



May 11, 2012

Ms. Christine Ritter
Hydrogeologist
NC DENR - Division of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

**RE: Halifax County Transfer Station
Response to Technical Review Comments**

Dear Ms. Ritter:

On behalf of Halifax County, Richardson Smith Gardner & Associates, Inc. (RSG) would like to respond to the comments in your letter dated April 25, 2012 (attached). Each comment is repeated below in *italics* followed by our response in **bold**.

GENERAL INFORMATION

Facility Description:

1. *Figure 1 included in the General Information section does not illustrate the location of the proposed transfer station.*

Please find attached an updated Figure 1 which shows the location of the proposed transfer station.

2. *Provide the size (acreage) of the actual area to be used for the transfer and storage operation.*

The attached Drawing S2 has been updated to show the contract area for the transfer station. This area is approximately 3.7 acres and includes portions of existing site roads and storage areas.

Property Information:

3. *Provide a copy of the USGS topographic quadrangle map of the area. The property boundaries of the site and the approximate transfer area should be drawn onto the map. The map may be a high quality photocopy.*

Please see the attached site location map (Figure 2) which shows the location of the facility and the proposed transfer station area.

4. *Provide a copy of the FEMA Flood Insurance floodplains map for the area, with the site properly marked on the map.*

Please see the attached Flood Insurance Rate Map (Map #3720394400J; Effective Date of July 3, 2007) which shows the approximate location of the transfer station. As shown there are no flood zones located near the proposed location. Also, there are no flood zones located

within the facility.

5. *Provide a letter and a map from the Army Corps of Engineers that addresses the wetlands determination of the property, and compliance with requirements, if applicable.*

Based on an assessment of the proposed site by Carolina Ecosystems, Inc., there are no jurisdictional wetlands or streams in the area to be developed for the transfer station. Please see the attached memo from Phil May of Carolina Ecosystems. As stated in the memo, confirmation by the Army Corps is not required.

OPERATIONS MANUAL

6. *Provide an estimate of tons per day expected to be managed at the transfer station.*

The transfer station should have adequate space for processing up to 200 tons per day. Typically the facility is anticipated to handle between 50 and 75 tons per day of waste. Section 1.1 has been revised to include this information.

7. *List the specific disposal facilities where the MSW waste will be transferred. Waste must only be transported to facilities whose service area includes the generation source.*

Formal arrangements for waste disposal have not been made at present. However, based on preliminary discussions, the likely facilities are the East Carolina Regional Landfill in Bertie County, NC or the Brunswick Waste Management Facility in Lawrenceville, VA. Both of these regional landfills would be able to accept waste from Halifax County. Section 2.6.3 of the Operations Manual has been modified to include these sites.

8. *Figure 1 illustrates a used pesticide area and used tires and electronic waste storage area on the north side of the Halifax County Landfill facility and a wood waste processing area and white goods handling area on the south side of the facility. Include a statement about the handling of those waste disposal activities under a separate permit(s).*

Figure 1 has been revised to include this statement.

9. *Signs must provide a description of the types of waste received, types of waste prohibited, operating hours, permit number, and emergency contact numbers.*

Section 1.5 of the Operations Manual has been revised to include this information.

10. *Describe the building structures, roofs/walls, scales, tipping floor, compactor and hopper, and water source for cleaning.*

Section 1.1 of the Operations Manual has been revised to include a general description of the building (metal building with reinforced concrete push walls and floors). There will not be a stationary “compactor” (waste will be compacted using a backhoe or mini-excavator as noted in Section 1.9). Also, there is also not a “hopper” but a loading chute formed by the push walls and the hole in the floor at the rear of the building (as shown on Drawing S3 and described in Section 2.6.2). The site is served by County water and two yard hydrants are anticipated at the front and rear of the building as shown on the attached revised Drawing S2.

11. *Provide a contingency plan for equipment breakdown, spills, vectors, noise, odors, unusual traffic patterns, power outages affecting the compactor and leachate pump, etc.*

Refer to Sections 3.5 and 3.6 for a description of vector and odor control measures. Given the rural location and tonnage being handled at the facility, noise is not anticipated to be an issue. There will be no stationary compactor or leachate pump used at the facility and the facility will mostly be operated during daylight hours, so power outages are not an issue. Section 1.9 has been modified to state that rental equipment can be readily obtained in the event of equipment breakdown of more than a few hours. Additionally, Section 3.3 has been modified to address spills outside of the building.

PERMIT DRAWINGS

12. *The engineered drawing Sheet No. 3 labeled Site Grading and Drainage Plan should include all utilities such as electric lines or gas pipelines if applicable. Also illustrate any recyclable storage areas with type and size of containers.*

The attached revised Drawing S2 has been updated to include utility information. Note that the location of existing overhead power lines are anticipated to be modified as necessary based on the final electrical design. Currently the citizen's drop off area is just for waste disposal and the waste will be placed through the side of the building as shown on Drawing S4. Information on recycling containers will be provided in the future as applicable.

SEDIMENTATION AND EROSION CONTROL PLAN

13. *Provide the letter of approval for the SECP when issued by the NC Division of Land Resources.*

Approval of the Division of Land Resources will be obtained prior to construction. RSG will forward a copy of this approval to you when obtained.

TRAFFIC STUDY

14. *Provide the letter of approval for the Traffic Study when issued by the NC Department of Transportation.*

Please find attached a letter from the NC DOT stating that a traffic study is not required for this facility.

Please contact me at your earliest convenience with any questions or comments on this submittal or if you require any additional information at this time.

Sincerely,
Richardson Smith Gardner & Associates, Inc.



Pieter K. Scheer, P.E.
Principal, Senior Engineer
pieter@rsgengineers.com



Ms. Christine Ritter
May 11, 2012
Page 4 of 4

Attachments: DWM Comment Letter
 Revised Figure 1
 Revised Drawing S2
 Site Location Map (Figure 2)
 FIRM Map 3720394400J
 Carolina Ecosystems Memo
 Revised Operations Manual
 Letter from NC DOT

cc: Gwen Matthews, Halifax County
 Larry Garriss, Halifax County



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Dexter R. Matthews

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

April 25, 2012

Gwen Matthews, Director
Halifax County Department of Public Utilities
26 N. King Street
P.O. Box 70
Halifax, North Carolina 27839

Re: Technical Review of Halifax County Transfer Station Permit Application
Halifax, Halifax County, North Carolina
P1244, Document ID No. 16491

Dear Ms. Matthews:

The Solid Waste Section has reviewed the Halifax County Transfer Station permit application submitted February 9, 2012, by Richardson Smith Gardner & Associates, Inc. and has the following comments pertaining to the application:

GENERAL INFORMATION

Facility Description:

Figure 1 included in the General Information section does not illustrate the location of the proposed transfer station.

Provide the size (acreage) of the actual area to be used for the transfer and storage operation.

Property Information

Provide a copy of the USGS topographic quadrangle map of the area. The property boundaries of the site and the approximate transfer area should be drawn onto the map. The map may be a high quality photocopy.

Provide a copy of the FEMA Flood Insurance floodplains map for the area, with the site property marked on the map.

Provide a letter and a map from the Army Corps of Engineers that addresses the wetlands determination of the property, and compliance with requirements, if applicable.

OPERATIONS MANUAL

Provide an estimate of tons per day expected to be managed at the transfer station.

List the specific disposal facilities where the MSW waste will be transferred. Waste must only be transported to facilities whose service area includes the generation source.

Figure 1 illustrates a used pesticide area and used tires and electronic waste storage area on the north side of the Halifax County Landfill facility and a wood waste processing area and white goods handling area on the south side of the facility. Include a statement about the handling of those waste disposal activities under a separate permit(s).

Signs must provide a description of the types of waste received, types of waste prohibited, operating hours, permit number, and emergency contact numbers.

Describe the building structures, roof/walls, scales, tipping floor, compactor and hopper, and water source for cleaning.

Provide a contingency plan for equipment breakdown, spills, vectors, noise, odors, unusual traffic patterns, power outages affecting the compactor and leachate pump, etc.

PERMIT DRAWINGS

The engineered drawing Sheet No. 3 labeled Site Grading and Drainage Plan should include all utilities such as electric lines or gas pipelines if applicable. Also illustrate any recyclable storage areas with type and size of containers.

SEDIMENTATION AND EROSION CONTROL PLAN

Provide the letter of approval for the SECP when issued by the NC Division of Land Resources.

TRAFFIC STUDY

Provide the letter of approval for the Traffic Study when issued by the NC Department of Transportation.

