



526 South Church Street  
Charlotte, NC 28202

Mailing Address:  
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Mail Code EC13K  
Charlotte, NC 28201-1006

704 382 4761

704 382 6240 fax

May 6, 2015

North Carolina Department of Environment and Natural Resources  
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 construction records for thirteen (13) non-water supply monitoring wells installed at Duke Energy's Dan River Steam Station in Eden, North Carolina between April 7, 2015 and April 23, 2015. These monitoring wells were installed in the vicinity of the Ash Storage Area 1 in the northeastern portion of the Dan River site. Per 15A NCAC 02C .0307(a), these records are being submitted within 30 days of completion of construction.

Records are provided for observation wells

OW-401D,  
OW-403D,  
OW-404S,  
OW-405S,  
OW-405D,

OW-406D,  
OW-407D,  
OW-409D,  
OW-411D,  
OW-414D,

OW-415D,  
OW-416D, and  
OW-417D

If you have any questions, please feel free to contact me at 704-382-4761 or at Sean.DeNeale@duke-energy.com

Sincerely,

Sean DeNeale, Engineer II  
Environmental Services

cc: Elizabeth Werner, NCDENR Solid Waste Section

**WELL CONSTRUCTION RECORD**

This form can be used for single or multiple wells

**1. Well Contractor Information:**

**Richy Lemire**

Well Contractor Name

**2593-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

**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 #21 Remarks)

**4. Date Well(s) Completed:** 4/14/15 **Well ID#:** OW-417 D

**5a. Well Location:**

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4964** N **-79.7200** W

**6. Is (are) the well(s):**  Permanent or  Temporary

**7. Is this a repair to an existing well:**  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

**8. Number of wells constructed:** 1

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

**9. Total well depth below land surface:** 47.7 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

**10. Static water level below top of casing:** 19.30 (ft.)

If water level is above casing, use "+"

**11. Borehole diameter:** 3 (in.)

**12. Well construction method:** 8.25 HSA / NQ2 core

(i.e. auger, rotary, cable, direct push, etc.)

**FOR WATER SUPPLY WELLS ONLY:**

**13a. Yield (gpm)** N/A **Method of test:** N/A

**13b. Disinfection type:** N/A **Amount:** N/A

For Internal Use ONLY:

**14. WATER ZONES**

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

**15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	33 ft.	6 in.	Sch. 40	PVC

**16. INNER CASING OR TUBING (geothermal closed-loop)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	42.4 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

**17. SCREEN**

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
42.4 ft.	47.4 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

**18. GROUT**

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	31.5 ft.	Neat Cement	Tremie
31.5 ft.	41.8 ft.	Bentonite	Pour & Hydrate
41.8 ft.	42 ft.	K-packer	place

**19. SAND/GRAVEL PACK (if applicable)**

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

**20. DRILLING LOG (attach additional sheets if necessary)**

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	8.5 ft.	Silty Sand
8.5 ft.	13.5 ft.	PWR
13.5 ft.	23.5 ft.	Silty Sand
23.5 ft.	33 ft.	PWR
33 ft.	47.7 ft.	Bedrock
ft.	ft.	
ft.	ft.	

**21. REMARKS**

N/A

**22. Certification:**

*Richy Lemire*

05/06/15

Signature of Certified Well Contractor

Date

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

**23. Site diagram or additional well details:**

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

**SUBMITTAL INSTRUCTIONS**

**24a. For All Wells:** Submit this form within 30 days of completion of well construction to the following:

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

**24b. For Injection Wells ONLY:** In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

**24c. For Water Supply & Injection Wells:**

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

Stefan Smith

Well Contractor Name

3576-A

NC Well Contractor Certification Number

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: 4/16/15 Well ID# OW-416 D

## 5a. Well Location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4931 N -79.7149 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

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

9. Total well depth below land surface: 45 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 27.93 (ft.)  
If water level is above casing, use "+"

11. Borehole diameter: 3 (in.)

12. Well construction method: 8.25 HSA / NQ2 core

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	29 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	39.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
39.7 ft.	44.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	27 ft.	Neat Cement	Tremie
27 ft.	29 ft.	Bentonite	Pour & Hydrate
39.1 ft.	39.3 ft.	K-packer	place

