



BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

**REPORT OF PIEZOMETER ABANDONMENT
FOR THE PHASE 3 EXPANSION**

**MACON COUNTY MSW LANDFILL
FRANKLIN, NORTH CAROLINA
FACILITY PERMIT NUMBER 57-03**

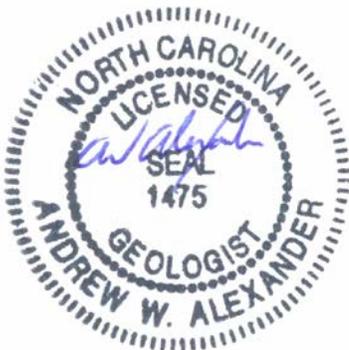
PREPARED FOR:



**MACON COUNTY, NORTH CAROLINA
SOLID WASTE MANAGEMENT DEPARTMENT
FRANKLIN, NORTH CAROLINA**

PREPARED BY:

**BUNNELL-LAMMONS ENGINEERING, INC.
GREENVILLE, SOUTH CAROLINA
ASHEVILLE, NORTH CAROLINA**



MAY 6, 2016

BLE PROJECT NUMBER J16-1101-14



May 6, 2016

Macon County Solid Waste Management Department
109 Sierra Drive
Franklin, NC 28734

Attention: Mr. M. Chris Stahl
Director

**Subject: Report of Piezometer Abandonment for the Phase 3 Expansion
Macon County MSW Landfill**
Franklin, North Carolina
Facility Permit Number 57-03
BLE North Carolina Business License C-1538
BLE Project Number J16-1101-14

Dear Mr. Stahl:

As authorized by Macon County's acceptance of our Proposal Number P15-1002R3 dated January 28, 2016, Bunnell-Lammons Engineering, Inc. (BLE) has performed required piezometer abandonment services at the subject site. The purpose of the work was to abandon the piezometers as part of the landfill expansion in the Phase 3 area. The enclosed report describes the work performed and presents the results obtained.

As directed by McGill Associates, twenty-six (26) piezometers (BLE-1 through BLE-9, BLE-11 through BLE-20, BLE-24, BLE-26, B-6R, B-16R, B-18R, BLE-25S, and BLE 25D) were permanently abandoned at the subject site from March 1 to 13, 2016. A site location map (**Figure 1**) and a well abandonment plan (**Figure 2**) are attached.

Please note that PT-1 (**Figure 2**) was a steel tube driven into the shallow stream bed sediments (i.e. piezotube). The steel tube was removed by hand by BLE personnel. This point does not require abandonment by grouting but is shown as abandoned on **Figure 2**.

Piezometer abandonments were performed by North Carolina licensed driller (Registration #3485-A) in general accordance with the abandonment requirements in the *Water Quality Monitoring Plan Landfill Phases 1, 2, and 3 (Cell 1)* dated June 2, 2015 (BLE Project No. J15-1101-10). The plan was approved by the DWM on August 20, 2015 (DIN 24844).

Selected piezometers that were within or near the proposed footprint waste units in Phase 3 were over-drilled to remove well construction materials, and then grouted with a flexible bentonite-cement grout. We understand from our conversations with the DWM that the flexible bentonite-cement grout is suitable for grouting boreholes within future cell footprints to the surface. Those 24 piezometers included BLE-1 through BLE-9, BLE-11 through BLE-20, BLE-24, BLE-26, B-6R, B-16R, and B-18R.



Other piezometers that potentially interfered with clearing and construction activities were abandoned by grouting the well in place with a flexible bentonite-cement grout and removing all surface features, such as concrete aprons, protective casings, and stickups. Those 2 piezometers included BLE-25S and BLE-25D.

In each case, the flexible bentonite-cement grout was continuously placed from the bottom of the borehole/piezometer upward via tremie pipe. Piezometers which were installed into bedrock were over drilled to the top of bedrock (auger refusal), well materials were be removed and the resulting borehole was grouted. Bedrock sections of piezometers were not over drilled.

