permit are unacceptable, the Permittee has the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request shall 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 at 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

One (1) set of final approved plans and specifications is to be forwarded to you, one (1) set is being forwarded to your Engineer (A/E), one (1) set retained for the Asheville Regional Office, one (1) set retained for the Construction Inspection Group, and one (1) set retained for the Design Management Unit.

A copy of the approved plans and specifications shall be maintained on file by the owner for the life of the project.

If you need additional information concerning this matter, please contact Ken Pohlig, P.E., State Review Engineer, at (919) 715-6221 or Seth Robertson, P.E. at (919) 715-6206.

Sincerely,  
  
✓ Coleen H. Sullins

Attachment 1: Figure 1 - Spray Irrigation Map

Attachment 2: Letter from Division of Waste Management, Solid Waste Section, October 26, 2006

Attachment 3: Letter from Division of Waste Management, Solid Waste Section, August 17, 2009

kp:sr

cc: Michael J. Waresak, P.E., McGill Associates, Asheville, NC  
Macon County Health Department  
Division of Waste Management, Solid Waste Section (Attn: Edward Mussler, P.E.)  
Asheville Regional Office, DWQ, Aquifer Protection Section  
Asheville Regional Office, Division of Waste Management, Solid Waste Section  
DWQ, Aquifer Protection Program Section, Land Application Unit, Central Files  
DWQ, Aquifer Protection Program Section, Land Application Unit, LAU Files  
Mark Hubbard, P.E.  
Ken Pohlig, P.E.  
SRG  
SRL

**NORTH CAROLINA**  
**ENVIRONMENTAL MANAGEMENT COMMISSION**  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
**RALEIGH**  
**CONJUNCTIVE RECLAIMED WATER SYSTEM PERMIT**

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In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

**Macon County**

FOR THE

construction and operation of a 28,000 gpd reclaimed water generation facility at the Town of Franklin WWTP consisting of an effluent transfer pump station located at the chlorine contact basin with dual 60 gpm pumps, in-line disc filter rated at 100 gpm, a flowmeter, a turbidity meter, associated yard piping, approximately 288 linear feet of 3-inch and 6,200 linear feet of 4-inch reclaimed water force main, and an irrigation system consisting of 40 fixed 30-gpm sprinkler nozzles with irrigation onto 7.22 acres at the Macon County Landfill;

to serve Macon County with no discharge of wastes to the surface waters of the State, pursuant to the application received May 27, 2003, and modified application received August 20, 2009, and subsequent additional information received by the Division, and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until September 21, 2014, shall void Permit No. WQ0022711 issued March 13, 2007 and shall be subject to the following specified conditions and limitations:

## I. SCHEDULES

1. In accordance with 15A NCAC 02T .0116, upon completion of construction and prior to operation of this permitted facility, a certification (attached) shall be submitted from a licensed North Carolina Professional Engineer certifying that the permitted facility has been installed in accordance with this permit, Division approved plans and specifications, and other supporting documentation, including the location of all monitoring wells as applicable. If this project is to be completed in phases and partially certified, the Permittee shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Division of Water Quality, Aquifer Protection Section, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. The Asheville Regional Office, telephone number (828) 296-4500, shall be notified at least 48 hours in advance (excluding weekends and holidays) of operation of the installed facilities such that an in-place inspection can be made. Notification to the Aquifer Protection Section's regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
3. The Asheville Regional Office, telephone number (828) 296-4500, shall approve monitoring wells DWQ-MW-1 and DWQ-MW-2 prior to installation, and the monitoring wells shall be installed prior to beginning waste disposal operations. The regional office shall be notified at least 48 hours prior to the construction of any monitoring well, and such notification to the Aquifer Protection Section's regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays. The monitoring wells shall be constructed such that the water level in the well is never above or below the screened (open) portion of the well at any time during the year, and in accordance with 15A NCAC 02C .0108. The general location and name for each monitoring well is marked on Figure 1.
4. Within 60 days of completion of the monitoring wells, the Permittee shall submit two original copies of a site map with a scale no greater than 1-inch equals 100 feet; however, special provisions may be granted upon prior approval for large properties. At a minimum, the map shall include the following information:
  - a. The location and identity of each monitoring well.
  - b. The location of major components of the waste disposal system.
  - c. The location of property boundaries within 500 feet of the disposal areas.
  - d. The latitude and longitude of the established horizontal control monument.
  - e. The elevation of the top of the well casing (i.e., measuring point) relative to a common datum.
  - f. The depth of water below the measuring point at the time the measuring point is established.
  - g. The location of compliance and review boundaries.
  - h. The date the map is prepared and/or revised.