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	5 ft.	Fill: Sandy Silt
5 ft.	18.5 ft.	Silty Sand/Sandy Silt
18.5 ft.	29.5 ft.	PWR
29.5 ft.	45 ft.	Bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:



05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

Stefan Smith

Well Contractor Name

3576-A

NC Well Contractor Certification Number

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: 4/9/15 Well ID# OW-415 D

## 5a. Well Location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4939 N -79.7137 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

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

9. Total well depth below land surface: 42 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 16.45 (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 3 (in.)

12. Well construction method: 8.25 HSA / NQ2 core

(i.e. auger, rotary, cable, direct push, etc.)

## FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	24.5 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	36.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
36.7 ft.	41.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	23.5 ft.	Neat Cement	Tremie
23.5 ft.	25.5 ft.	Bentonite	Pour & Hydrate
36.1 ft.	36.3 ft.	K-packer	place

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	8.5 ft.	Silty Sand
8.5 ft.	13.5 ft.	PWR
13.5 ft.	18.5 ft.	Silty Sand
18.5 ft.	25 ft.	PWR
25 ft.	42 ft.	Bedrock
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:

Stefan Smith

05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

**Stefan Smith**

Well Contractor Name

**3576-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: **4/13/15** Well ID# **OW-414 D**

### 5a. Well Location:

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4933** N **-79.7160** W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: **1**

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

9. Total well depth below land surface: **37** (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: **22.40** (ft.)

If water level is above casing, use "+"

11. Borehole diameter: **3** (in.)

12. Well construction method: **8.25 HSA / NQ2 core**

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) **N/A** Method of test: **N/A**

13b. Disinfection type: **N/A** Amount: **N/A**

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	29.5 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	31.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
31.7 ft.	36.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	28 ft.	Neat Cement	Tremie
28 ft.	30 ft.	Bentonite	Pour & Hydrate
31.1 ft.	31.3 ft.	K-packer	place

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/ruck type, grain size, etc.)
0 ft.	3 ft.	Fill: Silty Sand
3 ft.	18 ft.	Fill: Ash
18 ft.	23.5 ft.	Silty Sandy Gravel
23.5 ft.	30 ft.	PWR
30 ft.	37 ft.	Bedrock
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:

*Stefan Smith*

05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

Richy Lemire

Well Contractor Name

2593-A

NC Well Contractor Certification Number

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: 4/21/15 Well ID# OW-411 D

### 5a. Well Location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4944 N -79.7147 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

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

9. Total well depth below land surface: 81.3 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 46.01 (ft.)

If water level is above casing, use " "

11. Borehole diameter: 3 (in.)

12. Well construction method: 8.25 HSA / NQ2 core

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	54.5 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	76 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
76 ft.	81 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	55 ft.	Neat Cement	Tremie
55 ft.	57.5 ft.	Bentonite	Pour & Hydrate
75.4 ft.	75.6 ft.	K-packer	place

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	2 ft.	Fill: Silty Sand
2 ft.	31 ft.	Fill: Ash (Sandy Clay 18-19.8)
31 ft.	38.5 ft.	Silty Sand/Sandy Silt
38.5 ft.	58.5 ft.	PWR
58.5 ft.	60 ft.	Silty Sand
60 ft.	55 ft.	PWR
55 ft.	81.3 ft.	Bedrock

## 21. REMARKS

N/A

## 22. Certification:

Richy Lemire

05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## I. Well Contractor Information:

**Stefan Smith**

Well Contractor Name

**3576-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: **4/14/15** Well ID# **OW-409 D**

## 5a. Well Location:

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4948** N **-79.7180** W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: **1**  
For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: **27.3** (ft.)  
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: **+** (ft.)  
If water level is above casing, use "+"

11. Borehole diameter: **3** (in.)

12. Well construction method: **8.25 HSA / NQ2 core**  
(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) **N/A** Method of test: **N/A**

