

540SERBSF10,632

540SERBSF10,632

Site Name (Subject): TODDVILLE OPERATIONS/DUKE POWER

Site ID (Document ID): NCD981478480

Document Name (DocType): Correspondence (C)

Report Segment:
Description: General Correspondence, 1986 - 1996

Date of Document: 3/4/1996

Date Received:

Box: *Enter SF and # with no spaces* SF10,632

Access Level: PUBLIC

Division: WASTE MANAGEMENT

Section: SUPERFUND

Program (Document Group): SERB (SERB)

Document Category: FACILITY

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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



March 4, 1996

Mr. Andy Tinsley - TV01A
610 Toddville Road
Charlotte, North Carolina 28214

Subj: Request for Information -
Site Inspection Prioritization (SIP)
Toddville Operations Center
Charlotte, Mecklenburg County, N.C.
US EPA ID: NCD 981 478 480

Dear Mr. Tinsley:

Per your request by phone today, enclosed is the copy of the document indicating EPA Region IV concurrence with the SIP report submitted by the CERCLA Branch last year. If I can be of further assistance, please contact me at (919) 733-2801, ext. 315.

Sincerely,

A handwritten signature in cursive script that reads "Douglas Moore".

Douglas Moore
Environmental Chemist
NC Superfund Section

cc: File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED

AUG 28 1995

SUPERFUND SECTION

8-18-95

4WD-WPB

Ms. Pat DeRosa, Head
CERCLA Branch
North Carolina Department of Environment,
Health and Natural Resources
Division of Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Ms. DeRosa:

The following reports have recently been reviewed and accepted by EPA - Region IV Site Assessment Section:

Preliminary Assessments

Kaplan Ethyl Ether Drums
Watauga County
NCD 986 228 757

No Further Action
Action (NFRAP)

Combined Preliminary Assessment / Site Inspections (PA/SIs)

Chemical Cartage Company
Brunswick County
NCD 000 183 103

NFRAP

Summit Resource Management
Union County
NCD 986 232 213

NFRAP

Site Inspection Prioritizations (SIPs)

Carolina Wood Preserving
Halifax County
NCD 033 200 854

NFRAP

Crown Central Petroleum Co.
Mecklenburg County
NCD 044 447 639

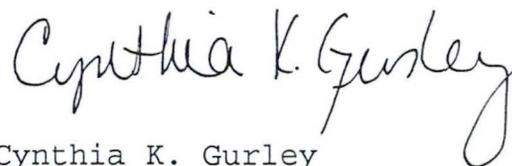
NFRAP

Fleet Transport Mecklenburg County NCD 062 553 490	NFRAP
Florida Steel Corp. Mecklenburg County NCD 093 340 487	NFRAP
Kerr-McGee Chemical Corp. Brunswick County NCD 980 557 805	Further Action (FA)
Knob Creek Flyash Landfill Transylvania County NCD 980 729 677	NFRAP
Lee's Motor Works Gaston County NCD 986 175 628	NFRAP
Rainbow Drive Battery Site Cabarrus County NCD 981 031 578	NFRAP
Toddville Operations Ctr. Mecklenburg County NCD 981 478 480	NFRAP
Union Carbide Corp. Mecklenburg County NCD 980 844 336	NFRAP

Enclosed please find the Remedial Site Assessment Decision Forms for each report generated by the North Carolina Superfund program.

If you have any questions concerning these site decisions, please call me at (404) 347-7791, Extension 2031.

Sincerely,



Cynthia K. Gurley
North Carolina, PO

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

To: NC

Site Name: Toddsville Operations Ctr

EPA ID#: NCD 981 478 480

Alias Site Names: _____

City: Charlotte

County or Parish: Mecklenburg

State: NC

Refer to Report Dated: June 1995

Report type: SIP

Report developed by: Robert Gandley, NCDEHNR

DECISION:

1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:

1a. Site does not qualify for further remedial site assessment under CERCLA
(No Further Remedial Action Planned - NFRAP)

1b. Site may qualify for further action, but is deferred to: RCRA NRC

2. Further Assessment Needed Under CERCLA: 2a. (optional) Priority: Higher Lower

2b. Activity Type: PA ESI
 SI HRS evaluation

Other: _____

DISCUSSION/RATIONALE: Based on the fact that no contaminated drinking water wells were indentified, no highly toxic or bioaccumulative substances were detected in the downstream wetlands or in a fishery, and the contaminants detected in soils at the site are not located on residential properties or in a commonly used work area, a disposition of no further remedial action planned was assigned.