Over drilling was performed using a hollow stem auger, mud rotary bull bit, or auger driven blade. All over drilling methods resulted in a 6.25-inch diameter borehole. Specific abandonment procedures for each well are documented on the abandonment records (**Appendix A**).

Please note that seven (7) piezometers were not abandoned as part of this phase of work. Those piezometers include BLE-21, BLE-22, BLE-23, BLE-27, BLE-28, BLE-29S, and BLE-29D which are within the Phase 3 area and/or on the former Dalton or Burling properties (**Figure 2**). Also note that the Burling water supply well was not abandoned as part of this work.

We appreciate the opportunity to serve as your environmental consultant on this project. Please contact us at (864) 288-1265 if you have any questions or comments regarding this report.

Sincerely,
BUNNELL-LAMMONS ENGINEERING, INC.


Andrew W. Alexander, P.G., RSM
Senior Hydrogeologist
Registered, NC No. 1475




Mark S. Preddy, P.G.
Senior Hydrogeologist
Registered, NC No. 1043

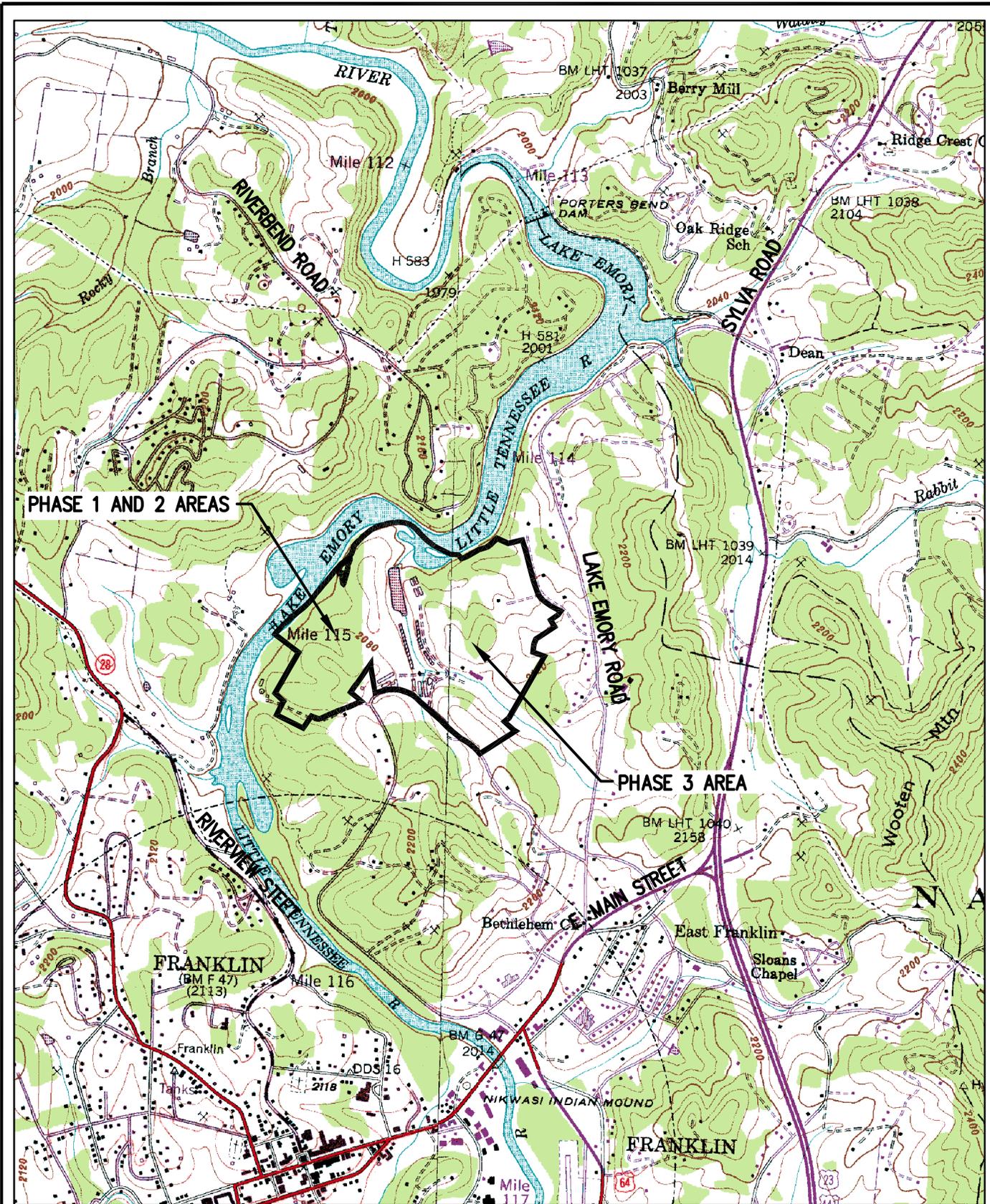


cc: Mr. Mark Cathey, PE – McGill Associates

Attachments: Figures
Appendix A

e:\awa projects\mcgill\macon county landfill\1101-14 piezometer abandonments\final mclf piezometer abandonment 1101-14.docx

FIGURES



NOTE:
ALL BOUNDARIES
ARE APPROXIMATE.

REFERENCE:
USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES,
CORBIN KNOB AND FRANKLIN, N.C. QUADRANGLES,
PHOTOREVISED 1978.

DRAWN:	ACE	DATE:	05-05-16
CHECKED:	AWA	CAD:	MACONCOLF14-SLM
APPROVED:	AWA	JOB NO:	J16-1101-14

IBLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
 6004 PONDERS COURT
 GREENVILLE, SOUTH CAROLINA 29615
 PHONE: (864)288-1265 FAX: (864)288-4430

SITE LOCATION MAP
 MACON COUNTY MSW LANDFILL
 FRANKLIN, NORTH CAROLINA

FIGURE
1



No.	REVISIONS DESCRIPTION	BY

DRAWN: ACE DATE: 05-05-16
 CHECKED: AWA CAD FILE: MACOLNCF-14PLAN
 APPROVED: AWA JOB NO: J16-1101-14



BUNNELL-LAMMONS ENGINEERING, INC.
 6004 POWERS COURT
 GREENVILLE, SOUTH CAROLINA 29615
 PHONE: (864)258-1266 FAX: (864)258-4450

PIEZOMETER ABANDONMENT PLAN
 MACON COUNTY MSW LANDFILL
 FRANKLIN, NORTH CAROLINA

APPENDIX A
ABANDONMENT RECORDS

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: **3/8/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20404 N **83.37598** W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **BLE-1**

6b. Total well depth: **64.9** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **58.60** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **10.2 ft3**

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing. Borehole tremie grouted with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/8/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #:

DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/9/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20375 N 83.37473 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-2

6b. Total well depth: 53.9 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 48.61 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 8.3 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling casing and removing. Borehole tremie grouted with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/9/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 5.1 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling casing and tremie grouted the bolehole with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/9/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

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1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

4. Date well(s) abandoned: 3/9/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20321 N 83.37412 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-3

6b. Total well depth: 24.0 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 13.60 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under 7g)

4. Date well(s) abandoned: **3/7/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35.20203 N **83.37405** W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **BLE-4**

6b. Total well depth: **49.9** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **38.40** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout Bentonite Chips or Pellets
- Sand Cement Grout Dry Clay
- Concrete Grout Drill Cuttings
- Specialty Grout Gravel
- Bentonite Slurry Other (explain under 7g)

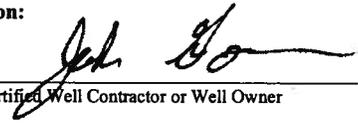
7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **8.5 ft3**

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling, removing the casing and screen and tremie grouting the borehole with 5% Bentonite cement.