13b. Disinfection type: **N/A** Amount: **N/A**

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	8 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	22 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
22 ft.	27 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	6 ft.	Neat Cement	Tremie
6 ft.	8 ft.	Bentonite	Pour & Hydrate
21.4 ft.	21.6 ft.	K-packer	place

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	7 ft.	Sandy Clay
7 ft.	8 ft.	PWR
8 ft.	27.3 ft.	Bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:

*Stefan Smith*

05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

**Richy Lemire**

Well Contractor Name

**2593-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: **4/22/15** Well ID# **OW-407 D**

## 5a. Well Location:

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4951**

**N**

**-79.7164**

**W**

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: **1**

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

9. Total well depth below land surface: **79.3** (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: **53.22** (ft.)

If water level is above casing, use "-"

11. Borehole diameter: **6** (in.)

12. Well construction method: **8.25 HSA / 6" roller cone**

(i.e. auger, rotary, cable, direct push, etc.)

## FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) **N/A** Method of test: **N/A**

13b. Disinfection type: **N/A** Amount: **N/A**

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	63.5 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	74 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
74 ft.	79 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	68 ft.	Neat Cement	Tremie
68 ft.	72 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
72 ft.	79.3 ft.	#2 Silica Sand	wash
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	1.5 ft.	Fill: Silty Sand
1.5 ft.	38.5 ft.	Fill: Ash
38.5 ft.	43.5 ft.	Organic Debris
43.5 ft.	48.5 ft.	Sandy Clay
48.5 ft.	54 ft.	Clayey Sand
54 ft.	58.5 ft.	Silty Sand
58.5 ft.	63.8 ft.	PWR

## 21. REMARKS

63.8' to 79.3' Soft Bedrock

## 22. Certification:

**Richy Lemire**

**05/06/15**

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

Richy Lemire

Well Contractor Name

2593-A

NC Well Contractor Certification Number:

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: 4/20/15 Well ID# OW-406 D

### 5a. Well Location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4954 N -79.7184 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

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

9. Total well depth below land surface: 41.3 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 5.00 (ft.)  
If water level is above casing, use "+"

11. Borehole diameter: 6 (in.)

12. Well construction method: 8.25 HSA / 6" roller cone  
(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	20.5 ft.	6 in.	Sch. 40	PVC

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	36 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
36 ft.	41 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	30 ft.	Neat Cement	Tremie
30 ft.	34 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
34 ft.	41.3 ft.	#2 Silica Sand	wash
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	7 ft.	Silty Clay
7 ft.	11 ft.	Silty Sand
11 ft.	26 ft.	PWR
26 ft.	41.3 ft.	Soft Bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:

Richy Lemire  
Signature of Certified Well Contractor

05/06/15  
Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

Stefan Smith

Well Contractor Name

3576-A

NC Well Contractor Certification Number

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: 4/7/15 Well ID# OW-405 S

## 5a. Well Location:

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4961 N -79.7133 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1  
For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 63 (ft.)  
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 52.40 (ft.)  
If water level is above casing, use " "

11. Borehole diameter: 7 (in.)

12. Well construction method: auger

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

## 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

## 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	47.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

## 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
47.7 ft.	62.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

## 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	44 ft.	Neat Cement	Tremie
44 ft.	46 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

## 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
46 ft.	63 ft.	#2 Silica Sand	wash
N/A ft.	N/A ft.	N/A	N/A

## 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	8.5 ft.	Silty Sand
8.5 ft.	13.5 ft.	Sandy Silt
13.5 ft.	18.5 ft.	Silty Sand
18.5 ft.	63 ft.	PWR
ft.	ft.	
ft.	ft.	
ft.	ft.	

