

WASTE-MINIMIZATION

North Carolina Department of Human Resources • Solid & Hazardous Waste Management Branch
P.O. Box 2091 • Raleigh, N.C. 27602-2091 • (919) 733-2178

USED OIL MANAGEMENT

Why Regulate Used Oil?

Regulation of used oil developed due to the concern for the harmful properties or chemicals it contains as a result of its use as a lubricant. These harmful chemicals are released to the environment by dumping the oil into sewers, drains and other water supplies; road oiling* for dust control; uncontrolled burning for heat; and storage in confined spaces. When improperly managed or disposed of, used oil can endanger human health and have devastating effects on the environment. Therefore, the EPA intends to regulate used oil within a system designed to recycle or reclaim it with the least amount of risk on health and the environment.

* In the past used oil has been spread as a dust suppressant; however, this activity is prohibited if the oil has been mixed with a listed hazardous waste or contains heavy metals in concentrations exceeding the maximum levels established for the hazardous waste characteristic of EP toxicity.

Who Generates Used Oil?

Used oil means any oil that has been refined from crude oil, used and as a result of such use, is contaminated by physical or chemical impurities.

There are two broad categories of used oil generators:

- o Automotive Generators
- o Industrial Generators

Automotive generators include service stations, repair shops, auto dealers, fleet shops and recycling centers. Recycling centers are those service stations offering an accumulation service to do-it-yourselfers for crankcase oil.

Industrial generators produce compressor, turbine, and bearing oils, hydraulic oils, metalworking oils, gear oils, electrical oil, refrigerator oils, railroad drainings and spent industrial process oils.

General Requirements:

ON-SPECIFICATION USED OIL FUEL

GENERATOR

- o The first person claiming the oil to be "on-specification" must analyze oil destined for burning to determine specification. If the generator burns his own fuel he must analyze it to prove that it is on-specification (see burner requirements). Retain chemical analysis for records.

TRANSPORTER

- o None

MARKETER/RECYCLER

- o Must analyze or have proof of analysis to determine classification or handle as off-specification.

BURNER

- o Must have analysis performed or proof of oils composition to determine specification.
- o Must notify the Solid and Hazardous Waste Management Branch with EPA form 8700-12 (Rev. 11-85) if first to claim on-specification.
- o Must be permitted with Department of Environmental Management (DEM) to burn (Air Quality Standards).

OFF-SPECIFICATION USED OIL FUEL

GENERATOR

- o The generator may burn off-specification oil on site:
 - (a) Without notifying the Solid and Hazardous Waste Management Branch or EPA if burned in an oil fired space heater if:
 - capacity is less than 500,000 BTU/hr.
 - combustion gases vented to ambient air
 - (b) In industrial furnaces and boilers if the Solid and Hazardous Waste Management Branch is notified with EPA form 8700-12
- o If generator sells directly to the burner, he must comply with the following marketer standards:
 - must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12
 - must invoice shipments
 - must obtain one time certification from burner which states he has notified and will burn only in industrial boilers or furnaces;
 - must keep required certification 3 years minimum.

How Do I Dispose of My Used Oil?

Used oils can be recycled - as fuel either directly on-site of generation or after it has been reprocessed by a marketer. Independent marketers generally process the oil into either on-specification or off-specification used oil fuel. Independent collectors (i.e., transporters) pick up both automotive and industrial used oils and sell it to processors and re-refiners, or sell it directly to end-users (i.e., burners, fuel oil dealers).

Processors and re-refiners of used oil collect, process and sell improved product oil to end users. Nearly 50% of collected waste oil is burned in boilers, kilns, diesel engines and waste oil heaters.

Marketers of used oil are those who sell used oil directly to the end-user, or other marketers.

What is the Classification of Used Oil?

The EPA regulations currently address only used oil burned for energy recovery. Used oil is classified as either "on-specification" or "off-specification".

Used oil fuel is considered "off-specification" if it exceeds the following standards:

<u>Constituent</u>	<u>Allowable Level</u>
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
lead	100 ppm maximum
flash point	100°F minimum
Total Halogens	4,000 ppm maximum

- * Presumption - If you have oil with total halogens between 1000 and 4000 ppm and you can prove that the halogen content did not come from mixing spent solvents or other listed wastes (i.e., the virgin oil could have chlorinated paraffins) then you have "on-specification", solid waste fuel.

How is Used Oil Regulated in North Carolina?