Control monuments shall be installed in such a manner and made of such materials that the monument will not be destroyed due to activities taking place on the property. The map and any supporting documentation shall be sent to the Division of Water Quality, Aquifer Protection Section, 1636 Mail Service Center, Raleigh, NC 27699-1636.

5. No later than six months prior to the expiration of this permit, the Permittee shall request renewal of this permit on official Division forms. Upon receipt of the request, the Division will review the adequacy of the facilities described therein, and if warranted, will renew the permit for such period of time and under such conditions and limitations as it may deem appropriate. Please note Rule 15A NCAC 02T .0105(d) requires an updated site map to be submitted with the permit renewal application.

## II. PERFORMANCE STANDARDS

1. The subject non-discharge facilities shall be effectively maintained and operated at all times so there is no discharge to surface waters, nor any contravention of groundwater or surface water standards. In the event the facilities fail to perform satisfactorily, including the creation of nuisance conditions due to improper operation and maintenance, or failure of the utilization areas to adequately assimilate the reclaimed water, the Permittee shall take immediate corrective actions including Division required actions, such as the construction of additional or replacement wastewater treatment or utilization facilities.
2. This permit shall not relieve the Permittee of their responsibility for damages to groundwater or surface water resulting from the operation of this facility.
3. All wells constructed for purposes of groundwater monitoring shall be constructed in accordance with 15A NCAC 02C .0108 (Standards of Construction for Wells Other than Water Supply), and any other jurisdictional laws and regulations pertaining to well construction.
4. Effluent limitations shall not exceed those specified in Attachment A.
5. Application rates, whether hydraulic, nutrient or other pollutant, shall not exceed those specified in Attachment B.
6. If the reclaimed water utilization system is automatically irrigated, the system shall be connected to a rain or moisture sensor that shall indicate when reclaimed water application is not appropriate in accordance with Conditions III.4. and III.5. of this permit.
7. The conjunctive use of reclaimed water permitted herein in no way negates, precludes, or invalidates the most recent reissuance of the Permittee's NPDES permit (NC0021547), and the Permittee shall continue to comply with all conditions provided for therein.
8. The following shall be requirements for the reclaimed water distribution, storage and utilization facilities:
  - a. All reclaimed water valves, storage facilities and outlets shall be tagged or labeled to warn the public or employees that reclaimed water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with reclaimed water.
  - b. All reclaimed water piping, valves, outlets and other appurtenances shall be color-coded, taped or otherwise marked to identify the source of the water as being reclaimed water.
    - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER – DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
    - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER – DO NOT DRINK." Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
    - iii. Existing underground distribution systems retrofitted for the purpose of distributing reclaimed water shall be taped or otherwise identified as noted above. This identification need not extend the entire length of the distribution system, but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.
  - c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.

- d. Above-ground hose bibs (i.e., spigots or other hand-operated connections) shall not be present. Hose bibs shall be located in locked below-grade vaults that shall be clearly labeled non-potable. As an alternative to the use of locked below-grade vaults with standard hose bibs services, hose bibs, which can only be operated by a special tool or connected to a special hose connection, may be placed in non-lockable underground services boxes clearly labeled non-potable.
9. The Permittee shall maintain an active cross-connection control program that shall have the following minimum requirements:
    - a. No direct cross-connections shall be allowed between the reclaimed water and potable water systems.
    - b. Where both reclaimed water and potable water are supplied to a reclaimed water utilization site, a reduced pressure principle backflow preventer, an approved air gap separation or other Division of Environmental Health approved device shall be installed at the potable water service connection to the use area. The installation of the reduced pressure principle backflow prevention device shall allow proper testing.
    - c. Where potable water is used to supplement a reclaimed water utilization system, the Permittee or potable water supplier shall approve and regularly inspect the air gap separation.
  10. Reclaimed water distribution lines shall be located 10 feet horizontally from and 18 inches below any water line where practicable. Where these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.
  11. Reclaimed water distribution lines shall not be less than 100 feet from a well unless the piping and integrity testing procedures meet water main standards in accordance with 15A NCAC 18C, but in no case shall they be less than 25 feet from a private well or 50 feet from a public well.
  12. Reclaimed water distribution lines shall meet the separation distances to sewer lines in accordance with Rule .0305 of Subchapter 02T.
  13. The compliance and review boundaries are established at the utilization area boundaries. Any exceedance of standards at the compliance or review boundary shall require action in accordance with 15A NCAC 02L .0106.
  14. The Permittee shall apply for a permit modification to establish a new compliance boundary prior to any sale or transfer of property affecting a compliance boundary.
  15. In accordance with 15A NCAC 02L .0107(d), no wells, excluding Division approved monitoring wells, shall be constructed within the compliance boundary except as provided for in 15A NCAC 02L .0107(g).
  16. Except as provided for in 15A NCAC 02L .0107(g), the Permittee shall ensure any landowner who is not the Permittee and owns land within the compliance boundary shall execute and file with the Macon County Register of Deeds an easement running with the land containing the following items:
    - a. A notice of the permit and number or other description as allowed in 15A NCAC 02L .0107(f)(1);
    - b. Prohibits construction and operation of water supply wells within the compliance boundary; and
    - c. Reserves the right of the Permittee or the State to enter the property within the compliance boundary for purposes related to the permit.