8. Certification:

 **3/7/16**
Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

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10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

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10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

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For Internal Use ONLY:

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John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
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- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under 7g)

4. Date well(s) abandoned: 3/9/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

35.20364 N 83.37539 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-5

6b. Total well depth: 67.2 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 61.70 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout Bentonite Chips or Pellets
- Sand Cement Grout Dry Clay
- Concrete Grout Drill Cuttings
- Specialty Grout Gravel
- Bentonite Slurry Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 10.2 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing. Borehole tremie grouted to surface with 5% Bentonite cement.

8. Certification:

John Gorman
Signature of Certified Well Contractor or Well Owner

3/9/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

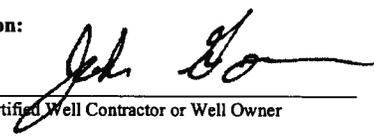
7f. For each material selected above, provide amount of materials used:

<u>5% Bentonite Cement</u>	<u>8.3 ft3</u>
_____	_____
_____	_____

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing. Borehole tremie grouted to surface with 5% Bentonite cement.

8. Certification:

	<u>3/8/16</u>
Signature of Certified Well Contractor or Well Owner	Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

4. Date well(s) abandoned: 3/8/16

5a. Well location:

Macon County Landfill 57-03

Facility/Owner Name Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20320 N 83.37482 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-6

6b. Total well depth: 65.5 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 58.31 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/3/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20267

N

83.37373

W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-7

6b. Total well depth: 58.9 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 55.11 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 12.6 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling with auger driven cutting blade. Borehole tremie grouted to surface with 5% Bentonite cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/3/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/7/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20199

N

83.37486

W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-8

6b. Total well depth: 52.5 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 38.29 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 8.2 ft3

7g. Provide a brief description of the abandonment procedure:

Well overdrilled, casing removed and borehole

tremie grouted to surface with 5% Bentonite

cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/7/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under 7g)

4. Date well(s) abandoned: 3/7/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35.20237

N

83.37531

W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-9

6b. Total well depth: 29.2 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 24.55 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 6.3 ft3

7g. Provide a brief description of the abandonment procedure:

Well casing overdrilled and removed resulting

borehole tremie grouted to surface with 5%

Bentonite cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/7/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/3/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35.20300 N 83.37291 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-11

6b. Total well depth: 76.9 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: Dry (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 16.5 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade. Tremie grouted the borehole with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/3/16
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 6.9 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger
driven blade and borehole tremie grouted with
5% Bentonite cement to surface.

8. Certification:

 3/2/16

Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/2/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20248 N 83.37236 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-12

6b. Total well depth: 49.5 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 43.50 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #:

DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 11.7 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling out casing with auger driven blade and tremie grouted the borehole with 5% Bentonite cement.

4. Date well(s) abandoned: 3/4/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20325

N

83.37197

W

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/4/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

6a. Well ID#: BLE-13

6b. Total well depth: 54.9 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 47.54 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under 7g)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 18.6 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade and tremie grouted the borehole with 5% Bentonite cement to surface.

4. Date well(s) abandoned: 3/2/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

35.20256 N 83.37134 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-14

6b. Total well depth: 87.2 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 66.50 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/2/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/2/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

35.20172 N 83.37186 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-15

6b. Total well depth: 35.5 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 25.32 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 7.8 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade. Tremie grouted the borehole with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/2/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 7.7 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade. Tremie grouted the borehole with 5% Bentonite cement to surface.

4. Date well(s) abandoned: 3/2/16

5a. Well location:

Macon County Landfill 57-03

Facility/Owner Name Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20099 N 83.37235 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-16

6b. Total well depth: 35.4 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 33.50 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/2/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under 7g)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout Bentonite Chips or Pellets
- Sand Cement Grout Dry Clay
- Concrete Grout Drill Cuttings
- Specialty Grout Gravel
- Bentonite Slurry Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 5.9 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by using mud rotary bull bit and removal of casing. Tremie grouted borehole filled to surface with 5% Bentonite cement.