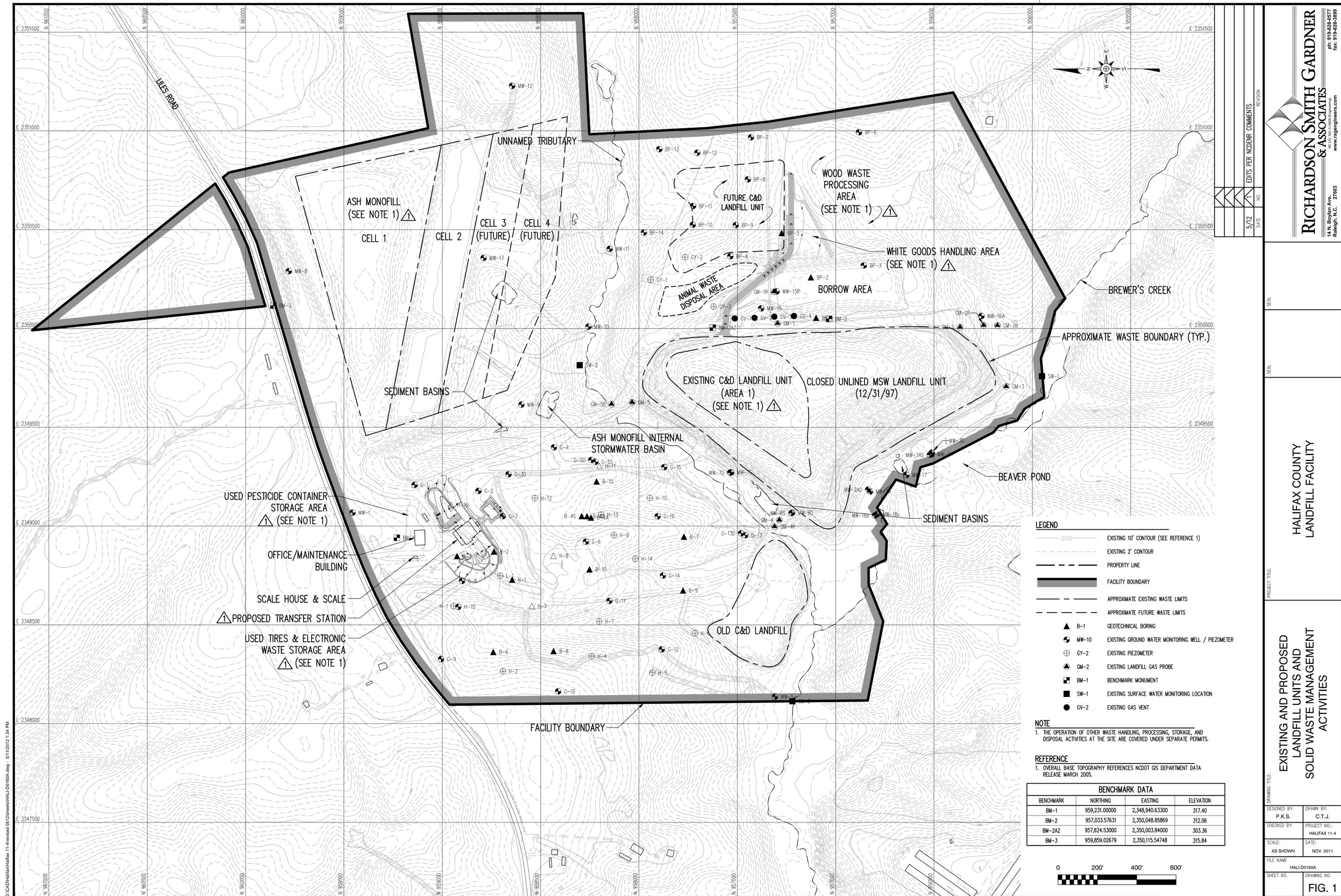
Please submit the above information as soon as possible to expedite processing of your permit. If you have any further questions or comments, please contact me by telephone at (919) 707-8254 or by email at Christine.ritter@ncdenr.gov.

Sincerely,



Christine Ritter
Hydrogeologist
NC Solid Waste Section

Cc: Ed Mussler, P.E., NC Solid Waste Section Mary Whaley, NC Solid Waste Section
Dennis Shackelford, NC Solid Waste Section Pieter Scheer, P.E., RSG & Associates



- LEGEND**
- 200 — EXISTING 10' CONTOUR (SEE REFERENCE 1)
 - — — EXISTING 2' CONTOUR
 - - - - - PROPERTY LINE
 - ▬ FACILITY BOUNDARY
 - - - - - APPROXIMATE EXISTING WASTE LIMITS
 - - - - - APPROXIMATE FUTURE WASTE LIMITS
 - ▲ B-1 GEOTECHNICAL BORING
 - ⊙ MW-10 EXISTING GROUND WATER MONITORING WELL / PIEZOMETER
 - ⊕ GY-2 EXISTING PIEZOMETER
 - ⊙ GM-2 EXISTING LANDFILL GAS PROBE
 - BM-1 BENCHMARK MONUMENT
 - SW-1 EXISTING SURFACE WATER MONITORING LOCATION
 - GV-2 EXISTING GAS VENT

NOTE
 1. THE OPERATION OF OTHER WASTE HANDLING, PROCESSING, STORAGE, AND DISPOSAL ACTIVITIES AT THE SITE ARE COVERED UNDER SEPARATE PERMITS.

REFERENCE
 1. OVERALL BASE TOPOGRAPHY REFERENCES NCDOT GIS DEPARTMENT DATA RELEASE MARCH 2005.

BENCHMARK DATA			
BENCHMARK	NORTHING	EASTING	ELEVATION
BM-1	959,231.00000	2,348,940.63300	317.40
BM-2	957,033.57631	2,350,048.85869	312.06
BM-2AZ	957,624.53000	2,350,003.84000	303.36
BM-3	959,859.02679	2,350,115.54748	315.84



EDITS PER INCORP. COMMENTS

NO.	DATE	REVISION
5/12		

RICHARDSON SMITH GARDNER & ASSOCIATES
 14 N. Boylan Ave.
 Raleigh, N.C. 27603
 www.rsgengineers.com
 ph: 919-428-0577
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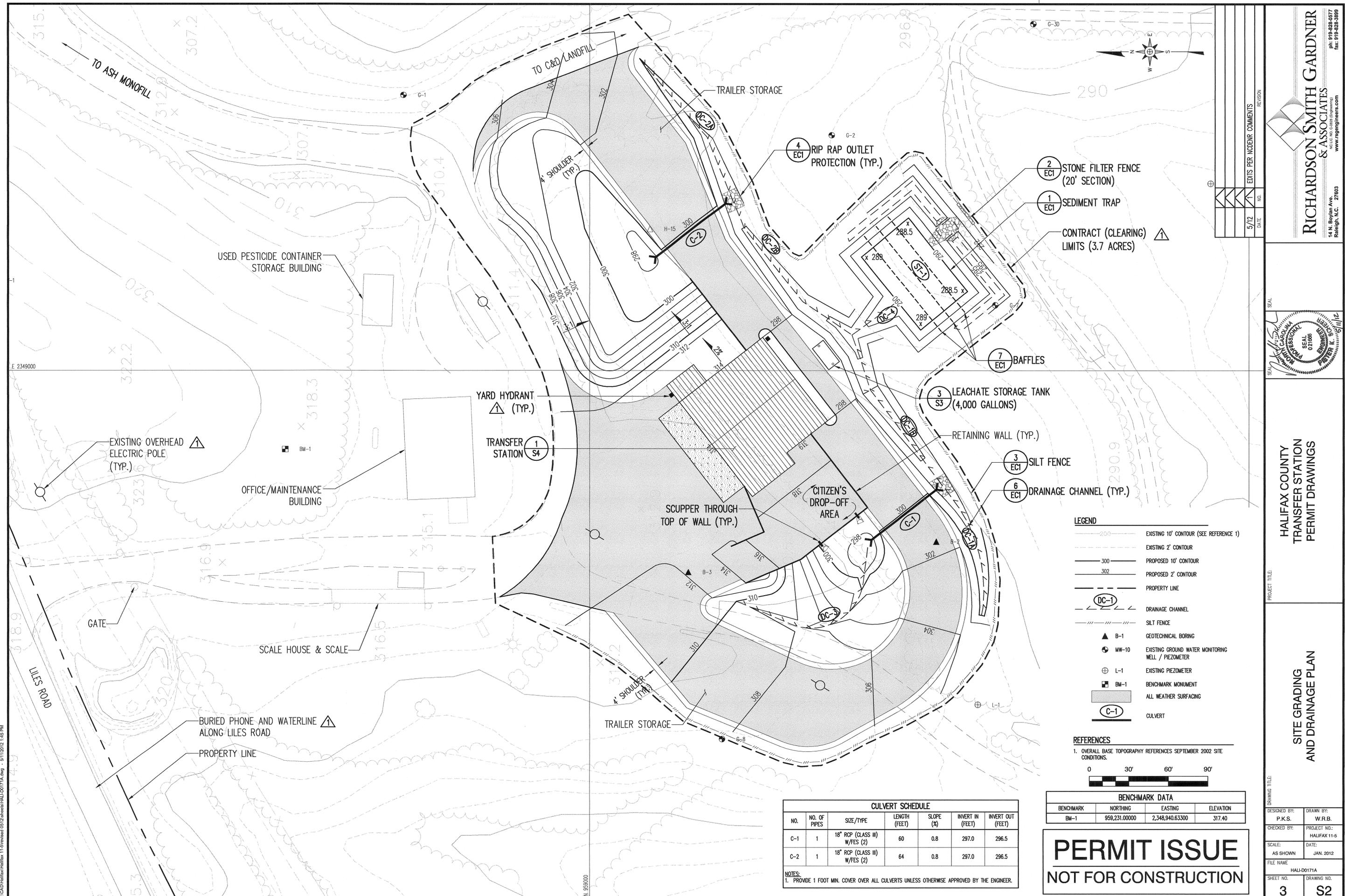
PROJECT TITLE:
HALIFAX COUNTY LANDFILL FACILITY