The Director may terminate the easement when its purpose has been fulfilled or is no longer needed.

17. The facilities permitted herein shall be constructed according to the following setbacks:
- a. The setbacks for reclaimed utilization sites permitted after September 1, 2006 shall be as follows (all distances in feet):
    - i. Surface waters not classified SA: 25
    - ii. Surface waters classified SA: 100
    - iii. Any well with exception to monitoring wells 100
  - b. The setbacks for storage and treatment units permitted after September 1, 2006 shall be as follows (all distances in feet):
    - i. Any habitable residence or place of public assembly under separate ownership: 100
    - ii. Any private or public water supply source: 100
    - iii. Surface waters: 50
    - iv. Any well with exception of monitoring wells: 100
    - v. Any property line: 50

### **III OPERATION AND MAINTENANCE REQUIREMENTS**

1. The facilities shall be properly maintained and operated at all times. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility. The Permittee shall maintain an Operation and Maintenance Plan pursuant to 15A NCAC 02T .0913, which at a minimum shall include operational functions, maintenance schedules, safety measures and a spill response plan.
2. Upon the Water Pollution Control System Operators Certification Commission's (WPCSOCC) classification of the subject non-discharge facilities, in accordance with 15A NCAC 08G .0200 the Permittee shall designate and employ a certified operator in responsible charge (ORC) and one or more certified operator(s) as back-up ORC(s). The ORC or their back-up shall visit the facilities in accordance with 15A NCAC 08G .0200, and shall comply with all other conditions specified in the previously cited rules.
3. A suitable year round vegetative cover shall be maintained at all times, such that crop health is optimized, allows for even distribution of reclaimed water and allows inspection of the utilization system.
4. Adequate measures shall be taken to prevent reclaimed water ponding in or runoff from the utilization sites listed in Attachment B.
5. Utilization shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff.
6. All utilization equipment shall be tested and calibrated at least once per permit cycle. Calibration records shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request.
7. Only reclaimed water from Town of Franklin wastewater treatment facility shall be utilized on the sites listed in Attachment B.
8. Public access to the reclaimed water utilization sites shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site. Public access to the wastewater treatment facilities shall be prohibited.

9. The residuals generated from the wastewater treatment facilities shall be disposed or utilized in accordance with 15A NCAC 02T .1100. The Permittee shall maintain a residual management plan pursuant to 15A NCAC 02T .0914.
10. Diversion or bypassing of untreated or partially treated wastewater from the treatment facilities is prohibited.
11. Diversion or bypassing of untreated or partially treated wastewater from the treatment facilities is prohibited, unless diverted to an alternate treatment or collection system.
12. A protective vegetative cover shall be established and maintained on all earthen embankments (i.e., outside toe of embankment to maximum allowable temporary storage elevation on the inside of the embankment), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen dikes or embankments. Earthen embankment areas shall be kept mowed or otherwise controlled and accessible.
13. An education program shall be developed and implemented to inform reclaimed water users of the proper use of reclaimed water. Educational material shall be provided to all facilities provided with reclaimed water, and these materials shall be maintained consistent with the reclaimed water uses. All educational materials shall be made available to the Division upon request.

#### **IV. MONITORING AND REPORTING REQUIREMENTS**

1. Any Division required monitoring (including groundwater, plant tissue, soil and surface water analyses) necessary to ensure groundwater and surface water protection shall be established, and an acceptable sampling reporting schedule shall be followed.
2. Per 15A NCAC 02H .0800, a Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater or surface water parameters.
3. Flow through the treatment facility shall be continuously monitored, and daily flow values shall be reported on Form NDMR.

The Permittee shall install and maintain an appropriate flow measurement device to ensure the accuracy and reliability of flow measurement consistent with accepted engineering and scientific practices. Selected flow measurement devices shall be capable of measuring flows with a maximum deviation of less than ten percent from true flow; accurately calibrated at a minimum of once per year; and maintained to ensure the accuracy of measurements is consistent with the selected device's accepted capability. The Permittee shall maintain records of flow measurement device calibration on file for a period of at least five years. At a minimum, documentation shall include:

- a. Date of flow measurement device calibration,
  - b. Name of person performing calibration, and
  - c. Percent from true flow.
4. Flow distributed to the conjunctive reclaimed water system shall be continuously monitored, and daily flow values shall be reported on Form NDMR.