Report Reviewed and Approved by: Cynthia K. Gurley Signature: Cynthia K. Gurley Date: 07/11/95

Site Decision Made by: Cynthia K. Gurley Signature: Cynthia K. Gurley Date: 07/11/95

RECEIVED

FEB 14 1995

Site Number NCD 981 478 480

Field Sample Number 016 010

Name of Site Toddville Operations Center Site Location Charlotte, Mecklenburg Co.

Collected By Robert Gandley

ID# _____

Date Collected 1/24/95

Time 1550

Agency: _____ Hazardous Waste _____ Solid Waste Superfund

Sample Type

Environmental Concentrate Comments

___ Ground water (1) ___ Solid (5) TO-001-5D

___ Surface water (2) ___ Liquid (6)

___ Soil (3) ___ Sludge (7)

Other (4) ___ Other (8)

(Sediment)

TCLP Compounds

Inorganic Compounds Results(mg/l)

___ Arsenic _____

___ Barium _____

___ Cadmium _____

___ Chromium _____

___ Lead _____

___ Mercury _____

___ Selenium _____

___ Silver _____

Organic Chemistry

Inorganic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	_____
___ Acid:B/N Ext.	_____
___ MTBE	_____
<input checked="" type="checkbox"/> <u>PCB's (1016)</u>	<u>5.17ppm</u>
___	_____
___	_____
___	_____
___	_____
___	_____
___	_____
___	_____

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	_____
___ Barium	_____
___ Cadmium	_____
___ Chloride	_____
___ Chromium	_____
___ Copper	_____
___ Fluoride	_____
___ Iron	_____
___ Lead	_____
___ Manganese	_____
___ Mercury	_____
___ Nitrate	_____
___ Selenium	_____
___ Silver	_____
___ Sulfates	_____
___ Zinc	_____
___ pH	_____
___ Conductivity	_____
___ TDS	_____
___ TOC	_____

Organic Compounds Results(mg/l)

___ benzene _____

___ carbon tetrachloride _____

___ chlordane _____

___ chlorobenzene _____

___ chloroform _____

___ o-cresol _____

___ m-cresol _____

___ p-cresol _____

___ cresol _____

___ 1,4-dichlorobenzene _____

___ 1,2-dichloroethane _____

___ 1,1-dichloroethylene _____

___ 2,4-dinitrotoluene _____

___ heptachlor _____

___ hexachlorobenzene _____

___ hexachlorobutadiene _____

___ hexachloroethane _____

___ methyl ethyl ketone _____

___ nitrobenzene _____

___ pentachlorophenol _____

___ pyridine _____

___ tetrachloroethylene _____

___ trichloroethylene _____

___ 2,4,5-trichlorophenol _____

___ 2,4,6-trichlorophenol _____

___ vinyl chloride _____

___ endrin _____

___ lindane _____

___ methoxychlor _____

___ toxaphene _____

___ 2,4-D _____

___ 2,4,5-TP (Silvex) _____

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	_____
___ Gross Beta	_____

Microbiology

Parameter	Results (Col/100ml)
___	_____
___	_____

Date Received 1-25-95 TW

Reported by John R. Neal

Date Extracted 1-31-95 VP

Date Reported 2/10/95

Date Analyzed 2-7-95 VP

Lab Number 950281

CPD89E

950281-950282

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Toddsville Operations Center ID # NCD 981 478 480

Location 610 Toddsville Road, Charlotte,
Mecklenburg County, NC

Proposed Date of Investigation January 24, 1995

Date of Briefing January 23, 1995

Date of Debriefing January 25, 1995

Nature of Visit (check one): On-Site Reconnaissance _____
Off-Site Reconnaissance _____
Sampling X _____
Sampling Overview _____
Remediation Overview _____

Health Department Official Contacted Ms. Sarah Edwards for John Gibson

Date of Contact January 12, 1995

Site Investigation Team: All site personnel have read the Site Health and Safety Plan and are familiar with its provisions.