EXISTING AND PROPOSED LANDFILL UNITS AND SOLID WASTE MANAGEMENT ACTIVITIES

DESIGNED BY: P.K.S.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: HALIFAX 11-4
SCALE: AS SHOWN	DATE: NOV. 2011
SHEET NO.	DRAWING NO.
	FIG. 1

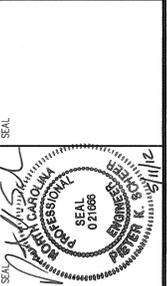
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NO.	DATE	REVISION
1	5/12	EDITS PER INCORP COMMENTS

RICHARDSON SMITH GARDNER & ASSOCIATES
 P.E. NO. 0004 (Engineering)
 Raleigh, N.C. 27603
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 fax: 919-968-9389



HALIFAX COUNTY
 TRANSFER STATION
 PERMIT DRAWINGS

PROJECT TITLE: HALIFAX COUNTY TRANSFER STATION PERMIT DRAWINGS
 DRAWING TITLE: SITE GRADING AND DRAINAGE PLAN

DESIGNED BY: P.K.S.	DRAWN BY: W.R.B.
CHECKED BY:	PROJECT NO.: HALIFAX 11-6
SCALE: AS SHOWN	DATE: JAN. 2012
FILE NAME: HAL-D0171A	SHEET NO. 3
	DRAWING NO. S2

LEGEND

- 200 --- EXISTING 10' CONTOUR (SEE REFERENCE 1)
- 300 --- EXISTING 2' CONTOUR
- 302 --- PROPOSED 10' CONTOUR
- 310 --- PROPOSED 2' CONTOUR
- --- PROPERTY LINE
- (DC-1) DRAINAGE CHANNEL
- --- SILT FENCE
- ▲ B-1 GEOTECHNICAL BORING
- ⊙ MW-10 EXISTING GROUND WATER MONITORING WELL / PIEZOMETER
- ⊕ L-1 EXISTING PIEZOMETER
- BM-1 BENCHMARK MONUMENT
- ALL WEATHER SURFACING
- (C-1) CULVERT

REFERENCES

1. OVERALL BASE TOPOGRAPHY REFERENCES SEPTEMBER 2002 SITE CONDITIONS.



BENCHMARK DATA			
BENCHMARK	NORTHING	EASTING	ELEVATION
BM-1	958,231.00000	2,348,940.63300	317.40

CULVERT SCHEDULE						
NO.	NO. OF PIPES	SIZE / TYPE	LENGTH (FEET)	SLOPE (%)	INVERT IN (FEET)	INVERT OUT (FEET)
C-1	1	18" RCP (CLASS III) W/FES (2)	60	0.8	297.0	296.5
C-2	1	18" RCP (CLASS III) W/FES (2)	64	0.8	297.0	296.5

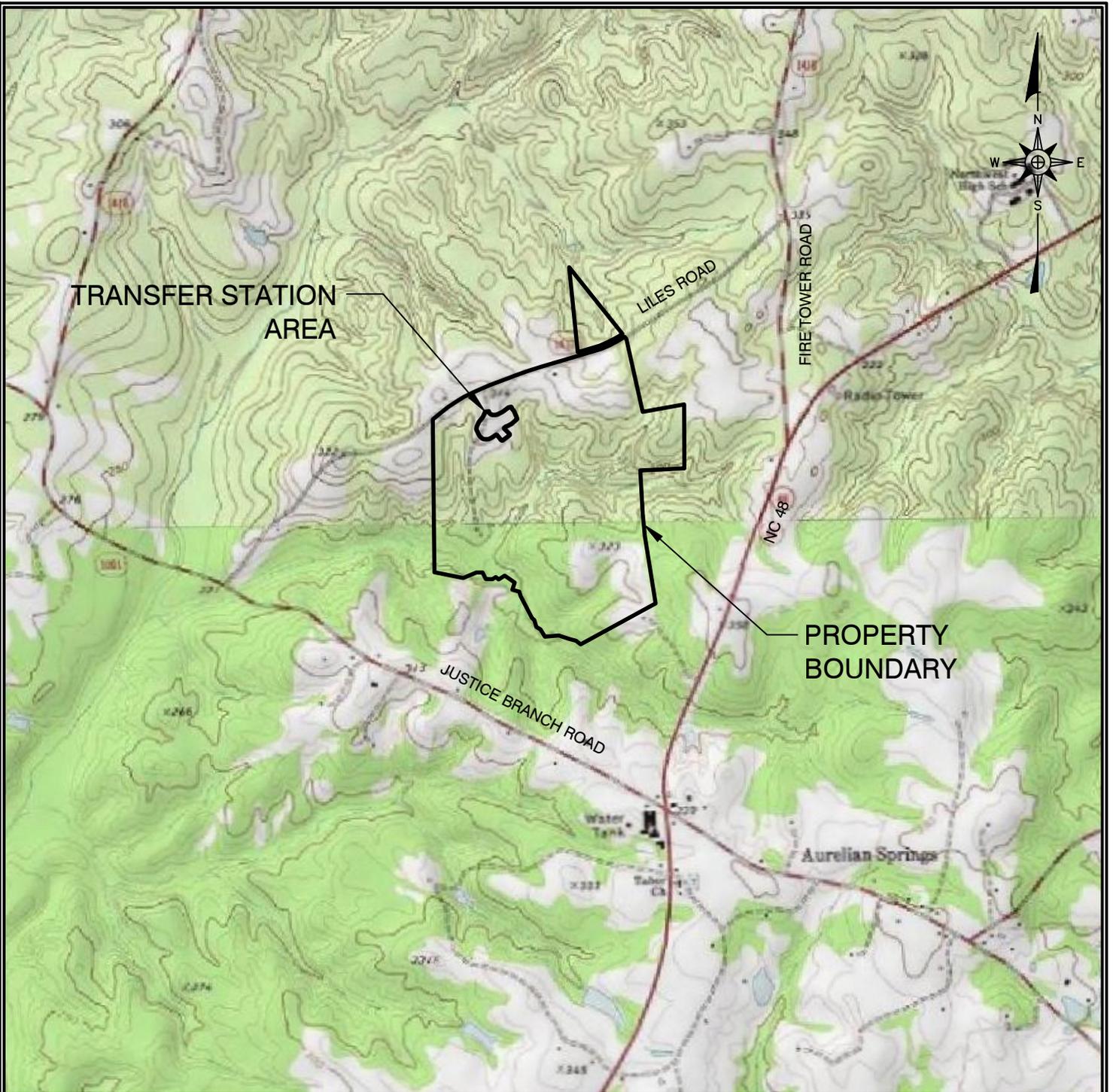
NOTES:
 1. PROVIDE 1 FOOT MIN. COVER OVER ALL CULVERTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

PERMIT ISSUE
NOT FOR CONSTRUCTION

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G:\CAD\Halifax\Halifax 11-5\revised 0512\sheets\HALI-A0182.dwg - 5/10/2012 6:10 PM



REFERENCE:
 BACKGROUND TOPOGRAPHY USGS QUADRANGLES "THELMA" AND
 "AURELIAN SPRINGS".



HALIFAX COUNTY TRANSFER STATION SITE LOCATION MAP

**RICHARDSON SMITH GARDNER
 & ASSOCIATES**

14 N. Boylan Ave.
 Raleigh, N.C. 27603

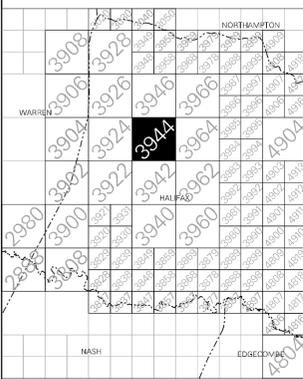
NC LIC. NO. C-0828 (Engineering)
www.rsgengineers.com

ph: 919-828-0577
 fax: 919-828-3899

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	PROJECT NO.	FIGURE NO.	FILE NAME
AS SHOWN	J.A.L.	P.K.S.	May. 2012	HALIFAX 11-5	2	HALI-A0182

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STATE OF NORTH CAROLINA FIRM PANEL LOCATOR DIAGRAM



DATUM INFORMATION

The projection used in the preparation of this map was the North Carolina State Plane (NAD 83). The horizontal datum was the North American Datum of 1983 (NAD 83). Differences in datum, ellipsoid, projection, or Universal Transverse Mercator zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM. All coordinates on this map are in U.S. Survey Feet, where 1 U.S. Survey Foot = 1200/3937 Meters.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each North Carolina county. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this statewide format FIRM. The offsets for each county shown on this FIRM panel are shown in the vertical datum offset table below. Where a county boundary and a flooding source with unrevised NGVD 29 flood elevations are coincident, an individual offset has been calculated and applied during the creation of this statewide format FIRM. See Section 6.1 of the accompanying Flood Insurance Study report to obtain further information on the conversion of elevations between NAVD 88 and NGVD 29. To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the North Carolina Geodetic Survey at the address shown below. You may also contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or

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MEMORANDUM

DATE: May 10, 2012

FROM: Phil May, Carolina Ecosystems, Inc.