The Permittee shall install and maintain an appropriate flow measurement device to ensure the accuracy and reliability of flow measurement consistent with accepted engineering and scientific practices. Selected flow measurement devices shall be capable of measuring flows with a maximum deviation of less than ten percent from true flow; accurately calibrated at a minimum of once per year; and maintained to ensure the accuracy of measurements is consistent with the selected device's accepted capability. The Permittee shall maintain records of flow measurement device calibration on file for a period of at least five years. At a minimum, documentation shall include:

- a. Date of flow measurement device calibration,
  - b. Name of person performing calibration, and
  - c. Percent from true flow.
5. The Permittee shall monitor the effluent from the subject facilities at the frequencies and locations for the parameters specified in Attachment A.
6. The Permittee shall maintain adequate records tracking the amount of reclaimed water distributed or utilized. At a minimum, these records shall include the following information for each utilization site listed in Attachment B:
- a. Date of distribution or utilization;
  - b. Volume of reclaimed water distributed or utilized (i.e., monthly total); and
  - c. Weather conditions (for irrigation sites owned or operated by the Permittee only).
7. Three copies of all monitoring data (as specified in Conditions IV.3. and IV.4.) on Form NDMR for each PPI and three copies of all operation and disposal records (as specified in Condition IV.5) on Form NDAR-3 for every site in Attachment B shall be submitted on or before the last day of the following month. If no activities occurred during the monitoring month, monitoring reports are still required documenting the absence of the activity. All information shall be submitted to the following address:

Division of Water Quality  
Information Processing Unit  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

8. A record shall be maintained of all residuals removed from this facility. This record shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this record shall include:
- a. Name of the residuals hauler;
  - b. Non-Discharge permit number authorizing the residuals disposal, or a letter from a municipality agreeing to accept the residuals;
  - c. Date the residuals were hauled; and
  - d. Volume of residuals removed.
9. A maintenance log shall be maintained at this facility. This log shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this log shall include:
- a. Date of calibration of flow measurement device;
  - b. Visual observations of the plant and plant site; and
  - c. Record of preventative maintenance (e.g., changing of equipment, adjustments, testing, inspections and cleanings, etc.).
10. A reclaimed water user inspection log shall be maintained at this facility. This log shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this log shall include:
- a. Visual observations of the reclaimed water user facilities; and
  - b. Record of preventative maintenance (e.g., pump and valve maintenance, cross connection control, etc.).

11. Monitoring wells shall be sampled after construction and within 3 months prior to initiating non-discharge utilization operations. Monitoring wells shall be sampled thereafter at the frequencies and for the parameters specified in Attachment C. All mapping, well construction forms, well abandonment forms and monitoring data shall refer to the permit number and the well nomenclature as provided in Attachment C and Figure 1.
12. For initial sampling of monitoring wells, the Permittee shall submit a Compliance Monitoring Form (GW-59) and a Well Construction Record Form (GW-1) listing this permit number and the appropriate monitoring well identification number. Initial Compliance Monitoring Forms (GW-59) without copies of the Well Construction Record Forms (GW-1) are deemed incomplete, and may be returned to the Permittee without being processed.
13. Two copies of the monitoring well sampling and analysis results shall be submitted on a Compliance Monitoring Form (GW-59), along with attached copies of laboratory analyses, on or before the last working day of the month following the sampling month. The Compliance Monitoring Form (GW-59) shall include this permit number, the appropriate well identification number, and one GW-59a certification form shall be submitted with each set of sampling results. All information shall be submitted to the following address:

Division of Water Quality  
Information Processing Unit  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

**14. Noncompliance Notification:**

The Permittee shall report by telephone to the Asheville Regional Office, telephone number (828) 296-4500, 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 facility resulting in the treatment of significant amounts of wastes that is abnormal in quantity or characteristic, including the known passage of a hazardous substance.
- b. Any process unit failure (e.g., mechanical, electrical, etc.), due to known or unknown reasons, rendering the facility incapable of adequate wastewater treatment.
- c. Any facility failure resulting in a by-pass directly to receiving surface waters.
- d. Any time self-monitoring indicates the facility has gone out of compliance with its permit limitations.
- e. Ponding in or runoff from the utilization sites.

Any emergency requiring immediate reporting (e.g., discharges to surface waters, imminent failure of a storage structure, etc.) outside normal business hours shall be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to be taken to ensure the problem does not recur.