North Carolina has adopted by reference the federal regulations published on November 29, 1985; Therefore, used oil is regulated under the hazardous waste management rules when burned for energy recovery. Listed below are the general requirements for each individual normally associated with used oil fuel. The actual regulations 40 CFR Parts 266.40-266.44 codified in 10 NCAC 10F .0039 -6 - .0039-8 should be consulted for compliance requirements.

NOTE: If a generator has previously received an EPA I.D. Number, he is still required to file a revised form to report used oil activities.

TRANSPORTER

- o Must take part in invoice recordkeeping system.

MARKETER/RECYCLER

- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12.
- o Must receive certification from customer that states:
 - If a burner, they will burn only in industrial boilers and furnaces;
 - they have notified the Solid and Hazardous Waste Management Branch stating location and description of activities.
- o Marketer/recycler must keep this certification for 3 years minimum.
- o Must take part in invoice recordkeeping system.

BURNER

- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12.
- o Illegal to burn in non-industrial boilers and furnaces.
- o Must inform suppliers that he, the burner, has notified and will burn off-specification oil in an industrial boiler or furnace only.
- o Must keep invoices of all shipments received.
- o Waste fuel must exceed 5000 BTU/lb to be legitimately burned as fuel.
- o Must be permitted with Department of Environmental Management (DEM) to burn (Air Quality Standards).

HAZARDOUS WASTE FUEL

Used oil mixed with hazardous waste may classify as a hazardous waste fuel.

Generator (large or small) - If a generator (ie. hazardous waste) mixes used oil with listed hazardous waste, the mixture is regulated as a hazardous waste or hazardous waste fuel.

If the halogen content of used oil is greater than 1000 ppm and has been mixed with listed hazardous waste, it is regulated as hazardous waste or hazardous waste fuel.

If the used oil has been mixed with a characteristic hazardous waste, and the resultant mixture exhibits the characteristic, it is regulated as hazardous waste or hazardous waste fuel.

Conditionally Exempt Small Quantity Generator (SQG) - If a small quantity generator (ie. hazardous waste) mixes used oil with any hazardous waste and the mixture is destined to be burned for energy recovery, the mixture is regulated as a used oil. However, if the resulting mixture is unsuitable for energy recovery and/or not accepted by a used oil handler, it may end up having to be handled as hazardous waste or hazardous waste fuel. (See general guidelines and recommendations). The regulations for hazardous waste fuel, 40 CFR Parts 266.30 - 266.35 codified in 10 NCAC 10F .0039-2 - .0039-3 should be consulted for compliance requirements.

GENERATOR

- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12, and obtain an EPA ID number.
- o Comply with 40 CFR 262 codified in 10 NCAC 10F .0030-1 - .0030-14, which includes the following:
 - (a) Complete a hazardous waste manifest.
 - (b) Meet pre-transport requirements:
 - package per DOT regulations;
 - label and marking per DOT and EPA;
 - meet accumulation and time requirements.
 - (c) Keep records and report shipments.

TRANSPORTER

- o Meet all DOT standards
- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12 and obtain an EPA ID Number.
- o Comply with 40 CFR 263 codified in 10 NCAC 10F .0031-1 - .0031-5 which includes the following:
 - (a) Compliance with an EPA regulated manifest system.
 - (b) If a discharge occurs during transporting, the transporter must notify EPA and take appropriate action to protect human health and the environment.

MARKETER/RECYCLER

- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12 and obtain an EPA ID Number.

- o Must file for a part A permit to store.
- o Can sell fuel only to persons who have obtained an EPA ID number and who burn waste in industrial furnaces or boilers.
- o Must receive certification from customer stating:
 - They will burn waste only in industrial boilers and furnaces;
 - They have obtained an EPA ID Number.
- o Must keep this certification for 3 years minimum.

BURNER

- o Must notify the Solid and Hazardous Waste Management Branch with EPA Form 8700-12 and obtain an EPA ID Number.
- o Must file RCRA Part A on all storage tanks.
- o Burner must certify to marketer that:
 - He has obtained an EPA ID Number;
 - He will burn waste only in industrial boilers or furnaces.
- o Must be permitted with DEM to burn (Air Quality Standards).