TO: Pieter Scheer, P.E., RSG

RE: Clean Water Act Jurisdictional Assessment
Halifax County Transfer Station
Littleton, NC

As requested, Carolina Ecosystems, Inc. (CEI) has performed an assessment of the proposed site for the Halifax County Transfer Station in order to determine if any resources under the jurisdiction of the Clean Water Act (CWA) or Tar-Pamlico River Riparian Buffer Rules (TPBR) are present. This memorandum briefly summarizes the results of this investigation.

The study area was defined as the area of disturbance shown on Sheet 3 Drawing S2 of the Halifax County Transfer Station Permit Drawings plus an approximate 100 foot buffer around the disturbance area. The site was traversed and evaluated for indicators of wetlands and streams under the jurisdiction of the CWA. Jurisdiction was determined using US Army Corps of Engineers (USACE) methodologies outlined in their 1987 Wetland Delineation Manual and subsequent regional guidance. This method relies primarily on indicators of an ordinary high water mark along the channels and presence of all three required criteria (hydric soils, hydrophytic vegetation, and hydrology) for wetlands. Channels were evaluated for their jurisdiction under the TPBR using the current NC Division of Water Quality (NCDWQ) Stream Identification Method (Version 4.1.1) and existing mapping.

No indicators of resources under the jurisdiction of the CWA or TPBR were found within the study area. Vegetation was typical of upland areas, and no evidence of wetland hydrology was present within the study area. Soils exhibited no hydric indicators and were consistently bright in color (10 YR 5/6 typically). One small drainage channel begins over 150 feet west of the proposed transfer station (not shown on Sheet 3 Drawing S2). This channel did not meet stream criteria within the study area and was determined to be ephemeral. No potential TPBR stream channels are present or mapped on the U.S. Geologic Service or Natural Resources Conservation Service maps of the study area.

As no jurisdictional resources were found on the site, no formal verification is required under the CWA or TPBR. Confirmation of these findings can be obtained through submittal of information to the USACE and NCDWQ if requested, but is not required under current regulations. If you have any questions, or need further information regarding this investigation, please call me at your convenience at (919) 606-1065 or email me at phil.may@carolinaeco.com. We appreciate the opportunity to work on this project.

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Operations Manual

Halifax County Transfer Station Halifax County, North Carolina

Prepared for:

Halifax County Department of Public Utilities
Halifax, North Carolina

January 2012
Revised: May 2012



14 N. BOYLAN AVENUE
RALEIGH, NORTH CAROLINA 27603
NC LIC. NO. C-0828 (ENGINEERING)

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**HALIFAX COUNTY
TRANSFER STATION**

OPERATIONS MANUAL

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SECTION 1.0 GENERAL FACILITY OPERATIONS

1.1 OVERVIEW

This Operations Manual was prepared for the Halifax County Transfer Station (Permit No.42-04T) located on Liles Road near Littleton (see **Figure 1**). This document discusses the operation of the transfer station, which is used for the collection and transport of municipal solid waste (MSW), and specifically addresses requirements of North Carolina Solid Waste Management Rules *Section .0402 - Operational Requirements*. Refer to **Figure 2** for the general layout of the facility.

The transfer station will consist of a metal building with a reinforced concrete tipping floor, single loading chute, and loading bay (with reinforced concrete floor) all under roof. The facility is designed to handle up to approximately 200 tons per day of waste. Typically, the facility will handle 50 to 75 tons per day of waste.

1.2 CONTACT INFORMATION

All correspondence and questions concerning the operation of the Halifax County Transfer Station should be directed to the appropriate County and State personnel listed below. For fire or police emergencies dial 911.

1.2.1 Halifax County

Halifax County Department of Public Utilities
26 N. King Street (Public Works Bldg.)
P.O. Box 70
Halifax, NC 27839
Phone: (252) 583-1451
Fax: (252) 593-5014
Contact: Gwen Matthews, Director

Halifax County Landfill
921 Liles Road
Littleton, NC 27850
Phone: (252) 586-7516
Fax: (252) 586-2685
Contact: Larry Garriss, Solid Waste Director

1.2.2 North Carolina Department of Environment and Natural Resources

North Carolina DENR - Fayetteville Regional Office (FRO)
225 Green Street, Suite 714
Fayetteville, NC 28301

Phone: (910) 486-1541
Fax: (910) 486-0707

North Carolina DENR - Raleigh Central Office (RCO)
1646 Mail Service Center
Raleigh, NC 27699-1646
217 West Jones Street
Raleigh, NC 27603
Phone: (919) 707-8200

North Carolina DENR - Raleigh Regional Office (RRO)
3800 Barrett Drive
Raleigh, NC 27609
Phone: (919) 571-4700
Fax: (919) 571-4718

Division of Waste Management (DWM) - Solid Waste Section:

Field Operations Branch Head:	Mark Poindexter (RCO)
Eastern District Supervisor:	Dennis Shackelford (FRO)
Waste Management Specialist:	Mary Whaley (RCO)

Division of Land Resources - Land Quality Section:

Regional Engineer:	John Holley, P.E. (RRO)
--------------------	-------------------------

1.3 FACILITY OPERATING HOURS

Normal hours of operation will be 8:00 A.M. to 4:00 P.M. Monday to Friday. The facility will be closed on Sundays and on observed holidays which include: New Year's Day, Martin Luther King Jr. Day, Good Friday, Memorial Day, Thanksgiving Eve, Thanksgiving Day, Christmas Eve, and Christmas Day.

The County may elect to modify these hours and scheduled holidays from time to time.

1.4 ACCESS CONTROL

Limiting access to the solid waste management facility is important for the following reasons:

- Unauthorized and illegal dumping of waste materials is prevented.
- Trespassing, and injury resulting therefrom, is discouraged.
- The risk of vandalism is greatly reduced.

Access to active areas of the facility will be controlled by a combination of fences and natural barriers, and strictly enforced operating hours. An attendant will be on duty at all times when the facility is open for public use to enforce access restrictions (see also **Section 1.10**).

1.4.1 Physical Restraints

The site will be accessed by the existing entrance on Liles Road. A scale and scale house is provided at this entrance. All waste will have been weighed prior to being processed through the transfer station. The facility entrance has a gate which will be securely locked during non-operating hours.

1.4.2 Security

Frequent inspections of gates and fences will be performed by facility personnel. The County will arrange for a random security patrol of the main gate to further discourage trespassing. Evidence of trespassing, vandalism, or illegal operation will be reported to the County Solid Waste Director.

1.5 SIGNAGE

A prominent sign(s) containing the information required by the DWM will be placed at the main facility entrance. This sign(s) will provide information on operating hours, operating procedures, and acceptable wastes in addition to listing the permit number and emergency contact information. Additional signage will be provided as necessary within the facility complex to distinctly distinguish the roadway to the transfer station from other solid waste management activities. Service and maintenance roads for use by operations personnel will be clearly marked and barriers (e.g., traffic cones, barrels, etc.) will be provided as required.

1.6 COMMUNICATIONS

Two way radio communication will be maintained between the transfer station and the facility scale house and office. The scale house and office have telephones in case of emergency and for the conduct of day-to-day business. Emergency telephone numbers are displayed.

1.7 FIRE CONTROL

Although no open burning of waste is allowed at the facility, the possibility of fire within the transfer station or a piece of equipment must be anticipated in the daily operation of the facility.

1.7.1 Fire Triangle

The “triangle” illustrates the rule that in order to ignite and burn, a fire requires three (3) elements: heat, fuel, and oxygen. A fire is prevented or extinguished by “removing” any one of them. A fire naturally occurs when the elements are combined in the right mixture (e.g., more heat needed for igniting some fuels, unless there is concentrated oxygen). These principles are integral in the prevention and management of potential fire situations.



1.7.2 Equipment

A combination of factory installed fire suppression systems and/or portable fire extinguishers will be operational on all pieces of heavy equipment at all times. Potential fire hazards are created from the build-up of fine, dry dust particles on and around operational motors and control panels. The presence of these build-ups can cause overheating and potential fire if periodic equipment cleaning and maintenance are not practiced. Portable fire extinguishers should be maintained in a state of readiness on each piece of moving equipment and equipment should be cleaned periodically.

1.7.3 General Fire Management Strategies

Each fire situation is site specific; however, general strategies for active fire management include the following (in no particular order):

- Covering of burning material with soil (reduce oxygen);
- Covering of burning material with foams (reduce oxygen);
- Flooding the burning material with water (reduce heat);
- Injecting an inert gas such as CO₂ (reduce oxygen); and
- Excavating the burning material (displacing fuel) and then extinguishing it in small controlled areas.

1.7.4 Fires within the Transfer Station or in Transfer Trailers

Fires within the transfer station or in transfer trailers will be limited by the control of “hot” loads entering the facility. Facility personnel at the scale house will turn away all vehicles containing waste that is suspected to be hot. If smoldering or burning waste is discovered on the tipping floor, then the waste will be segregated, spread as thin as possible, and the fire will be extinguished. No “hot” material will be loaded onto transfer trailers.