**V. INSPECTIONS**

1. The Permittee shall provide adequate inspection and maintenance to ensure proper operation of the wastewater treatment and utilization facilities.

2. The Permittee or their designee shall inspect the wastewater treatment and utilization facilities to prevent malfunctions, facility deterioration and operator errors resulting in discharges, which may cause the release of wastes to the environment, a threat to human health or a public nuisance. The Permittee shall maintain an inspection log that includes, at a minimum, the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken. The Permittee shall maintain this inspection log for a period of five years from the date of the inspection, and this log shall be made available to the Division upon request.
3. Any duly authorized Division representative may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the wastewater treatment and utilization facilities permitted herein at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records required to be maintained under the terms and conditions of this permit, and may collect groundwater, surface water or leachate samples.

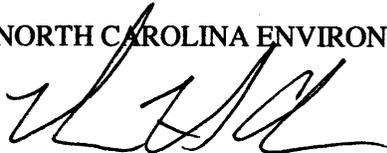
## **VI. GENERAL CONDITIONS**

1. Failure to comply with the conditions and limitations contained herein may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.
2. This permit shall become voidable if the permitted facilities are not constructed in accordance with the conditions of this permit, the Division approved plans and specifications, and other supporting documentation.
3. This permit is effective only with respect to the nature and volume of wastes described in the permit application, Division approved plans and specifications, and other supporting documentation. No variances to applicable rules governing the construction or operation of the permitted facilities are granted, unless specifically requested and approved in this permit pursuant to 15A NCAC 02T .0105(n).
4. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other jurisdictional government agencies (e.g., local, state, and federal). Of particular concern to the Division are applicable river buffer rules in 15A NCAC 02B .0200; erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000; any requirements pertaining to wetlands under 15A NCAC 02B .0200 and 02H .0500; and documentation of compliance with Article 21 Part 6 of Chapter 143 of the General Statutes.
5. In the event the permitted facilities change ownership or the Permittee changes their name, a formal permit modification request shall be submitted to the Division. This request shall be made on official Division forms, and shall include appropriate property ownership documentation and other supporting documentation as necessary. The Permittee of record shall remain fully responsible for maintaining and operating the facilities permitted herein until a permit is issued to the new owner.
6. The Permittee shall retain a set of Division approved plans and specifications for the life of the facilities permitted herein.
7. The Permittee shall maintain this permit until all permitted facilities herein are properly closed or permitted under another permit issued by the appropriate permitting authority pursuant to 15A NCAC 02T .0105(j).
8. This permit is subject to revocation or unilateral modification upon 60 days notice from the Division Director, in whole or part for the requirements listed in 15A NCAC 02T .0110.

9. Unless the Division Director grants a variance, expansion of the permitted facilities contained herein shall not be granted if the Permittee exemplifies any of the criteria in 15A NCAC 02T .0120(b).
10. The Permittee shall pay the annual fee within 30 days after being billed by the Division. Failure to pay the annual fee accordingly shall be cause for the Division to revoke this permit pursuant to 15A NCAC 02T .0105(e)(3).
11. This permit shall become voidable unless the agreement between Macon County and the Town of Franklin for the transfer of treated wastewater is in full force and effect.

Modified permit issued this the 24<sup>th</sup> day of September 2009

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



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z Coleen H. Sullins, Director  
Division of Water Quality  
By Authority of the Environmental Management Commission

**Modified Permit Number WQ0022711**

Modified Permit No. WQ0022711, Issued September 24, 2009  
 Macon County  
 Conjunctive Reclaimed Water System Permit at the Macon County Landfill

**ENGINEERING CERTIFICATION**

Partial     Final

In accordance with 15A NCAC 02T .0116, I, \_\_\_\_\_,  
 as a duly registered Professional Engineer in the State of North Carolina, having the Permittee's  
 authorization to  periodically  weekly  fully observe the construction of the permitted facility,  
 hereby state to the best of my abilities that due care and diligence was used in the observation of the  
 construction, such that the facility was built within substantial compliance and intent of this permit, the  
 Division approved plans and specifications, and other supporting documentation.

Any variation to this permit, the Division approved plans and specifications, and other supporting  
 documentation has been documented in the attached as-built drawings, and shall serve as the  
 Permittee's minor modification request to amend the permit accordingly.