<u>Personnel</u>	<u>Responsibilities</u>	<u>Signature</u>
Team 1 <u>Bob Gandley</u>	<u>team leader, sampling</u>	<u>Bob Gandley</u>
Team 1 <u>Jeanette Stanley</u>	<u>sampling</u>	<u>Jeanette Stanley</u>
Team 2 _____	_____	_____
Team 2 _____	_____	_____

Plan Preparation:

Prepared By: David Lilley, Industrial Hygiene Consultant

Reviewed By: Jack Butler, Environmental Engineering Supervisor

David Lilley
Jack Butler

B. SITE/WASTE CHARACTERISTICS

Waste Type(s) Liquid Solid Sludge Gas Vapor
 Characteristics Corrosive Ignitable Radioactive
 Volatile Toxic Reactive Other

List Known or Suspected Hazards (physical, chemical biological or radioactive) on Site and their toxicological effects. Also, if known, list chemical amounts

HAZARD	WARNING PROPERTIES	EXPOSURE LIMIT
PCBs	Odor Threshold (OT) = no data	0.5 mg/m ³
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

UNDERGROUND UTILITIES CHECKLIST

Utility	Locator/Contact Person	Phone #	Date of Location
Power	NA	_____	_____
Telephone	NA	_____	_____
Gas	NA	_____	_____
Water	NA	_____	_____
Sewer	NA	_____	_____

Call made by:

Facility Description: Size 115 acres Buildings yes

Disposal Methods Being Investigated Potential leakage of PCB filled electrical equipment.

Unusual Features on Site (dike integrity, power lines, terrain, etc.):
none known

History of the Site: The site is owned by Duke Power and has been used to service and store transformers and capacitors since 1956.

C. HAZARD EVALUATION

The site can be toured and sampled in level D protection. PVC gloves will be worn while collecting sediment samples. PVC or PE gloves over nitrile gloves will be worn if discolored sediment is encountered. Steel toed work boots will be worn while collecting samples. Tyvek suits (saranex in wet conditions) are recommended to keep clothing clean.

D. WORK PLAN INSTRUCTION

Map or Sketch Attached? yes

Perimeter Identified? no

Command Post Identified? no

Zones of Contamination Identified? no

Personal Protective Equipment/Level of Protection: C X D

Modifications _____

Surveillance Equipment:

<u> </u> HNU	<u> </u> Detector Tubes and Pumps
<u> </u> OVA	<u> </u> O2 Meter
<u> </u> Explosimeter	<u> </u> Radiation Monitor

Decontamination Procedures

 Level C Respirator wash, respirator removal, suit wash (if needed),
 suit removal, boot wash, boot removal and glove removal.

 X Level D Boot wash and rinse and boot removal, suit removal, glove
 and goggle removal.

Modifications Dispose of trash properly, on-site if possible.

Work Schedule/Visit Objectives The purpose of this visit is to determine if the site poses a threat to the public health or environment because of releases of contaminants to soil, surface water, groundwater, or air. Sampling may consist of sediment sampling.

EMERGENCY PRECAUTIONS

<u>Route of Exposure</u>	<u>First Aid</u>
<u>Eyes</u>	<u>irrigate immediately</u>
<u>Skin</u>	<u>soap and water wash</u>
<u>Inhalation</u>	<u>fresh air and artificial respiration</u>
<u>Ingestion</u>	<u>get medical attention immediately</u>

ID # NCD 981 478 480

Location of Nearest Phone: unknown (nearby residence/business?)

Hospital (Address and Phone Number)

Mercy Hospital, 2001 Vail Avenue, Charlotte, NC (704) 379-5000

can handle chemically contaminated patients

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Travel south on Toddville Road, then turn left onto Route 27 and travel into Charlotte. Exit onto Route 16 East, take a right onto Queens Rd, a left onto Randolph Rd, then a left onto Caswell Rd. The hospital will be on the right.