4. Date well(s) abandoned: 3/3/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

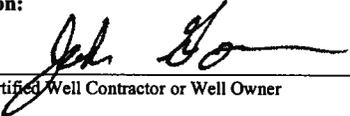
Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20145 N 83.37376 W

8. Certification:



Signature of Certified Well Contractor or Well Owner

3/3/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

6a. Well ID#: BLE-17

6b. Total well depth: 44.2 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 24.51 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under 7g)

4. Date well(s) abandoned: 3/4/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20342 N 83.37098 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-18

6b. Total well depth: 45.2 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 30.80 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout
- Sand Cement Grout
- Concrete Grout
- Specialty Grout
- Bentonite Slurry
- Bentonite Chips or Pellets
- Dry Clay
- Drill Cuttings
- Gravel
- Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 9.8 ft3

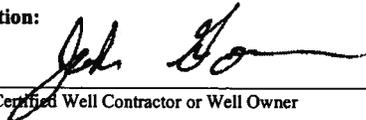
7g. Provide a brief description of the abandonment procedure:

Well drilled with auger driven cutting blade.

Borehole tremie grouted to surface with 5%

Bentonite cement.

8. Certification:

 3/4/16
Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under 7g)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 7.9 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade and tremie grouted the borehole with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner: John Gorman Date: 3/4/16

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

4. Date well(s) abandoned: 3/4/16

5a. Well location:

Macon County Landfill 57-03

Facility/Owner Name Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20382 N 83.37244 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-19

6b. Total well depth: 46.7 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 36.60 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 3.1 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing.

Borehole tremie grouted to surface with 5%

Bentonite cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/9/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: 3/9/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20472 N 83.37489 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-20

6b. Total well depth: 34.4 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 14.95 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 3.4 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing.

Borehole tremie grouted to surface with 5%

Bentonite cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/13/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

4. Date well(s) abandoned: 3/13/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20494 N 83.37241 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-24

6b. Total well depth: 16.0 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 9.81 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: **3/13/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20500 N **83.37110** W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **BLE-25S**

6b. Total well depth: **45.0** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **30.30** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **1.0 ft3**

7g. Provide a brief description of the abandonment procedure:

Well abandoned in place with 5% Bentonite cement. Tremie grouted. 3.5 ft of stick up casing removed.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/13/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 1.5 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned in place and tremie grouted to surface with 5% Bentonite cement. 3.5 ft of stick up casing removed.

4. Date well(s) abandoned: 3/13/16

5a. Well location:

Macon County Landfill 57-03

Facility/Owner Name Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

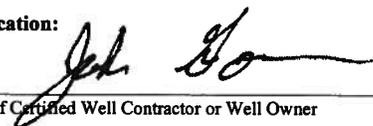
County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20501 N 83.37112 W

8. Certification:


Signature of Certified Well Contractor or Well Owner

3/13/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

6a. Well ID#: BLE-25D

6b. Total well depth: 70.0 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 30.72 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: DIN 24884

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under 7g)

4. Date well(s) abandoned: 3/4/16

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20492 N 83.37344 W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: BLE-26

6b. Total well depth: 44.5 (ft.)

6c. Borehole diameter: 6.25 (in.)

6d. Water level below ground surface: 16.81 (ft.)

6e. Outer casing length (if known): NA (ft.)

6f. Inner casing/tubing length (if known): NA (ft.)