Provide a brief narrative description of any variations: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Professional Engineer's Name			
Engineering Firm			
Mailing Address			
City	State	Zip	
Telephone	E-mail		
NC PE Seal, Signature & Date			

**THE COMPLETED ENGINEERING CERTIFICATION, INCLUDING ALL SUPPORTING  
 INFORMATION AND MATERIALS, SHALL BE SENT TO THE FOLLOWING ADDRESS:  
 NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
 DIVISION OF WATER QUALITY  
 CONSTRUCTION GRANTS & LOANS SECTION**

By U.S. Postal Service:  
 1633 MAIL SERVICE CENTER  
 RALEIGH, NORTH CAROLINA 27699-1633

By Courier/Special Delivery:  
 2728 CAPITAL BOULEVARD  
 RALEIGH, NORTH CAROLINA 27604





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**ATTACHMENT C – GROUNDWATER MONITORING AND LIMITATIONS**

**Permit Number: WQ0022711**

**Version: 1.1**

**Monitoring wells: DWQ-MW-1, DWQ-MW-2**

GROUNDWATER CHARACTERISTICS		GROUNDWATER STANDARDS		MONITORING REQUIREMENTS		
Parameter Description - Parameter Code	Daily Maximum	Frequency Measurement	Sample Type	Footnotes		
Water level, distance from measuring point - 82546		3 X Year	Calculated	1,2,3		
pH - 00400	6.5-8.5	3 X Year	Grab	1,2		
Coliform, Fecal MF, M-FC Broth,44.5C - 31616		3 X Year	Grab	1		
Carbon, Tot Organic (TOC) - 00680		3 X Year	Grab	1,6		
Chloride (as Cl) - 00940	250	3 X Year	Grab	1		
Nitrogen, Ammonia Total (as N) - 00610		3 X Year	Grab	1		
Nitrogen, Nitrate Total (as N) - 00620	10	3 X Year	Grab	1		
Solids, Total Dissolved - 70295	500	3 X Year	Grab	1		
Volatile Compounds, (GC/MS) - 78732		Annually	Grab	1,4,5		

1. 3 x Year monitoring shall be conducted in March, July & November; Annual monitoring shall be conducted every November.
2. The measurement of water levels shall be made prior to purging the wells. The depth to water in each well shall be measured from the surveyed point on the top of the casing. The measurement of pH shall be made after purging and prior to sampling for the remaining parameters.
3. The measuring points (top of well casing) of all monitoring wells shall be surveyed to provide the relative elevation of the measuring point for each monitoring well. The measuring points (top of casing) of all monitoring wells shall be surveyed relative to a common datum.
4. Volatile Organic Compounds (VOC) - In November only, analyze by one of the following methods:
  - a. Standard Method 6230D, PQL at 0.5 µg/L or less
  - b. Standard Method 6210D, PQL at 0.5 µg/L or less
  - c. EPA Method 8021, Low Concentration, PQL at 0.5 µg/L or less
  - d. EPA Method 8260, Low Concentration, PQL at 0.5 µg/L or less
  - e. Another method with prior approval by the Aquifer Protection Section Chief

Any method used must meet the following qualifications:

  - a. A laboratory must be DWQ certified to run any method used.
  - b. The method used must, at a minimum, include all the constituents listed in Table VIII of Standard Method 6230D.
  - c. The method used must provide a PQL of 0.5 µg/L or less that must be supported by laboratory proficiency studies as required by the DWQ Laboratory Certification Unit. Any constituents detected above the MDL but below the PQL of 0.5 µg/L must be qualified (estimated) and reported.
5. If any volatile organic compounds (VOC) are detected as a result of monitoring as provided in Attachment C, then the Asheville Regional Office Aquifer Protection Supervisor, telephone number (828) 296-4500, must be contacted immediately for further instructions regarding any additional follow-up analyses required.
6. If TOC concentrations greater than 10 mg/l are detected in any downgradient monitoring well, additional sampling and analysis must be conducted to identify the individual constituents comprising this TOC concentration. If the TOC concentration as measured in the background monitor well exceeds 10 mg/l, this concentration will be taken to represent the naturally occurring TOC concentration. Any exceedances of this naturally occurring TOC concentration in the downgradient wells shall be subject to the additional sampling and analysis as described above.
7. Monitoring wells shall be reported consistent with the nomenclature and location information provided in Figure 1 and this attachment.



**North Carolina Department of Environment and Natural Resources**

Dexter R. Matthews, Director

Division of Waste Management  
Solid Waste Section

Michael F. Easley, Governor  
William G. Ross Jr., Secretary

October 26, 2006

Mr. Sam K. Greenwood, Manager  
Macon County  
Macon County Courthouse Annex  
5 West Main Street  
Franklin, NC 28734

Re: Modification to the Permit, Spray Irrigation of Wastewater  
Macon County Municipal Solid Waste Landfill, Permit Number 57-03, Doc ID# RCO547

Dear Mr. Greenwood:

This letter is in response to your request to modify the permit for the referenced landfill to allow the spray irrigation of wastewater from the adjacent Town of Franklin Wastewater Treatment Plant. The plan is to utilize only future Cell 3 for the spray irrigation site and not to use any portions of the active Cells 1 or 2. The portable spray irrigation system will be installed above ground and will be removed prior to use of this area as a landfill.