## 21. REMARKS

N/A

## 22. Certification:

Stefan Smith

05/06/15

Signature of Certified Well Contractor

Date

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

## 23. Site diagram or additional well details:

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

## SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

## 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

**Richy Lemire**

Well Contractor Name

**2593-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: **4/23/15** Well ID# **OW-405 D**

### 5a. Well Location:

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4960** N **-79.7133** W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: **1**

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

9. Total well depth below land surface: **79** (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: **52.49** (ft.)

If water level is above casing, use "1"

11. Borehole diameter: **6** (in.)

12. Well construction method: **8.25 HSA / 6" Roller Cone**

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) **N/A** Method of test: **N/A**

13b. Disinfection type: **N/A** Amount: **N/A**

For Internal Use ONLY:

### 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

### 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	50.5 ft.	6 in.	Sch. 40	PVC

### 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	73.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

### 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
73.7 ft.	78.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

### 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	68 ft.	Neat Cement	Tremie
68 ft.	72 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

### 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
72 ft.	79 ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

### 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	8.5 ft.	Silty Sand
8.5 ft.	13.5 ft.	Sandy Silt
13.5 ft.	18.5 ft.	Silty Sand
18.5 ft.	65.5 ft.	PWR
65.5 ft.	79 ft.	Soft Bedrock
ft.	ft.	
ft.	ft.	

### 21. REMARKS

N/A

### 22. Certification:

*Richy Lemire*

05/06/15

Signature of Certified Well Contractor

Date

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

### 23. Site diagram or additional well details:

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

### SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

### 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

**WELL CONSTRUCTION RECORD**

This form can be used for single or multiple wells

**1. Well Contractor Information:**

Stefan Smith

Well Contractor Name

3576-A

NC Well Contractor Certification Number

SAEDACCO

Company Name

2. Well Construction Permit #: N/A

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

**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 #21 Remarks)

4. Date Well(s) Completed: 4/7/15 Well ID# OW-404 S

**5a. Well Location:**

Duke Energy-Dan River

N/A

Facility/Owner Name

Facility ID# (if applicable)

900 S. Edgewood Rd, 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)

36.4957 N -79.7141 W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1  
For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 30 (ft.)  
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.00 (ft.)  
If water level is above casing, use "+"

11. Borehole diameter: 7 (in.)

12. Well construction method: auger  
(i.e. auger, rotary, cable, direct push, etc.)

**FOR WATER SUPPLY WELLS ONLY:**

13a. Yield (gpm) N/A Method of test: N/A

13b. Disinfection type: N/A Amount: N/A

For Internal Use ONLY:

**14. WATER ZONES**

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

**15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
N/A ft.	N/A ft.	N/A in.	N/A	N/A

**16. INNER CASING OR TUBING (geothermal closed-loop)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	14.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

**17. SCREEN**

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
14.7 ft.	29.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

**18. GROUT**

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	11 ft.	Neat Cement	Tremie
11 ft.	13 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

**19. SAND/GRAVEL PACK (if applicable)**

FROM	TO	MATERIAL	EMPLACEMENT METHOD
13 ft.	30 ft.	#2 Silica Sand	wash
N/A ft.	N/A ft.	N/A	N/A

**20. DRILLING LOG (attach additional sheets if necessary)**

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	3 ft.	Silty Sand
3 ft.	30 ft.	PWR
ft.	ft.	

**21. REMARKS**

N/A

**22. Certification:**

*Stefan Smith*

05/06/15

Signature of Certified Well Contractor

Date

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

**23. Site diagram or additional well details:**

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

**SUBMITTAL INSTRUCTIONS**

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

**24c. For Water Supply & Injection Wells:**

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

**WELL CONSTRUCTION RECORD**

This form can be used for single or multiple wells

**1. Well Contractor Information:**

**Richy Lemire**

Well Contractor Name

**2593-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

**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 #21 Remarks)

**4. Date Well(s) Completed:** 4/16/15 **Well ID#** OW-403 D

**5a. Well Location:**

**Duke Energy-Dan River**

N/A

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4963** N **-79.7147** W

**6. Is (are) the well(s):**  Permanent or  Temporary

**7. Is this a repair to an existing well:**  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

**8. Number of wells constructed:** 1

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

**9. Total well depth below land surface:** 67.5 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

**10. Static water level below top of casing:** 35.65 (ft.)

If water level is above casing, use "1"

**11. Borehole diameter:** 3 (in.)

**12. Well construction method:** 8.25 HSA / NQ2 core

(i.e. auger, rotary, cable, direct push, etc.)