6g. Screen length (if known): 10 (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout Bentonite Chips or Pellets
 Sand Cement Grout Dry Clay
 Concrete Grout Drill Cuttings
 Specialty Grout Gravel
 Bentonite Slurry Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement 5.0 ft3

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven blade and tremie grouted the borehole with 5% Bentonite cement.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/4/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: **3/10/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20308 N **83.37145** W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **B-6R**

6b. Total well depth: **79.5** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **71.10** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

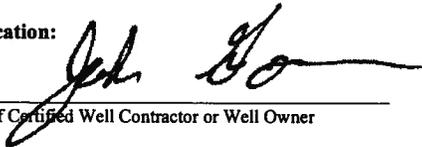
7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **16.9 ft3**

7g. Provide a brief description of the abandonment procedure:

Well overdrilled and casing removed. Borehole tremie grouted to surface with 5% Bentonite cement.

8. Certification:

 **3/10/16**
Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Municipal/Public |
| <input type="checkbox"/> Geothermal (Heating/Cooling Supply) | <input type="checkbox"/> Residential Water Supply (single) |
| <input type="checkbox"/> Industrial/Commercial | <input type="checkbox"/> Residential Water Supply (shared) |
| <input type="checkbox"/> Irrigation | |

Non-Water Supply Well:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Monitoring | <input type="checkbox"/> Recovery |
|--|-----------------------------------|

Injection Well:

- | | |
|--|---|
| <input type="checkbox"/> Aquifer Recharge | <input type="checkbox"/> Groundwater Remediation |
| <input type="checkbox"/> Aquifer Storage and Recovery | <input type="checkbox"/> Salinity Barrier |
| <input type="checkbox"/> Aquifer Test | <input type="checkbox"/> Stormwater Drainage |
| <input type="checkbox"/> Experimental Technology | <input type="checkbox"/> Subsidence Control |
| <input type="checkbox"/> Geothermal (Closed Loop) | <input type="checkbox"/> Tracer |
| <input type="checkbox"/> Geothermal (Heating/Cooling Return) | <input type="checkbox"/> Other (explain under 7g) |

4. Date well(s) abandoned: **3/10/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20290 N **83.37560** W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **B-16R**

6b. Total well depth: **54.5** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **38.60** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input checked="" type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **7.8 ft3**

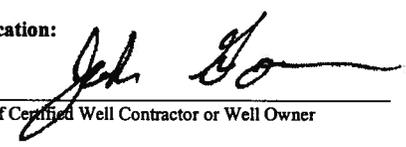
7g. Provide a brief description of the abandonment procedure:

Well abandoned by overdrilling and removing casing.

Borehole tremie grouted to surface with 5%

Bentonite cement.

8. Certification:

 **3/10/16**
Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

John Gorman

Well Contractor Name (or well owner personally abandoning well on his/her property)

3485-A

NC Well Contractor Certification Number

Bunnell-Lammons Engineering, Inc.

Company Name

2. Well Construction Permit #: **DIN 24884**

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under 7g)

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- Neat Cement Grout Bentonite Chips or Pellets
 Sand Cement Grout Dry Clay
 Concrete Grout Drill Cuttings
 Specialty Grout Gravel
 Bentonite Slurry Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

5% Bentonite Cement **8.3 ft3**

7g. Provide a brief description of the abandonment procedure:

Well abandoned by drilling casing with auger driven cutting blade and tremie grouted the borehole with 5% Bentonite cement to surface.

8. Certification:

Signature of Certified Well Contractor or Well Owner

3/1/16

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

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1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

4. Date well(s) abandoned: **3/1/16**

5a. Well location:

Macon County Landfill

57-03

Facility/Owner Name

Facility ID# (if applicable)

109 Sierra Lane, Franklin, NC 28734

Physical Address, City, and Zip

Macon

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35.20167 **N** **83.37266** **W**

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: **B-18R**

6b. Total well depth: **38.9** (ft.)

6c. Borehole diameter: **6.25** (in.)

6d. Water level below ground surface: **20.65** (ft.)

6e. Outer casing length (if known): **NA** (ft.)

6f. Inner casing/tubing length (if known): **NA** (ft.)

6g. Screen length (if known): **10** (ft.)