



526 South Church St.
Charlotte, NC 28202
P.O. Box 1006
Mail Code EC13K
Charlotte, NC 28201-1006

336-215-4576

704-382-6240 fax

November 4, 2015

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

Subject: Well Construction Records
Duke Energy Carolinas, LLC
Dan River Steam Station
900 S Edgewood Road, Eden, NC 27288

Dear DWR Representative:

Duke Energy is providing well abandonment records for two (8) non-water supply monitoring wells abandoned at Duke Energy's Dan River Steam Station in Eden, North Carolina between September 24, 2015 and October 18, 2015. These observation wells were installed in the vicinity of the ash storage area and future landfill footprint in the northeastern portion of the Dan River site. Per 15A NCAC 02C .0307(a), these records are being submitted within 30 days of project abandonment.

Records are provided for observation wells

MW-303BR
MW-306BR
OW-302D
OW-303D
OW-407S
OW-410S
OW-411S
OW-411D

If you have any questions, please feel free to contact me at 336-215-4576 or at Kim.Hutchinson@duke-energy.com

Sincerely,

A handwritten signature in blue ink that reads "Kimberlee Hutchinson".

Kimberlee Hutchinson, PE
Environmental Services

Attachments: Well Abandonment Records

cc (via e-mail): Elizabeth Werner, NCDEQ
Shuying Wang, NCDEQ

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

SAEDACCO

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

Stefan Smith

NC Well Contractor Certification Number

3576-A

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, 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. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 1.02 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: N/A

7d. Amount of disinfectant used: N/A

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:

Aquaguard (30% bentonite solids grout) ~600 pounds

water ~168 gallons

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

Overdrilled with 4.25-inch I.D. Hollow-Stem Augers
Tremie grouted

4. Date well(s) abandoned: 09/24/2015

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2941 N -79.4256 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#: OW-303D

6b. Total well depth: 88 (ft.)

6c. Borehole diameter: 3 (in.)

6d. Water level below ground surface: 76.89 (ft.)

6e. Outer casing length (if known): N/A (ft.)

6f. Inner casing/tubing length (if known): 83 (ft.)

6g. Screen length (if known): 5 (ft.)

8. Certification:

Stephen J. Smith

Signature of Certified Well Contractor or Well Owner

10/23/15

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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/05/2015

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2940 N -79.4253 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#: OW-411S

6b. Total well depth: 66 (ft.)

6c. Borehole diameter: 7 (in.)

6d. Water level below ground surface: 40.02 (ft.)

6e. Outer casing length (if known): N/A (ft.)

6f. Inner casing/tubing length (if known): 50.7 (ft.)

6g. Screen length (if known): 15 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 4.2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: N/A

7d. Amount of disinfectant used: N/A

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:

Aquaguard (30% bentonite solids grout) ~500 pounds

water ~140 gallons

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

Overdrilled with 4.25-inch I.D. Hollow-Stem Augers
Tremie grouted

8. Certification:

Richy Lemire
Signature of Certified Well Contractor or Well Owner

10/23/15
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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: **N/A**

List all applicable well permits (i.e. County, State, Variance, Injection, 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: **09/28/2015**

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

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

36.2937

N

-79.4256

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#: **OW-320D**

6b. Total well depth: **70** (ft.)

6c. Borehole diameter: **3** (in.)

6d. Water level below ground surface: **63.56** (ft.)

6e. Outer casing length (if known): **N/A** (ft.)

6f. Inner casing/tubing length (if known): **65** (ft.)

6g. Screen length (if known): **5** (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: **1**

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): **0.59** (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: **N/A**

7d. Amount of disinfectant used: **N/A**

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:

Aquaguard (30% bentonite solids grout) **~550 pounds**

water **~154 gallons**

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

**Overdrilled with 4.25-inch I.D. Hollow-Stem Augers
Tremie grouted**

8. Certification:


Signature of Certified Well Contractor or Well Owner

10/23/15

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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/18/2015

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

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

36.2940 N -79.4253 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#: OW-411D

6b. Total well depth: 81.3 (ft.)

6c. Borehole diameter: 7 & 2 (in.)

6d. Water level below ground surface: 43.84 (ft.)

6e. Outer casing length (if known): 54.5 (ft.)