**FOR WATER SUPPLY WELLS ONLY:**

**13a. Yield (gpm)** N/A **Method of test:** N/A

**13b. Disinfection type:** N/A **Amount:** N/A

For Internal Use ONLY:

**14. WATER ZONES**

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

**15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	50 ft.	6 in.	Sch. 40	PVC

**16. INNER CASING OR TUBING (geothermal closed-loop)**

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	62.2 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

**17. SCREEN**

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
62.2 ft.	67.2 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

**18. GROUT**

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	58 ft.	Neat Cement	Tremie
58 ft.	61.6 ft.	Bentonite	Pour & Hydrate
61.6 ft.	61.8 ft.	K-packer	place

**19. SAND/GRAVEL PACK (if applicable)**

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	N/A ft.	N/A	N/A
N/A ft.	N/A ft.	N/A	N/A

**20. DRILLING LOG (attach additional sheets if necessary)**

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	13.5 ft.	Silty Sand
13.5 ft.	18.5 ft.	PWR
18.5 ft.	23 ft.	Sandy Silt
23 ft.	25 ft.	Sandy Clayey Silt
25 ft.	50.5 ft.	PWR
50.5 ft.	67.5 ft.	Bedrock
ft.	ft.	

**21. REMARKS**

N/A

**22. Certification:**

Richy Lemire  
Signature of Certified Well Contractor

05/06/15

Date

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

**23. Site diagram or additional well details:**

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

**SUBMITTAL INSTRUCTIONS**

**24a. For All Wells:** Submit this form within 30 days of completion of well construction to the following:

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

**24b. For Injection Wells ONLY:** In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

**24c. For Water Supply & Injection Wells:**

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

# WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

## 1. Well Contractor Information:

**Richy Lemire**

Well Contractor Name

**2593-A**

NC Well Contractor Certification Number

**SAEDACCO**

Company Name

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

List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

## 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 #21 Remarks)

4. Date Well(s) Completed: **4/16/15** Well ID# **OW-401 D**

### 5a. Well Location:

**Duke Energy-Dan River**

**N/A**

Facility/Owner Name

Facility ID# (if applicable)

**900 S. Edgewood Rd, 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)

**36.4963** N **-79.7179** W

6. Is (are) the well(s):  Permanent or  Temporary

7. Is this a repair to an existing well:  Yes or  No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: **1**

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

9. Total well depth below land surface: **47** (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: **10.27** (ft.)

If water level is above casing, use "+"

11. Borehole diameter: **6** (in.)

12. Well construction method: **8.25 HSA / 6" roller cone**

(i.e. auger, rotary, cable, direct push, etc.)

### FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) **N/A** Method of test: **N/A**

13b. Disinfection type: **N/A** Amount: **N/A**

For Internal Use ONLY:

### 14. WATER ZONES

FROM	TO	DESCRIPTION
N/A ft.	N/A ft.	N/A
N/A ft.	N/A ft.	N/A

### 15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	25 ft.	6 in.	Sch. 40	PVC

### 16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	41.7 ft.	2 in.	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A

### 17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
41.7 ft.	46.7 ft.	2 in.	0.010	Sch. 40	PVC
N/A ft.	N/A ft.	N/A in.	N/A	N/A	N/A

### 18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	36 ft.	Neat Cement	Tremie
36 ft.	39.8 ft.	Bentonite	Pour & Hydrate
N/A ft.	N/A ft.	N/A	N/A

### 19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
39.8 ft.	47 ft.	#2 Silica Sand	wash
N/A ft.	N/A ft.	N/A	N/A

### 20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	7 ft.	Silty Sand
7 ft.	18.5 ft.	PWR
18.5 ft.	23.5 ft.	Silty Sand
23.5 ft.	26 ft.	PWR
26 ft.	47 ft.	Soft Bedrock
ft.	ft.	
ft.	ft.	

### 21. REMARKS

N/A

### 22. Certification:

*Richy Lemire*  
Signature of Certified Well Contractor

05/06/15

Date

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

### 23. Site diagram or additional well details:

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

### SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

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

24b. For Injection Wells ONLY: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

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

### 24c. For Water Supply & Injection Wells:

Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.