



5400 Glenwood Avenue, Suite 300  
Raleigh, North Carolina 27612  
tel: 919-325-3500  
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April 15, 2010

Ms. Christine Ritter  
Hydrogeologist  
North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
401 Oberlin Road - Suite 150  
Raleigh, North Carolina 27611-9603

Subject: Dare County  
Dare County Construction and Demolition Debris Landfill (C&DLF)  
Phase 4 Expansion  
Well Abandonment Records

Dear Ms. Ritter:

CDM, on behalf of Dare County is forwarding the Well Abandonment Records (Form GW-30) for the monitoring wells and piezometers within the Phase 4 boundary of the Dare County C&D Landfill. The two monitoring wells and nine piezometers within the proposed Phase 4 boundary were abandoned by Froehling and Robertson, Inc. on April 5, 2010 - April 7, 2010. Copies of the Well Abandonment Records are attached.

If you have any questions or need additional information, please do not hesitate to call me.

Very truly yours,

Mathew F. Colone, P.G.  
Camp Dresser & McKee

cc: Ed Mussler, NCDENR DWM  
Edward Mann, Dare County  
Kevin Irby, CDM  
Michael Brincheck, CDM



**FROEHLING & ROBERTSON, INC.**

Engineering • Environmental • Geotechnical  
NC Engineering License # F-0266

310 Hubert Street  
Raleigh, North Carolina 27603-2302 | USA  
T 919.828.3441 | F 919.828.5751

April 14, 2010

Mr. Patrick Stout  
Camp Dresser & McKee  
5400 Glenwood Avenue  
Raleigh, NC 27612

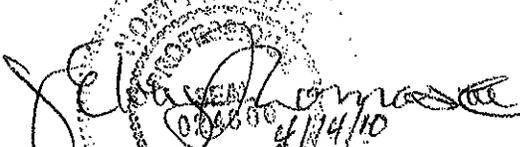
**Re: Abandonment Records for Water and Piezometer Monitoring Wells  
Dare County Landfill  
Dare County, North Carolina  
F&R Project No. 66L-0496**

Dear Mr. Stout:

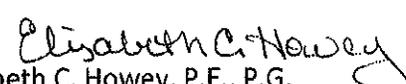
Froehling and Robertson, Inc. (F&R) has completed well abandonment services performed by a certified well contractor on the referenced project. F&R's work consisted of abandonment of nine (9) 2-inch diameter piezometer monitoring wells and two (2) 2-inch diameter water monitoring wells at the above referenced site. F&R abandoned the 11 existing wells in general accordance with 15A NCAC Subchapter 2C. Please find enclosed the North Carolina Well Abandonment Record for each well.

Please do not hesitate to contact me if you have any questions regarding these Well Abandonment Records or require additional information.

Sincerely,  
**FROEHLING & ROBERTSON, INC.**

  
J. Elver Thomas III, P.E.  
Geotechnical Engineer



  
Elizabeth C. Howey, P.E., P.G.  
Senior Geotechnical Engineer



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.  
Well Contractor (Individual) Name

Froehling & Robertson, Inc.  
Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603  
City or Town State Zip Code

(919) - 828-3441  
Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 503d

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other \_\_\_\_\_

(Check appropriate setting)

LATITUDE N 772749.74

LONGITUDE E 2942902.33

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID # (if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953  
City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 50 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.  
Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION: \_\_\_\_\_

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

<u>Neat Cement</u>	<u>Sand Cement</u>
Cement <u>188</u> lb.	Cement _____ lb.
Water <u>10</u> gal.	Water _____ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/5/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4/13/10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.  
Well Contractor (Individual) Name

Froehling & Robertson, Inc.  
Well Contractor Company Name

310 Hubert St.  
STREET ADDRESS

Raleigh NC 27603  
City or Town State Zip Code

(919) 828-3441  
Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 503

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other \_\_\_\_\_

(Check appropriate setting)

LATITUDE N 772744.09

LONGITUDE E 2942905.36

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID # (if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953  
City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 20 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

Cement 94 lb.  
Water 5 gal.

#### Sand Cement

Cement \_\_\_\_\_ lb.  
Water \_\_\_\_\_ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/5/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603

City or Town State Zip Code

(919) - 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 505

STATE WELL PERMIT # (if applicable)

COUNTY WELL PERMIT # (if applicable)

DWQ or OTHER PERMIT # (if applicable)

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use)

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 773251.27

LONGITUDE E 2942711.61

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable)

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953

City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS

### 5. WELL DETAILS:

a. Total Depth: 25 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): ft. in.

b. Casing Removed: ft. in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

Neat Cement

Sand Cement

Cement 94 lb.