6f. Inner casing/tubing length (if known): 76 (ft.)

6g. Screen length (if known): 15 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 6 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: N/A

7d. Amount of disinfectant used: N/A

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:

Aquaguard (30% bentonite solids grout) ~550 pounds

water ~154 gallons

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

In-place tremie grout 54.5 to 81.3

Overdrilled 0 to 54.4 with 8.25-inch I.D. Hollow-Stem Augers

Tremie grouted to surface

8. Certification:


Signature of Certified Well Contractor or Well Owner

10/23/15

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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: **N/A**

List all applicable well permits (i.e. County, State, Variance, Injection, 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: **10/15/2015**

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2940 N **-79.4253** 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#: **OW-410S**

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

6c. Borehole diameter: **7** (in.)

6d. Water level below ground surface: **36.34** (ft.)

6e. Outer casing length (if known): **N/A** (ft.)

6f. Inner casing/tubing length (if known): **39.2** (ft.)

6g. Screen length (if known): **15** (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: **1**
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): **3** (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: **N/A**

7d. Amount of disinfectant used: **N/A**

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:

Aquaguard (30% bentonite solids grout) **~950 pounds**

water **~266 gallons**

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

**Overdrilled with 4.25-inch I.D. Hollow-Stem Augers
Tremie grouted**

8. Certification:

Richy Lemire
Signature of Certified Well Contractor or Well Owner

10/23/15
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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/01/2015

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2937 N -79.4256 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#: MW-306BR

6b. Total well depth: 107 (ft.)

6c. Borehole diameter: 12 & 6 (in.)

6d. Water level below ground surface: 67.17 (ft.)

6e. Outer casing length (if known): 79 (ft.)

6f. Inner casing/tubing length (if known): 102 (ft.)

6g. Screen length (if known): 5 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 6.5 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: N/A

7d. Amount of disinfectant used: N/A

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:

Aquaguard (30% bentonite solids grout) ~1200 pounds
water ~336 gallons

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

Overdrilled with 8.25-inch I.D. Hollow-Stem Augers
Drilled out in rock with 5.5-inch Mill Bit
Tremie grouted

8. Certification:

Richy Lemire 10/23/15
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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: **N/A**

List all applicable well permits (i.e. County, State, Variance, Injection, 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: **10/14/2015**

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2942 N **-79.4259** 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#: **OW-407S**

6b. Total well depth: **63.5** (ft.)

6c. Borehole diameter: **7** (in.)

6d. Water level below ground surface: **48.25** (ft.)

6e. Outer casing length (if known): **N/A** (ft.)

6f. Inner casing/tubing length (if known): **48.2** (ft.)

6g. Screen length (if known): **15** (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: **1**

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): **2.5** (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: **N/A**

7d. Amount of disinfectant used: **N/A**

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:

Aquaguard (30% bentonite solids grout) **~925 pounds**

water **~259 gallons**

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

**Overdrilled with 4.25-inch I.D. Hollow-Stem Augers
Tremie grouted**

8. Certification:



Signature of Certified Well Contractor or Well Owner

10/23/15

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

This form can be used for single or multiple wells

1. Well Contractor Information:

SAEDACCO

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

Richy Lemire

NC Well Contractor Certification Number

2593-A

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/13/2015

5a. Well location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Road, Eden, NC

Physical Address, City, and Zip

Rockingham

798908886870

County

Parcel Identification No. (PIN)

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

36.2937 N -79.4256 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#: MW-303BR

6b. Total well depth: 142 (ft.)

6c. Borehole diameter: 12 & 2 (in.)

6d. Water level below ground surface: 90.57 (ft.)

6e. Outer casing length (if known): 97 (ft.)

6f. Inner casing/tubing length (if known): 137 (ft.)

6g. Screen length (if known): 15 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 8.4 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: N/A

7d. Amount of disinfectant used: N/A

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:

Aquaguard (30% bentonite solids grout) ~900 pounds

water ~252 gallons

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

In-place tremie grout 98 to 142

Overdrilled 0 to 98 with 8.25-inch I.D. Hollow-Stem Augers

Tremie grouted to surface

8. Certification:

Richy Lemire
Signature of Certified Well Contractor or Well Owner

10/23/15

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.