PREVAILING WEATHER CONDITIONS AND FORECAST Partly cloudy with a chance of rain, highs in the 40s.

EQUIPMENT CHECKLIST

<input type="checkbox"/> Air purifying respirator	<input checked="" type="checkbox"/> First Aid Kit
<input type="checkbox"/> Cartridges for respirator	<input checked="" type="checkbox"/> 3 gal. Deionized H2O
<input type="checkbox"/> Eye Wash Unit	<input checked="" type="checkbox"/> Rain suit
<input type="checkbox"/> HNU	<input checked="" type="checkbox"/> Gloves (PE/PVC/nitrile/cloth)
<input type="checkbox"/> OVA	<input checked="" type="checkbox"/> Boots/Boot Covers
<input type="checkbox"/> Explosimeter	<input checked="" type="checkbox"/> Coveralls (tyvek/saranex)
<input type="checkbox"/> Radiation Monitor	<input checked="" type="checkbox"/> Eye Protection (goggles/shield)
<input checked="" type="checkbox"/> Decontamination Materials	<input checked="" type="checkbox"/> Hard Hat

Poison Control Center - State Coordinator

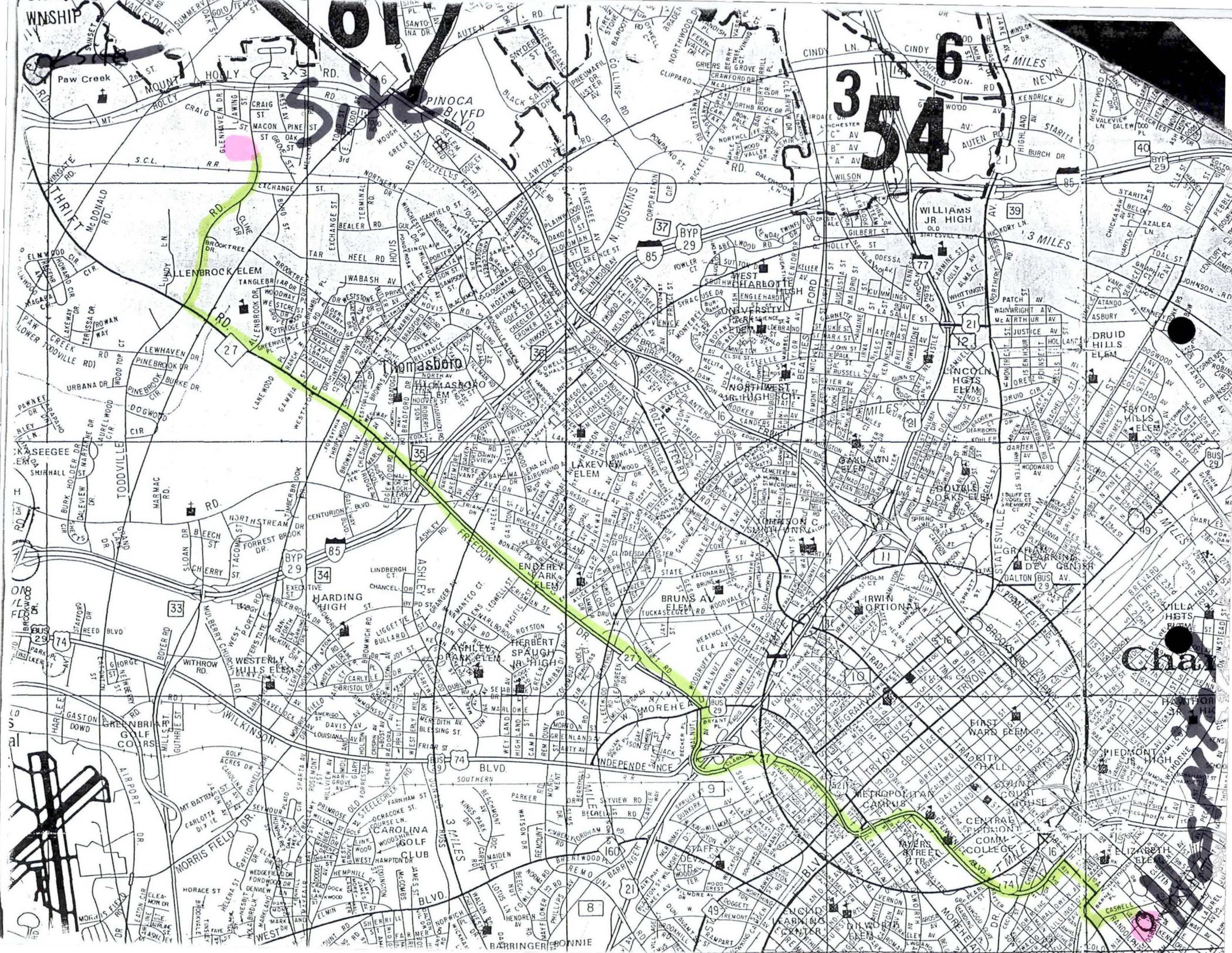
Duke University Medical Center

Telephone: 1-800-672-1697

Box 3024

Durham, NC 27710

ASHEVILLE 704-255-4490	Western NC Poison Control Center Memorial Mission Hosp. 509 Biltmore Ave. 28801	HENDERSONVILLE 704-693-6522 Ext. 555,556	Margaret R. Pardee Memorial Hospital Fleming St., 28739
CHARLOTTE 704-379-5827	Mercy Hospital 2001 Vail Ave, 28207	HICKORY 704-322-6649	Catawba Mem. Hosp. Fairgrove Chur. Rd 28601
DURHAM 1-800-672-1697	Duke Univ. Med. Center Box 3007, 27710	JACKSONVILLE 919-577-2555	Onslow Mem. Hospital Western Blvd. 28540
GREENSBORO 919-379-4105	Moses Cone Hospital 1200 N. Elm St. 27420	WILMINGTON 919-343-7046	New Hanover Mem. Hospital 2131 S. 17th St. 28401



HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: PCBs (polychlorinated biphenyls) 42% & 54% chlorine