General Guidelines and Recommendations

- Used oil generators should not mix hazardous wastes such as spent solvents with used oil for many reasons.
 - a. If you are a large quantity generator of hazardous waste, used oil mixed with listed hazardous wastes becomes a hazardous waste fuel if it is destined to be burned for energy recovery.
 - b. Mixing listed hazardous waste or even certain characteristic hazardous waste with used oil can result in a non-acceptable mixture suitable for energy recovery.
 - c. Most used oil handlers will not accept used oils that have been mixed with hazardous waste.
 - d. The higher the halogen content in the used oil the more likely the used oil will be rejected by a used oil handler.
 - e. If the used oil mixed with hazardous waste is not accepted by a used oil handler, the mixture must then be burned or disposed as a hazardous waste or hazardous waste fuel.

- Generators that dispose of used oil at a hazardous waste facility may be subject to hazardous waste generator regulations if the oil meets any of the hazardous waste criteria (i.e., listed or characteristic).
- The Solid and Hazardous Waste Management Branch encourages used oil generators to maintain a record of volume and disposition of used oil.
- Recycle used oil. Have it picked up by a reputable collector who takes it to a used oil processor.
- Store used oil in non-leaking, covered containers, drums or tanks.
- If used oil is burned in a space heater designed to burn used oil (on-spec, off-spec), make sure it is vented outdoors.
- Collect used oil from vehicle maintenance. Do not dispose or dump used oil in the trash, sewers or on the ground.
- Vehicle maintenance and repair shops could help promote used oil recycling by accepting used oil from the vehicle owner and encourage the vehicle owners not to mix other substances into the used oil.

Other State rules and regulations in addition to RCRA regulations affecting management of used oil.

- Ban on disposal of oil on land or water without a permit from N.C. Department of Natural Resources and Community Development (NRCD) (Article 21-A: 143-215.83)
- Ban on liquid oil being disposed in sanitary landfills or dumped into sewers.
- Disposal of oil spill residue in a sanitary landfill must be pre-approved by the Solid and Hazardous Waste Management Branch
 - a) Final acceptance in the landfill is up to the landfill owner/operator
 - b) Virgin oil and gasoline residue will not need pre-approval from this office as long as the total amount does not exceed 50 cubic yards or 100 gallons.
 - c) Oil filters and oily rags can be disposed of in a sanitary landfill only if they are drip free and are not contaminated with combustible or flammable solvents or other hazardous waste. (Many businesses contract a laundry service for cleaning oily rags.)
- Reporting all oil spills to NRCD (919) 733-5291.
- Air Quality regulations (NRCD) (919) 733-7014.
- Regulation for used oil storage tanks

Above ground tanks -

- (a) must meet certain requirements by the NFPA - National Fire Protection Association

Underground tanks (NRCD) -

- (a) requires notification to NRCD by owners of underground storage tanks
- (b) prohibition on installing unprotected new tanks
- (c) technical standards for all new and existing tanks

For more information call the North Carolina Solid and Hazardous Waste Management Branch, Technical Assistance and Support Unit at (919) 733-2178.