Transfer trailer fires are uncommon, but may occur when open trailers are loosely loaded with combustible waste materials. If smoke or fire are observed in a loaded waste transfer trailer, the fire must be immediately reported to the Solid Waste Director. If possible, the load should be immediately doused with water from the tipping floor loading chute. If possible, the transfer trailer should be slowly moved from the truck bay, moved at least 100 feet away from the building, and disconnected from the truck cab. The Solid Waste Director will evaluate the situation and response, and, if necessary, **call 911**.

1.7.5 Notification

The County will verbally notify the DWM (see **Section 1.2.2**) within 24 hours of discovery of a fire within the transfer station. In addition, written documentation describing the fire, the actions carried out to extinguish the fire, and a strategy for preventing future occurrences will be provided to the DWM within 15 days following

any such occurrence.

1.7.6 Coordination with Local Fire Department

A copy of this Operations Manual will be filed with the local fire department including all contact information for the facility.

1.8 SEVERE WEATHER CONDITIONS

Unusual weather conditions can directly affect the operation of the facility. Some of these weather conditions and recommended operational responses are as follows.

1.8.1 Ice Storms

An ice storm can make access to the facility dangerous, prevent movement and, thus, may require closure of the facility until the ice is removed or has melted.

1.8.2 Heavy Rains

Exposed soil surfaces can create a muddy situation in some portions of the facility during rainy periods. The control of drainage and use of crushed stone on unpaved roads should provide all-weather access for the site and promote drainage away from critical areas. In areas where the aggregate surface is washed away or otherwise damaged, new aggregate should be used for repair.

1.8.3 Electrical Storms

The open areas of the facility are susceptible to the hazards of an electrical storm. If necessary, activities will be temporarily suspended during such an event. Refuge will be taken as necessary in the on-site buildings or in rubber-tired vehicles.

1.8.4 Windy Conditions

Facility operations during a particularly windy period may require that the active tipping area be temporarily shifted to a more sheltered area and/or reduced in size.

1.8.5 Violent Storms

In the event of hurricane, tornado, or severe winter storm warning issued by the National Weather Service, facility operations may be temporarily suspended until the warning is lifted.

1.9 EQUIPMENT REQUIREMENTS

The County will maintain on-site equipment required to perform the necessary transfer activities. The County typically use the following equipment in the daily operation of the transfer station:

- Wheel Loader - waste movement and trailer loading;
- Backhoe (or mini-excavator) - trailer loading and compaction;
- Truck - movement of transfer trailers on-site; and
- Transfer Vehicles (trucks/trailers).

Periodic maintenance of all equipment and minor and major repair work will be performed at designated maintenance zones. In the event of equipment breakdown of more than a few hours, local sources of rental equipment are readily available to keep the transfer station in operation.

1.10 PERSONNEL REQUIREMENTS

At least one member of the facility supervisory staff will be experienced in the management of transfer station operations. Each facility employee will go through an annual training course (led by supervisory staff). As part of this training, personnel will learn to recognize loads which may contain prohibited wastes.

1.11 HEALTH AND SAFETY

All aspects of the facility operations were developed with the health and safety of the operating staff, customers, and neighbors in mind. Prior to commencement of operations of the facility, a member of the operating staff will be designated site safety officer. This individual, together with the facility's management, will modify the site safety and emergency response program to remain consistent with national Solid Waste Management Association (SWANA) and Occupational Safety and Health Administration (OSHA) guidance.

Safety equipment provided includes equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Facility personnel will be encouraged to complete the American Red Cross Basic First Aid Course. Other safety requirements as designated by the County will also be implemented.

Facility employees will be routinely trained in health and safety by supervisory staff. All training will be documented. The following are some general recommendations for the health and safety of workers:

1.11.1 Personal Hygiene

The following items are recommended as a minimum of practice:

- Wash hands before eating, drinking, or smoking.
- Wear personal protective equipment as described in **Section 1.11.2**.
- Wash, disinfect, and bandage ANY cut, no matter how small it is. Any break in the skin can become a source of infection.
- Keep fingernails closely trimmed and clean (dirty nails can harbor pathogens).

1.11.2 Personal Protective Equipment

Personal Protective Equipment (PPE) must be evaluated as to the level of protection necessary for particular operating conditions and then made available to facility employees. The list below includes the PPE typically used and/or required in a solid waste management facility workplace.

- Safety shoes with steel toes.
- Hearing protection should be used in areas where extended exposure to continuous high decibel levels are expected.
- Disposable rubber latex or chemical resistant gloves for handling and/or sampling of waste materials.
- Dust filter masks.
- Class 2 vest, shirt, or coat (at all times).

Following use, PPE's should be disposed of or adequately cleaned, dried, or readied for reuse.

1.11.3 Mechanical Equipment Hazard Prevention

All equipment should be operated with care and caution. All safety equipment such as horns, backup alarms, and lights should be functional. A Lockout-Tagout program will be used to identify equipment in need or under repair and insure that operation is "off-limits" prior to maintenance or repair. All operators will be trained in the proper operation of equipment.

1.11.4 Employee Health and Safety

Some general safety rules are:

- Consider safety first when planning and conducting activities.
- Review the equipment O&M manual(s) prior to attempting repairs/changes.
- Remember the buddy system in case of repair of mechanical equipment.
- Post emergency contact phone numbers.
- Provide easy and visible access to the Right to Know materials.
- Provide easy and visible access to first aid kits and fire extinguishers.

1.11.5 Physical Exposure

Facility personnel may come in contact with the fluids, solids, and airborne constituents found at the facility. Routine training should be conducted regarding the individual and collective materials used at the facility and their associated hazards. Training concerning safe work practices around these potential exposures should use equipment and proper disposal procedures.

1.11.6 Material Safety Data Sheets

Material Safety Data Sheets (MSDS) will be collected on every waste (if available) that enters the facility. Information will also be made available for all chemicals stored on site for use at the facility. MSDS sheets will be stored in a location with all other Right to Know information for the site.

1.12 UTILITIES

Electrical power, water, telephone, and restrooms will be provided at the facility scale house and office/maintenance building.

1.13 RECORD KEEPING PROGRAM

The Operator will maintain the following records related to the transfer station in an operating record at the facility:

- A. Current permit(s);
- B. Inspection reports;
- C. Audit and compliance records;
- D. Annual reports;
- E. Waste inspection records (see **Section 2.5**);
- F. Daily tonnage records - including source of generation;
- G. Waste determination records;
- H. List of generators and haulers that have attempted to dispose of restricted wastes;
- I. Employee training procedures and records of training completed; and
- J. Cost estimates or financial assurance documentation.

The operating record will be kept up to date by the Solid Waste Director or his designee. It will be presented upon request to the DWM for inspection. A copy of this Operations Manual will be kept at the facility and will be available for use at all times.

SECTION 2.0 WASTE HANDLING OPERATIONS

2.1 OVERVIEW

This section describes the required waste handling operations for the transfer station.

2.2 ACCEPTABLE WASTES

Only the waste as defined by NCGS 130A-290(a)(18a) generated within the approved service area (see **Section 2.2.1**) may be received at the transfer station. The waste processed at the transfer station includes wastes generated from residential, commercial, industrial, and institutional sources.

2.2.1 Service Area

The service area for the facility is Halifax County, NC.

2.3 PROHIBITED WASTES

Only wastes as defined in **Section 2.2** above may be accepted in the MSW transfer station. No other wastes may be accepted including the following wastes (per NCGS 130A-309.10)*:

- Used Oil
- Yard Trash (Yard Waste)
- White Goods
- Antifreeze
- Aluminum Cans
- Whole Scrap Tires
- Lead Acid Batteries
- Beverage Containers (those that are required to be recycled under NCGS 18B-1006.1)
- Motor Vehicle Oil Filters
- Recyclable Rigid Plastic Containers
- Wooden Pallets
- Oyster Shells
- Discarded Computer Equipment and Televisions.

**Note that incidental or occasional disposal of small amounts of the above listed wastes is not considered a violation.*

In addition, operating criteria prohibit other materials from receipt within the transfer station. These materials include:

- Hazardous waste as defined by NCGS 130A-290(a)(8), including hazardous waste from conditionally exempt small quantity generators.
- Polychlorinated biphenyls (PCB) wastes as defined in 40 CFR 761 with the exception of trace amounts found in materials such as consumer electronics.
- Bulk or non-containerized liquid wastes unless the waste is household waste other than septic waste and waste oil. A liquid determination will be performed by the paint filter test (see **Appendix A** for apparatus and procedure).
- Containers holding liquid wastes unless the waste is household waste.

At the County's discretion, or as may be required by law, recyclable materials may be separated and placed in roll-off, or other containers located near the transfer station. These containers will be stored on site until they are full, and will then be transported off site.

2.4 PROHIBITION OF OPEN BURNING

Open burning of waste is prohibited at the facility.