Cement lb.

Water 5 gal.

Water gal.

Bentonite

Bentonite lb.

Type:  Slurry  Pellets

Water gal.

Other

Type material

Amount

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL. DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.  
Well Contractor (Individual) Name

Fruehling & Robertson, Inc.  
Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603  
City or Town State Zip Code

(919) - 828-3441  
Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 502S

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other \_\_\_\_\_

(Check appropriate setting)

LATITUDE N 773472.30

LONGITUDE E 2942768.70

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953  
City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 15 ft. Diameter: 1 in.

b. Water Level (Below Measuring Point): 3 ft.  
Measuring point is 1.5 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION: \_\_\_\_\_

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

Cement 30 lb.  
Water 2 gal.

#### Sand Cement

Cement \_\_\_\_\_ lb.  
Water \_\_\_\_\_ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Cut PVC off 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

### 11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.  
Well Contractor (Individual) Name

Froehling & Robertson, inc.  
Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603  
City or Town State Zip Code

(919) - 828-3441  
Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) GW6

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

#### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 773947.90

LONGITUDE E 2942765.94

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID # (if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953  
City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 20 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

Cement 94 lb.  
Water 5 gal.

#### Sand Cement

Cement \_\_\_\_\_ lb.  
Water \_\_\_\_\_ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Cut PVC off 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

### 11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL. DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603

City or Town State Zip Code

(919) - 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) GW-7

STATE WELL PERMIT # (if applicable)

COUNTY WELL PERMIT # (if applicable)

DWQ or OTHER PERMIT # (if applicable)

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use)

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 774497.80

LONGITUDE E 2942689.46

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY. The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable)

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953

City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS

### 5. WELL DETAILS:

a. Total Depth: 20 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): ft. in.

b. Casing Removed: ft. in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

Cement 94 lb.  
Water 5 gal.

#### Sand Cement

Cement lb.  
Water gal.

#### Bentonite

Bentonite lb.

Type:  Slurry  Pellets

Water gal.

#### Other

Type material

Amount

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR

DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.

PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603

City or Town State Zip Code

(919) - 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 506

STATE WELL PERMIT # (if applicable)

COUNTY WELL PERMIT # (if applicable)

DWQ or OTHER PERMIT # (if applicable)

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use)

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 774789.35

LONGITUDE E 2942603.78

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY. The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID # (if applicable)

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953

City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS

### 5. WELL DETAILS:

a. Total Depth: 20 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): ft. in.

b. Casing Removed: ft. in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

Neat Cement Sand Cement

Cement 94 lb. Cement lb.  
Water 5 gal. Water gal.

### Bentonite

Bentonite lb.

Type:  Slurry  Pellets

Water gal.

### Other

Type material

Amount

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr. 4-13-10  
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/hor residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh

NC

27603

City or Town

State

Zip Code

(919) - 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 506d

STATE WELL PERMIT # (if applicable)

COUNTY WELL PERMIT # (if applicable)

DWQ or OTHER PERMIT # (if applicable)

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use)

### 3. WELL LOCATION:

COUNTY Dare

QUADRANGLE NAME

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 774795.08

May be in degrees, minutes, seconds, or in a decimal format

LONGITUDE E 2942607.09

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable)

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor

NC

27953

City or Town

State

Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS

### 5. WELL DETAILS:

a. Total Depth: 50 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

Length

Diameter

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

#### Sand Cement

Cement 188 lb.

Cement \_\_\_\_\_ lb.

Water 10 gal.

Water \_\_\_\_\_ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

### 10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

### 11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR

DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.

PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603

City or Town State Zip Code

(919) 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 504

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other \_\_\_\_\_

(Check appropriate setting)

LATITUDE N 773251.27

LONGITUDE E 2942711.61

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953

City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 25 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): 4.2 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.

b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION: \_\_\_\_\_

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

Cement 94 lb.  
Water 5 gal.

#### Sand Cement

Cement \_\_\_\_\_ lb.  
Water \_\_\_\_\_ gal.

#### Bentonite

Bentonite \_\_\_\_\_ lb.  
Type:  Slurry  Pellets  
Water \_\_\_\_\_ gal.

#### Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Removed stand pipe & concrete pad, cut PVC 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/6/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.

Well Contractor (Individual) Name

Froehling & Robertson, Inc.

Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603

City or Town State Zip Code

(919) - 828-3441

Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 502d

STATE WELL PERMIT # (if applicable)

COUNTY WELL PERMIT # (if applicable)

DWQ or OTHER PERMIT # (if applicable)

WELL USE (Check applicable use):  Monitoring  Residential

Municipal/Public  Industrial/Commercial  Agricultural

Recovery  Injection  Irrigation

Other (list use)

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other

(Check appropriate setting)

LATITUDE N 773472.30

LONGITUDE E 2942768.70

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable)

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953

City or Town State Zip Code

### 4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS

### 5. WELL DETAILS:

a. Total Depth: 31 ft. Diameter: 1 in.

b. Water Level (Below Measuring Point): 4 ft.

Measuring point is 2 ft. above land surface.

### 6. CASING: Length Diameter

a. Casing Depth (if known): ft. in.

b. Casing Removed: ft. in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

#### Neat Cement

#### Sand Cement

Cement 30 lb.  
Water 20 gal.

Cement lb.  
Water gal.

#### Bentonite

Bentonite lb.

Type:  Slurry  Pellets

Water gal.

#### Other

Type material

Amount

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Cut PVC off 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/7/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

*James W. Gilchrist, Jr.*  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL



# WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

## WELL CONTRACTOR CERTIFICATION #2351A

### 1. WELL CONTRACTOR:

James W. Gilchrist, Jr.  
Well Contractor (Individual) Name

Froehling & Robertson, Inc.  
Well Contractor Company Name

STREET ADDRESS 310 Hubert St.

Raleigh NC 27603  
City or Town State Zip Code

(919) 828-3441  
Area code - Phone number

### 2. WELL INFORMATION:

SITE WELL ID # (if applicable) 501

STATE WELL PERMIT # (if applicable) \_\_\_\_\_

COUNTY WELL PERMIT # (if applicable) \_\_\_\_\_

DWQ or OTHER PERMIT # (if applicable) \_\_\_\_\_

WELL USE (Check applicable use):  Monitoring  Residential  
 Municipal/Public  Industrial/Commercial  Agricultural  
 Recovery  Injection  Irrigation  
 Other (list use) \_\_\_\_\_

### 3. WELL LOCATION:

COUNTY Dare QUADRANGLE NAME \_\_\_\_\_

NEAREST TOWN: Manns Harbor

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

### TOPOGRAPHIC / LAND SETTING:

Slope  Valley  Flat  Ridge  Other \_\_\_\_\_

(Check appropriate setting)

LATITUDE N 773021.90  
LONGITUDE E 2942745.50

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source:  GPS  Topographic map  
(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable) \_\_\_\_\_

NAME OF FACILITY C&D Landfill

STREET ADDRESS 1603 Cub Rd.

Manns Harbor NC 27953  
City or Town State Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME Same

STREET ADDRESS \_\_\_\_\_

### 5. WELL DETAILS:

a. Total Depth: 15 ft. Diameter: 1 in.  
b. Water Level (Below Measuring Point): 4.5 ft.  
Measuring point is 2 ft. above land surface.

### 6. CASING:

a. Casing Depth (if known): \_\_\_\_\_ ft. \_\_\_\_\_ in.  
b. Casing Removed: \_\_\_\_\_ ft. \_\_\_\_\_ in.

### 7. DISINFECTION:

(Amount of 65%-75% calcium hypochlorite used)

### 8. SEALING MATERIAL:

<u>Neat Cement</u>	<u>Sand Cement</u>
Cement <u>30</u> lb.	Cement _____ lb.
Water <u>2</u> gal.	Water _____ gal.

Bentonite

Bentonite \_\_\_\_\_ lb.

Type:  Slurry  Pellets

Water \_\_\_\_\_ gal.

Other

Type material \_\_\_\_\_

Amount \_\_\_\_\_

### 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Cut PVC off 2' below ground surface, filled PVC with neat cement from bottom to top with 1'x1'x6" concrete cap

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/5/10

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James W. Gilchrist, Jr.  
SIGNATURE OF CERTIFIED WELL CONTRACTOR

4-13-10  
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE  
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

James W. Gilchrist, Jr.  
PRINTED NAME OF PERSON ABANDONING THE WELL