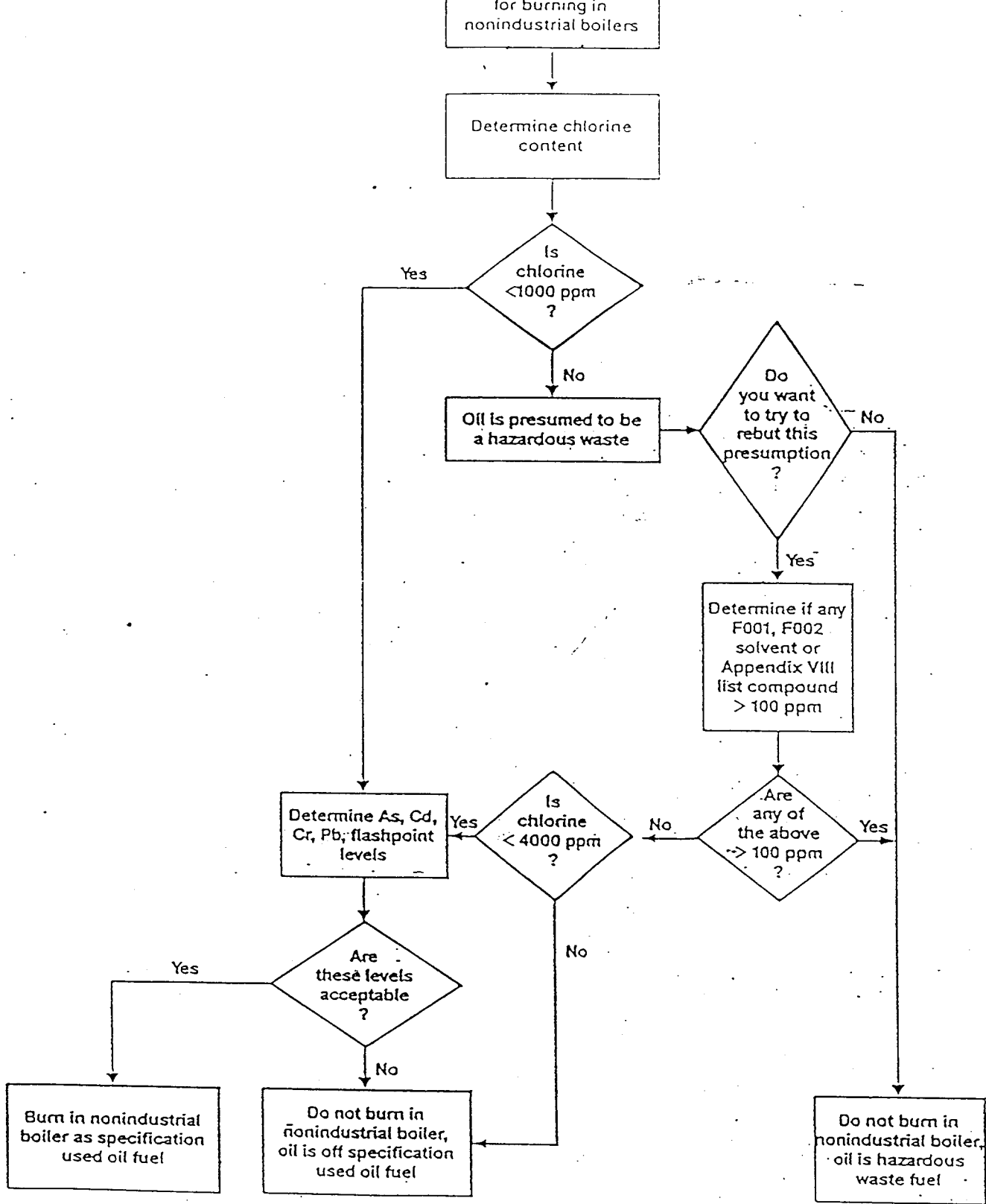


Figure 1. Analysis decision flow chart for regulation of burning of used oil in nonindustrial boilers.

10. USED OIL HANDLERS

The following list was compiled by Mary N. Payne, Recycling Coordinator, City of Raleigh, in November, 1983, and revised in February of 1986 through telephone interviews with the waste oil handlers. We take no responsibility for the list's completeness or for the quality of services offered by these firms.

ACE WASTE OIL

510 Robinson Street
Lowell, NC 28098
(704) 824-3146
Contact: Herb Bullock

BAUMGARDNER OIL COMPANY

1514 Black Gap Road
Fayetteville, PA 17222
1-800-233-0960
Contact: Dirk Baumgardner
Wastes Accepted: all petroleum base oils; non-hazardous waters and oily waters; regularly scheduled pick-up service
Recycling Services: reprocesses oil into heating fuel and lube oil.
Lab Facilities: yes
Transport: yes

CHEROKEE OIL COMPANY

1201 Berryhill Road
Charlotte, NC 28208
(704) 332-9023
Contact: Keith Eldson

DILLINGHAM, CRAIG

31 Ambler Road
Asheville, NC 28805
(704) 298-4107

FAYETTEVILLE WASTE OIL

County Road 22242, Box 64035
Fayetteville, NC 28306
(919) 485-4805
Contact: William Hayner, Owner
Service: Transports used oil

FOUR SEASONS TANK CLEANING, INC.

P.O. Box 7217
Greensboro, NC 27407
(919) 273-2718
Wastes Accepted: Petroleum base oils in 500 gallon or more quantities
Transport: yes

FOUR SEASONS TANK CLEANING, INC. (continued)

Other Services: clean-up of hazardous waste spills; clean-out of above and below ground tanks; cleaning transport tankers, caustic wash, and steaming

HENDRICK MOTOR COMPANY

P.O. Box 2508
Hickory, NC 28601
Contact: Vern Eisenhower
(704) 322-5640 or
(704) 324-8048

HERITAGE ENVIRONMENTAL SERVICES INC.

4132 Pompano Street
Charlotte, NC 27216
(704) 392-6276
Contact: Lynn Phillips
Services: handles all types of oily wastes and waste oils; water soluble oils, synthetic and petroleum base, oil-water emulsions, waste coolants; treat oily sludges, waste waters.

HOLSTON ENERGY, INC.