2.5 WASTE SCREENING PROGRAMS

In order to assure that prohibited wastes are not entering the facility, screening programs have been implemented. Waste received at both the scale house entrance and waste taken to the transfer station is inspected by trained personnel. These individuals have been trained to spot indications of suspicious wastes, including: hazardous placarding or markings, liquids, powders or dusts, sludges, bright or unusual colors, drums or commercial size containers, and "chemical" odors. Screening programs for visual and olfactory characteristics of prohibited wastes are an ongoing part of the operation of the facility.

Records of information gathered as part of the waste screening programs will be maintained at the facility during its active life and as long as required by the County and the DWM.

2.5.1 Waste Receiving and Inspection

All vehicles must stop at the scale house located at the main entrance of the facility and visitors are required to sign-in. All waste transportation vehicles are weighed and the content of the load assessed. The scale attendant(s) requests from the driver of the vehicle a description of the waste it is carrying to ensure that unacceptable waste is not allowed into the facility. The attendant(s) then visually checks the vehicle as it crosses the scale. Signs informing users of the acceptable and unacceptable types of waste are posted at the scale house. Once passing the scales, the vehicles are routed to the MSW transfer station or other area as appropriate.

Vehicles are randomly selected for screening on a regular basis, depending on personnel available. At least one vehicle per week, but not less than 1% by weight of the waste

stream entering the facility (based on the previous week's total), will be randomly selected by inspection personnel. A random truck number and time will be selected (e.g., the tenth load after 10:00 a.m.) on the day of inspections. However, if something looks suspicious is spotted in any waste load, that load is inspected further.

Vehicles selected for inspection at the transfer station are directed to an area on the tipping floor where the vehicle will be unloaded. Waste is carefully spread using suitable equipment. An attendant trained to identify wastes that are unacceptable inspects the waste discharged at the screening area. If unacceptable waste is found, including wastes generated from outside of the service area, the load will be isolated, reloaded, and the generator/hauler will be logged and escorted out of the facility. For unacceptable wastes that are non-hazardous, the Solid Waste Director will then notify officials of the DWM (see **Section 1.2.2**) within 24 hours of attempted disposal of any waste the facility is not permitted to receive in order to determine the proper course of action. For unacceptable wastes that are hazardous, the Hazardous Waste Contingency Plan outlined in **Section 2.4.2** will be followed. The hauler is responsible for removing unacceptable waste from the facility property.

If no unacceptable waste is found, the load will be loaded onto a transfer trailer. All random waste inspections will be documented by facility staff using the waste screening form provided in **Appendix B**.

In addition to random waste screening described above, waste unloaded on the tipping floor will be inspected by the equipment operators, trained to spot unacceptable wastes, before and during pushing into the transfer trailers. Any suspicious looking waste will be reported immediately to the designated primary inspector for further evaluation.

2.5.2 Hazardous Waste Contingency Plan

In the event that identifiable hazardous waste or waste of questionable character is detected at the facility, appropriate equipment, protective gear, personnel, and materials as necessary will be employed to isolate the wastes. The DWM will be notified immediately (see **Section 1.2.2**) that an attempt was made to dispose of hazardous waste at the facility. If the vehicle attempting disposal of such waste is known, all attempts will be made to prevent that vehicle from leaving the site or, if the vehicle has left the site, immediate notice will be served on the owner of the vehicle that hazardous waste, for which they have responsibility, has been disposed of at the facility.

The County will assist the DWM as necessary and appropriate in the removal and disposition of the hazardous waste and in the prosecution of responsible parties. If needed, the hazardous waste will be covered with either on-site soils or other tarping material until such time when an appropriate method can be implemented to properly handle the waste. The cost of the removal and disposing of the hazardous waste will be charged to the owner of the vehicle involved. Any vehicle owner or operator who knowingly dumps hazardous waste at the facility may be barred from future use.

Should an incident where hazardous waste is found at the facility occur, the event will be documented by facility staff using the waste screening form provided in **Appendix B**.

2.6 TRANSFER STATION OPERATIONS

2.6.1 Waste Receipt

All wastes received for processing at the transfer station will have been weighed-in and visually inspected by scale house personnel (see **Section 2.5**). Vehicles to be unloaded on the tipping floor will be directed by the waste spotter to back into the transfer station building and unload onto the tipping floor (approximate 4,500 square feet in area).

2.6.2 Tipping Floor Operations

Unloaded wastes will be visually inspected on the tipping floor (see **Section 2.5**). Acceptable wastes will be loaded into an awaiting open-top transfer trailer in the loading bay (lower floor of the building). The building has push walls on either side of the tipping floor to aid operations staff in pushing waste through the loading chute located above the loading bay.

2.6.3 Transfer Trailer Loading and Transport

The waste placed in each trailer should be adequately placed and to eliminate excessive surface voids, irregularities, and protruding wastes to the extent possible. The loaded transfer trailer will be immediately covered with a tarp prior to leaving the loading bay. Any partially loaded trailers will be covered overnight with a tarp and left in the loading bay. The movement of transfer trailers on the site is the responsibility of the County. The movement of transfer trailers to and from the site is the responsibility of either the County or contracted transfer trucking firm.

Once loaded, transfer trailers will be moved from the loading bay to await transport to the designated disposal facility(ies) (currently anticipated to be the East Carolina Regional Landfill in Bertie County, NC and/or the Brunswick Waste Management Facility in Lawrenceville, VA). The disposal facility will be appropriately permitted to receive waste from the transfer station's service area. Waste can be stored in covered transfer trailers at the facility after hours, but no longer than 48 hours.

2.6.4 Equipment Operations Within the Transfer Station

Equipment operations will be carried out in a safe manner to avoid damage to the structure and transport vehicles.

2.6.5 Daily Cleaning

Daily cleaning will be used to control the potential for disease vectors, fire, odors, blowing litter, and scavenging. Any waste remaining on the tipping floor at the end of

each day shall be placed into a transfer trailer and the partially filled trailer will be covered overnight with a tarp. Additionally, the tipping floor will be rinsed with water at the end of each working day. Wash-down water, which becomes leachate upon contact with waste or waste residue, will be directed toward the floor drain located in the loading bay. From the drain, the wash-down water flows to a concrete storage tank located near the back of the building (see **Section 3.3** for management of leachate). As small a working area as possible should be maintained on the tipping floor to minimize the amount of daily cleanup required and the amount of leachate generated.

In case of an emergency, a tarp may be used to cover wastes that must remain on the tipping floor overnight. A tarp cover will be used only when it is impossible to clear the tipping floor.

2.6.6 Weekly Cleaning

A thorough cleaning of the transfer station will be performed at least on a weekly basis. An anti-bacterial detergent shall be used once weekly to sanitize the work area (tipping floor, push walls, and loading bay). Waste handling equipment will also be washed at least weekly.

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SECTION 3.0 ENVIRONMENTAL MANAGEMENT

3.1 OVERVIEW

This section reviews the overall environmental management tasks required for the successful operation of the facility.

3.2 SURFACE WATER CONTROL

As used herein, the definition of “surface water” is water which results from precipitation or site run-on that has not contacted the waste.

Proper control of surface water at the transfer station will accomplish the following goals:

- Prevent the run-on of surface water into waste handling area(s);
- Prevent the run-off of surface water that has come into contact with the waste (i.e. leachate);
- Limit the erosion caused by surface waters; and
- Limit sediments carried off-site by surface waters.

The design of the transfer station (enclosure, slopes, etc.) minimize the potential for run-on or run-off problems.

Erosion control measures have been taken within the site drainage channels and at points of stormwater discharge. All site features will be inspected regularly for erosion damage and promptly repaired.

Stormwater run-off from the site is conveyed to an on-site sediment trap. The trap will be inspected regularly for sediment build-up or erosion damage. The trap will be cleaned out when sediment reaches the sediment cleanout elevation.

3.3 LEACHATE MANAGEMENT

All wash-down water which comes into contact with the waste, tipping floor, loading bay floor, or waste handling equipment will be treated as leachate. Wash-down water, which is collected in a floor drain in the loading bay and flows to a concrete storage tank located near the back of the building. The floor drain will be visually inspected during routine cleaning activities. If there is evidence that the drain is not working properly the County will initiate the necessary maintenance activities.

The leachate storage tank level will be checked at least once per week. The tank will be pumped out whenever the tank approaches full capacity (typically quarterly or more frequently if larger

storms are forecast). This water will then be hauled to an approved wastewater treatment plant for treatment and disposal. The tank will be routinely inspected during pumping activities. If there is evidence that the tank is not functioning properly, the County will initiate the necessary maintenance actions.

It is anticipated that any leachate getting outside of the building or leachate storage tank will be minor (i.e. no more than a few gallons - such as the case of a leaky fitting during loading of leachate that is quickly repaired). In the event of a larger spillage of leachate, the spill will be contained as much as practical by County staff (using excavation, soil berms, or other means) and the DWM will be verbally notified (see **Section 1.2.2**). Any impacted soils will be excavated and properly disposed of.

3.4 LITTER CONTROL

The transfer station building is enclosed on three sides and, thus, acts as a barrier to keep litter contained. Additionally, all outbound transfer trailers will have their load covered to minimize the potential for litter.

A litter control crew will pick up spilled or wind-blown waste around the site and on access roads daily as necessary. Facility staff will also make operational changes as practical based on wind conditions that may spread litter.