By copy of this letter, the Solid Waste Section (Section) hereby issues the Modification to the Permit to allow the use of the portable spray irrigation system in accordance with the Approved Plan.

Please note that from the Section's perspective, Macon County as the landfill owner/operator is responsible for ensuring compliance with 15A NCAC 13B, Section .1600 Requirements for Municipal Solid Waste Landfill Facilities. Under these rules, any increase above background detected in the ground water monitoring wells for the landfill automatically trigger assessment monitoring and, if required, corrective action. If Macon County as owner/operator of the landfill believes that the contamination is from the spray irrigation system, a demonstration will have to be made that a source other than the landfill caused the increase above background or the County will be required to initiate assessment monitoring in accordance with 15A NCAC 13B Rules .1634-.1638.

It is important to note that the use of the spray irrigation system in an area proposed for future landfill disposal could effect the development of that phase. A significant part of the permit application for landfill expansion into Cell 3 will be a site characterization, which will include an assessment of the ground water quality in Cell 3. If the spray irrigation system has impacted

Mr. Sam Greewood  
Permit Modification  
October 26, 2006  
Page 2

groundwater in the proposed area, an assessment will be required. It is important to note that the results of this assessment could significantly impact the use of this cell for landfill expansion.

If you have any questions, please call Jim Coffey, phone number 828-296-4703 at the Asheville Regional Office.

Sincerely,



Edward F. Mussler, III, P.E.,  
Permitting Branch Supervisor  
Solid Waste Section

Edward F. Mussler III  
CN = Edward F. Mussler III, C =  
US, O = Division of Waste  
Management, OU = Solid Waste  
Section  
I have reviewed this document  
and I am approving this document  
2006.10.26 08:40:57 -04'00'

cc. Jim Coffey  
Jim Patterson  
Chris Stahl, Macon County Solid Waste  
Mike Waresak, Mark Cathey, McGill Associates



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Beverly Eaves Perdue	Dexter R. Matthews	Dee Freeman
Governor	Director	Secretary

August 17, 2009

Mr. Chris Stahl  
Macon County Solid Waste Director  
109 Sierra Drive  
Franklin, North Carolina 28734

Subject: Authorization – Spray Irrigation System Revision  
Macon County MSW Landfill  
Macon County, Permit #57-03, Document ID No. 8230

Mr. Stahl:

The Division of Waste Management, Solid Waste Section (Section) received an email (DIN8229) requesting a change in the permitted spray irrigation system. The request was submitted on your behalf by McGill Associates and was received in the Asheville Regional Office on August 10, 2009.

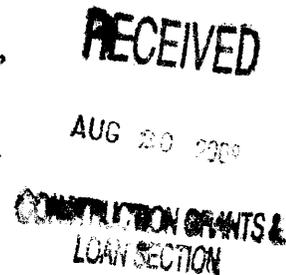
The email request proposes a reduction in the area to be utilized for spray irrigation from the previously permitted 40 acres to approximately 7.2 acres. In addition, the request proposes changing from aluminum pipe on top of the soil to buried PVC pipe. This letter authorizes the changes as presented. Exclusive of these changes, the spray irrigation system must meet all other requirements of the approved plan and permit modification. You must notify the Section if the proposed activity changes significantly from the information submitted.

If you should have any questions regarding this matter please contact me at (828) 296-4703, or by email at [allen.gaither@ncdenr.gov](mailto:allen.gaither@ncdenr.gov).

Sincerely,

Allen Gaither  
Environmental Engineer

Cc: Mike Waresak – McGill Associates  
Jeff Bishop – McGill Associates  
Troy Harrison – SWS/ARO