P.O. Box 720
Waynesville, NC 28786
(704) 452-2836
Contact: Max Kimmel
Wastes Accepted: petroleum base oils; minimum pick-up of 2,000 to 6,000 gallons per trip
Recycling Services: Reprocesses oil into No. 4 boiler fuel. EPA certified

JAMES WASTE OIL SERVICE

P.O. Box 5651
Charlotte, NC 28225
(704) 332-8692
Contact: Jack Holder
Wastes Accepted: petroleum base and water soluble oil; and industrial waste coolants; 150 mile radius of

USED OIL HANDLERS (cont.)

Charlotte; 2,000 gallons minimum
on regular basis
Recycling Services: sells oil to be
burned as fuel
Lab Facilities: none
Transport: yes

KEARNS, ELMER O., WASTE OIL COMPANY
P.O. Box 967
High Point, NC 27621
(919) 869-3311
Wastes Accepted: spent oils; no
paint; 2000 gallon tank or 15
drums minimum
Recycling Services: sells oil to
reprocessors
Lab Facilities: none
Transport: yes

NOBLE OIL SERVICE
P.O. Box 52113
Raleigh, NC 27612
(919) 846-0018
Contact: Jim Noble
Wastes accepted: Used oils,
coolants, waste water
Other Services: Transporting and
tank cleaning

PIEDMONT ENVIRONMENTAL SERVICES INC.
P.O. Box 8861
Greensboro, NC 27419
(919) 668-4821
Contact: Thad Chesson
Wastes Accepted: Petroleum base
oils
Range: 70 mile radius of Greensboro
Transport: Yes
Lab: No
Other Services: Pumping of under-
ground and above ground tanks,
removing and installing under-
ground tanks, spill clean up and
containment, and disposing of
infectious wastes through
incineration.

PIEDMONT OIL SALVAGE, INC.
Route 1, Box 100
Seagrove, NC 27431
(919) 879-3366
Contact: Paul Cox
Kenneth Temple
Services: Transport used oil.

PRATT, FRED
272 White Pine Road
Fletcher, NC 28732
(704) 252-6771
Services: Pump and transport used
oil and waste water.

RESOURCE RECOVERY OF AMERICA, INC.
1410 N. 21st
Tampa, FL 33065
(813) 644-7700
Contact: E.V. Phillips
Services: Recycles used oils; tank
removal and cleaning; site clean-
up and emergency response team.
Transport: yes

SELLARD, EDDIE
Route 2, Box 200
Elon College, NC 27244
(919) 227-1614 (office)
(919) 421-3854 (home)
Contact: Eddie Sellard
Wastes Accepted: petroleum base
oils and water soluble oils; drums
or tanks
Recycling Services: oils dirt roads
Lab Facilities: no
Transport: yes

STATEWIDE SERVICE & SUPPLY INC.
P.O. Box 5503
Spartanburg, SC 29304
(803) 439-9330
Contact: Ralph Higgins
Jerry Johnson
Wastes Accepted: petroleum base
oils only
Recycling Services: reprocesses oil
into No. 5 fuel oil; EPA certified
Transport: only in South Carolina

STRAYHORN, LEO
2219 Glover Road
Durham, NC 27703
(919) 596-2580
Contact: Leo Strayhorn
Wastes Accepted: petroleum base
oils; drums or tanks; 200 gallon
minimum
Recycling Services: sells to
reprocessors and paving companies

USED OIL HANDLERS (cont.)

Lab Facilities: no
Transport: yes

SUPERIOR PRODUCTS
P.O. Box 106
Greensboro, NC 27402
(919) 375-5811

WASTE OIL SERVICE
427 Vann Street
Goldsboro, NC 27530
(919) 735-1231
Contact: Willy Johnson
Transport: yes

WATSON, HAROLD WASTE OIL SERVICE,
INC.
Star Route, Box 77-A
Swansboro, NC 28584
(919) 393-8747
Contact: Harold Watson
Serving Eastern North Carolina
Wastes Accepted: oil from service
stations, industrial plants,
trucking companies, 200 gallon
minimum.
Transport: yes

YARBROUGH ROAD OIL SERVICE
1405 Chickasha Drive
Pfafftown, NC 27040
(919) 724-1420
Contact: Henry L. Yarbrough
Wastes Accepted: oil from service
stations, industrial plants,
trucking companies
Recycling Services: sells oil for
reprocessing. Temporary storage
facility.
Lab Facilities: none
Transport: yes