3.5 VECTOR CONTROL

Control of insects, rodents, and birds will be accomplished by regular cleaning of the transfer station and the control of litter. If vector control becomes a problem, additional measures will be taken to ensure the protection of human health.

3.6 ODOR CONTROL

Odorous or potentially odorous materials will be pushed into a transfer truck and covered as soon as possible to avoid odor problems. Additionally, regular cleaning of the transfer station will help minimize the potential for odor problems. If odor control becomes a problem, additional measures will be taken to ensure odor control.

3.7 DUST CONTROL

Dust related to waste hauler traffic on the access roads will be minimized by using a water truck to limit dust potential on the gravel portions of the road.



REFERENCE:

1. AERIAL PHOTOGRAPHY OBTAINED FROM HALIFAX COUNTY GIS DEPARTMENT.

**HALIFAX COUNTY
TRANSFER STATION
SITE LOCATION MAP**



**RICHARDSON SMITH GARDNER
& ASSOCIATES**

14 N. Boylan Ave.
Raleigh, N.C. 27603

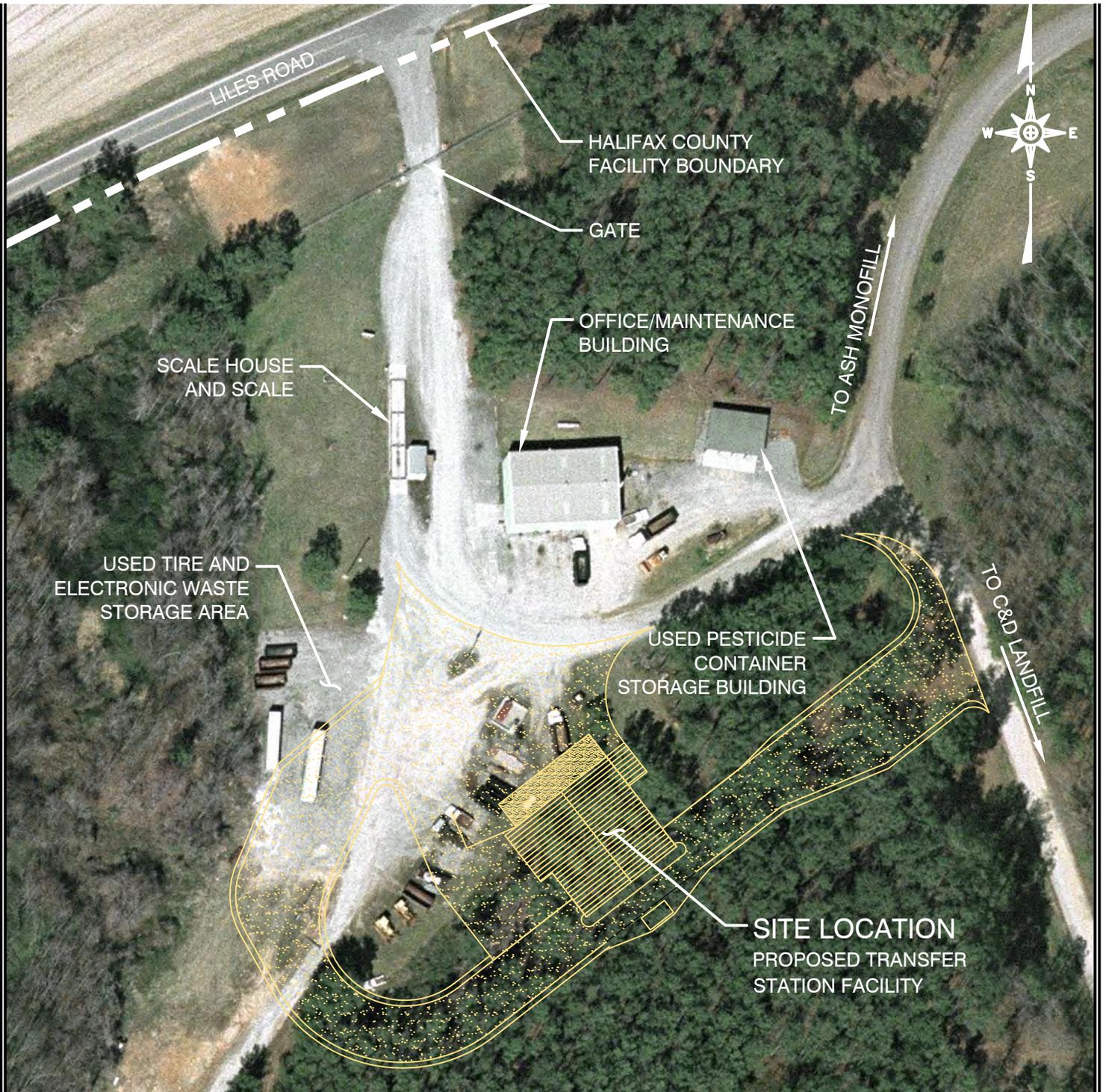
NC LIC. NO. C-0828 (Engineering)
www.rsgengineers.com

ph: 919-828-0577
fax: 919-828-3899

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	PROJECT NO.	FIGURE NO.	FILE NAME
AS SHOWN	W.R.B.	P.K.S.	Jan. 2012	HALIFAX 11-5	1	HALI-A0175

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REFERENCE:

1. AERIAL PHOTOGRAPHY OBTAINED FROM HALIFAX CO. GIS DEPARTMENT.

**HALIFAX COUNTY
TRANSFER STATION
EXISTING CONDITIONS**



**RICHARDSON SMITH GARDNER
& ASSOCIATES**

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SCALE:	DRAWN BY:	CHECKED BY:	DATE:	PROJECT NO.	FIGURE NO.	FILE NAME
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Appendix A

EPA Method 9095 Paint Filter Liquids Test

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METHOD 9095
PAINT FILTER LIQUIDS TEST
From EPA SW-846

1.0 SCOPE AND APPLICATION

- 1.1 This method is used to determine the presence of free liquids in a representative sample of waste.
- 1.2 The method is used to determine compliance with 40 CFR 264.314 and 265.314.

2.0 SUMMARY OF METHOD

- 2.1 A predetermined amount of material is placed in a paint filter. If any portion of the material passes through and drops from the filter within the 5 minute test period, the material is deemed to contain free liquids.

3.0 INTERFERENCES

- 3.1 Filter media were observed to separate from the filter cone on exposure to alkaline materials. This development causes no problem if the sample is not disturbed.

4.0 APPARATUS AND MATERIALS

- 4.1 Conical paint filter: Mesh number 60 (fine meshed size). Available at local paint stores such as Sherwin-Williams and Glidden for an approximate cost of \$0.07 each.
- 4.2 Glass funnel: If the paint filter, with the waste, cannot sustain its weight on the ring stand, then a fluted glass funnel or glass funnel with a mouth large enough to allow at least 1 inch of the filter mesh to protrude should be used to support the filter. The funnel is to be fluted or have a large open mouth in order to support the paint filter yet not interfere with the movement, to the graduated cylinder, of the liquid that passes through the filter mesh.
- 4.3 Ring stand and ring or tripod.
- 4.4 Graduated cylinder or beaker: 100-mL.

5.0 REAGENTS

- 5.1 None.

6.0 SAMPLE COLLECTION, PRESERVATION, AND HANDLING

- 6.1 All samples must be collected according to the directions in Chapter Nine of EPA SW-846.
- 6.2 A 100 mL or 100 g representative sample is required for the test. If it is not possible to obtain a sample of 100 mL or 100 g that is sufficiently representative of the waste, the analyst may use larger size samples in multiples of 100 mL or 100 g, i.e., 200, 300, 400 mL or g. However, when larger samples are used, analysts shall divide the sample into 100-mL or 100-g portions and test each portion separately. If any portion contains free liquids, the entire sample is considered to have free liquids.

7.0 PROCEDURE

- 7.1 Assemble test apparatus as shown in Figure 1.
- 7.2 Place sample in the filter. A funnel may be used to provide support for the paint filter.
- 7.3 Allow sample to drain for 5 minutes into the graduated cylinder.
- 7.4 If any portion of the test material collects in the graduated cylinder in the 5-min. period, then the material is deemed to contain free liquids for purposes of 40 CFR 264.314 and 265.314.

8.0 QUALITY CONTROL

- 8.1 Duplicate samples should be analyzed on a routine basis.

9.0 METHOD PERFORMANCE

- 9.1 No data provided.

10.0 REFERENCES

- 10.1 None required.