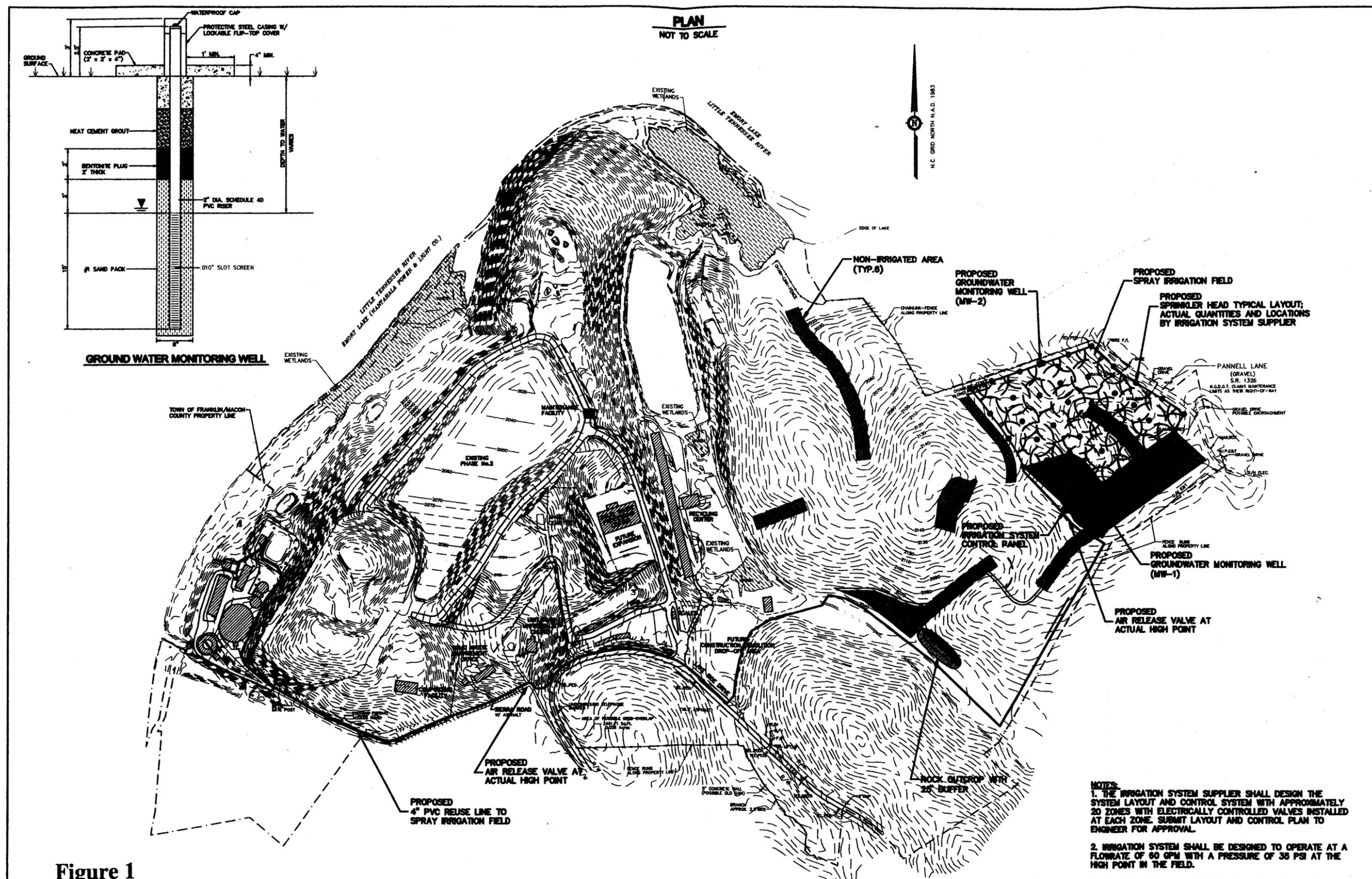


Figure 1

Macon County  
 Conjunctive Reclaimed Water System Permit at the Macon County Landfill  
 Permit WQ0022711

- NOTES:
1. THE IRRIGATION SYSTEM SUPPLIER SHALL DESIGN THE SYSTEM LAYOUT AND CONTROL SYSTEM WITH APPROXIMATELY 20 ZONES WITH ELECTRICALLY CONTROLLED VALVES INSTALLED AT EACH ZONE. SUBMIT LAYOUT AND CONTROL PLAN TO ENGINEER FOR APPROVAL.
  2. IRRIGATION SYSTEM SHALL BE DESIGNED TO OPERATE AT A FLOWRATE OF 60 GPM WITH A PRESSURE OF 36 PSI AT THE HIGH POINT IN THE FIELD.
  3. CONTRACTOR SHALL FURNISH AND INSTALL 3" SDR 21 PVC PIPE INSIDE THE IRRIGATION FIELD BURIED A MINIMUM OF 3' DEEP WITH FITTINGS AND VALVES AS REQUIRED. QUANTITIES AND LOCATIONS TO BE DETERMINED BY IRRIGATION SYSTEM SUPPLIER.

NO.	DATE	BY	REVISION DESCRIPTION
4	7/08	M/JW	REVISED IRRIGATED AREA AND FORCE MAIN LOCATION
3	10/06	M/JW	REVISED MONITORING WELL LOCATIONS PER MCDWQ COMMENTS
2	8/06	M/JW	STATE REVIEW COMMENTS
1	5/03	M/JW	REVISED LAYOUT AND STATE REVIEW COMMENTS