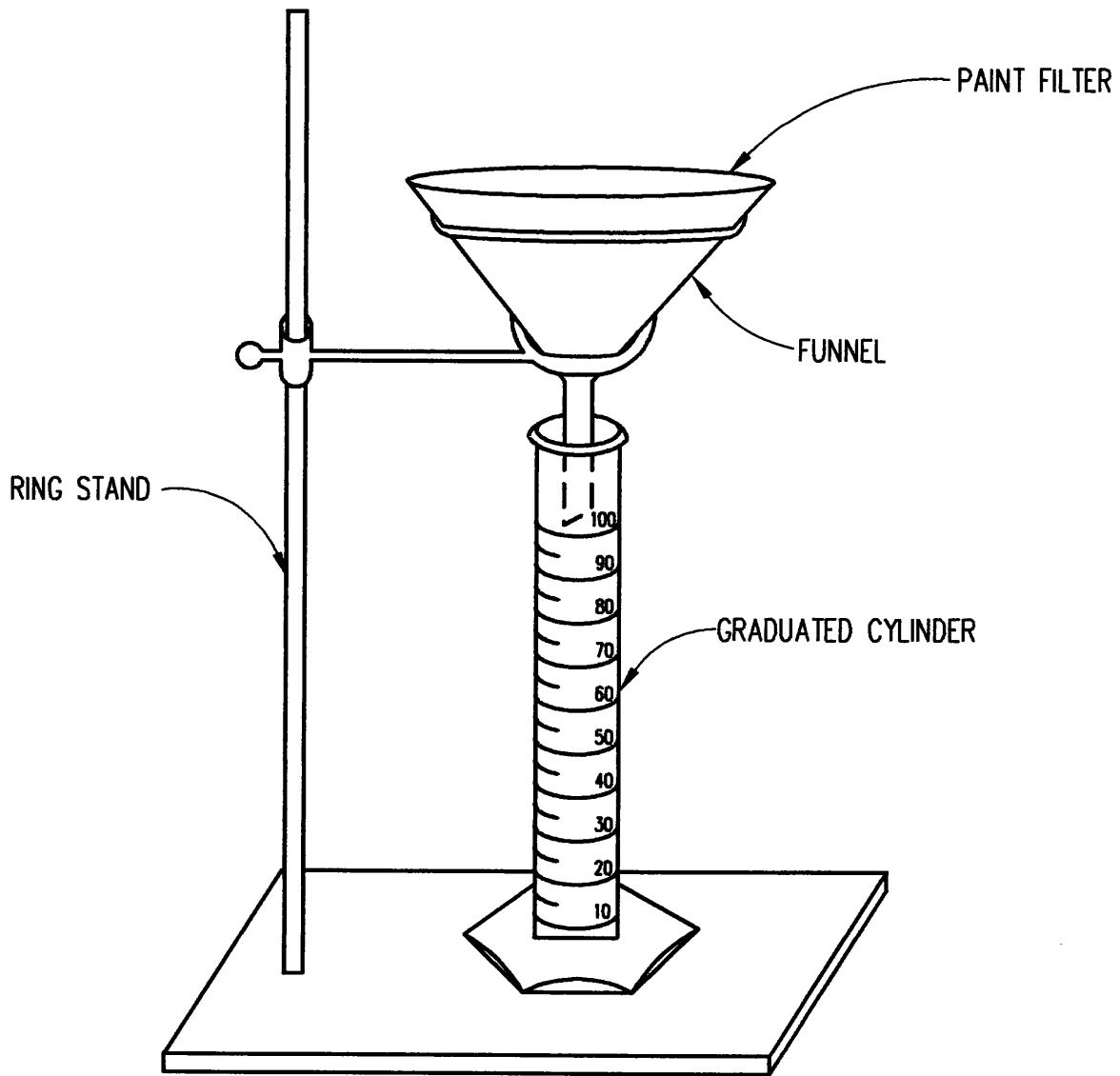
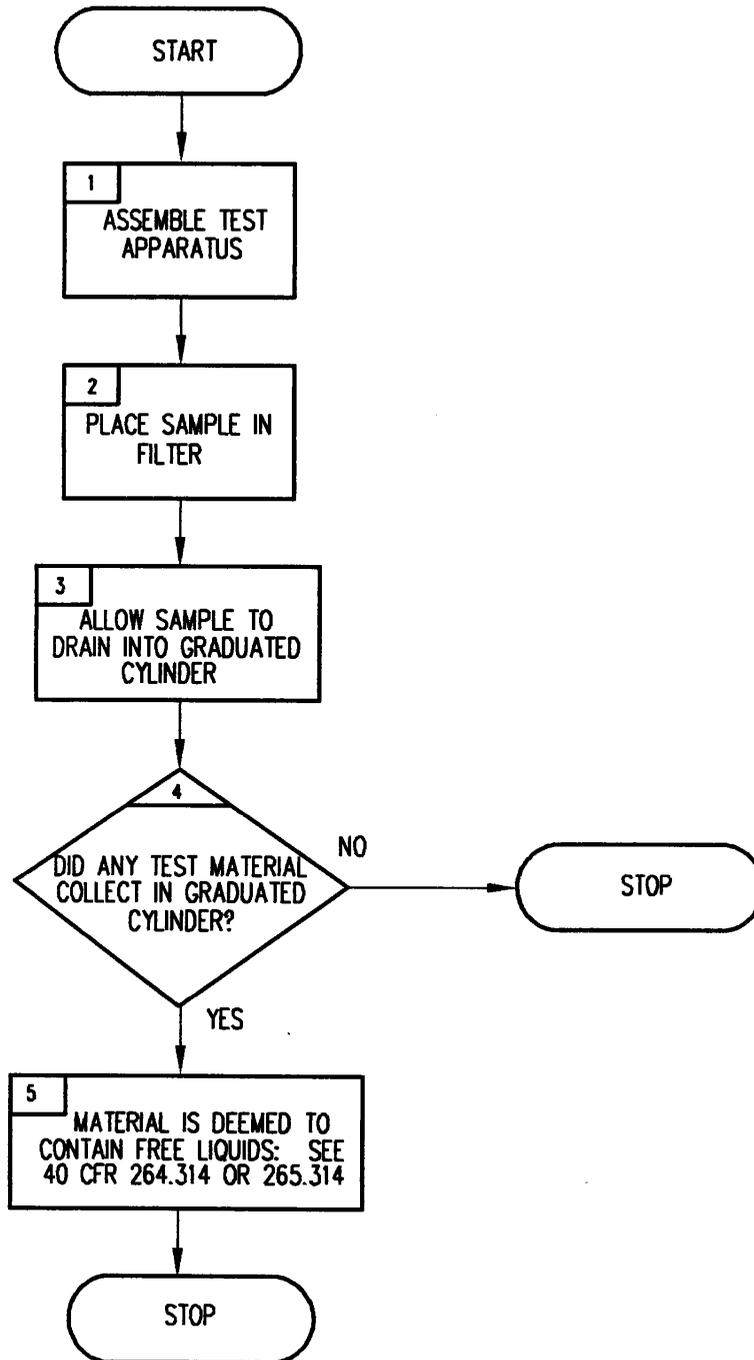


FIGURE 1. PAINT FILTER TEST APPARATUS.

METHOD 9095
PAINT FILTER LIQUIDS TEST



Appendix B

Waste Screening Form

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Halifax County Transfer Station
Permit No. 42-__T
(252) 586-7516

WASTE SCREENING FORM

Day / Date: _____ Time Weighed in: _____
Truck Owner: _____ Driver Name: _____
Truck Type: _____ Vehicle ID / Tag No: _____
Weight _____ Tare: _____
Waste Generator / Source: _____

Reason Load Inspected: Random Inspection _____ Staff Initials _____
Detained at Scales _____ Staff Initials _____
Detained by Operating Staff _____ Staff Initials _____

Inspection Location: _____

Approved Waste Determination Form Present? Yes _____ No _____ N/A _____

Description of Load: _____

Load Accepted (signature) _____ Date _____
Load Not Accepted (signature) _____ Date _____

Reason Load Not Accepted (complete only if load not accepted)

Description of Suspicious Contents: Color _____ Haz. Waste Markings _____
Texture _____
Drums Present _____ Smell _____
Est. Cu. Yds. Present in Load _____
Est. Tons Present in Load _____

Halifax County Emergency Management Contacted? Yes _____ No _____

Company or Authority Contacted? _____
Hazardous Materials Present: _____

Hauler Notified (if waste not accepted) Phone: _____ Time Contacted: _____
Other Observations: _____

Final Disposition
Signed _____ Date _____
Waste Screening Inspector or Solid Waste Director

Attach related correspondence to this form.
File completed form in Operating Record.

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

March 14, 2012

County: Halifax
Subject: Proposed Halifax Transfer Station
Liles Road (SR 1417)

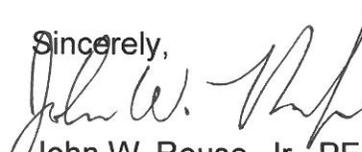
We have completed a review of your Traffic Assessment dated January 6, 2012, which provides the trip generation information and the analysis associated with the subject provided. Based on our review of your study we offer the following:

The proposed facility is at the existing landfill on SR 1417. The proposed project will generate 120 trips per day. According to the study, the traffic will not have any substantial impact on the surrounding area.

The increase in traffic in the area will be mainly truck traffic. The additional tonnage may impact the surrounding roads and intersections. Therefore, there may be some roadway and intersection improvement required. The intersections of SR 1001 and NC 48 and SR 1418 and NC 48 should be of concern with the close proximity of the school and poor alignment of the intersections. These improvements can be addressed when the required driveway permit is issued for the transfer station, to the District Engineer.

Please feel free to contact Terry Ellis, Halifax District Engineer, or myself if you need further assistance.

Sincerely,



John W. Rouse, Jr., PE
Division Engineer

C: Terry Ellis, District Engineer

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