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C₁₂H₇Cl₃ (42%) & C₁₂H₇Cl₅ (54%)</u>	<u>1-3</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1-3</u>
Vapor Pressure <u>0.001</u> mm Hg at 20°C	<u>1-3</u>
Melting Point <u>-19-10</u> °F/°C Boiling Point <u>325-390</u> °F/°C	<u>1-3</u>
Flash Point (open or closed cup) <u>349-432</u> °C/°F	<u>1</u>
Solubility - H ₂ O <u>insoluble</u>	<u>1-3</u>
Other _____	_____

Physical Features: (odor, color, etc.) colorless to dark brown liquid
with a mild hydrocarbon odor.

II. TOXICOLOGICAL DATA

Standards: 1 mg/m³ (42%) 1 mg/m³ (42%) potential human
0.5 mg/m³ (54%) (4) TLV 0.5 mg/m³ (54%) (5) PEL carcinogen (6) IDLH

Routes of Exposure: Inhalation, skin and ingestion

Acute/Chronic Symptoms: Irritates the eyes, nose, and skin. Can cause
chloracne. Liver injury is possible. May cause jaundice and dark urine. (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical
attention immediately; Eye contact: irrigate immediately; Skin contact:
soap and water wash immediately

Chemical Name: PCB's

III. HAZARDOUS CHARACTERISTICS Reference

A. Combustibility (Instability w/very high heat) 1.3

Toxic by-products HCl & CO gases may be released 1.3

B. Flammability LEL N/A UEL _____

C. Reactivity Hazard contact with strong oxidizers may 1.3
cause fire or explosion.

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard		Exposure Rate	
Background	yes/no	_____	_____
Alpha particles	yes/no	_____	_____
Beta particles	yes/no	_____	_____
Gamma radiation	yes/no	_____	_____

IV. REFERENCES

1. Chemical Safety Data Guide, BNA - 1985.
2. Pocket Guide to Chemical Hazards, NIOSH - 1990.
3. PA Chemical Emergency Preparedness Program - Chemical Profiles - 1985
4. Threshold Limit Values and Biological Exposure Indices for 1993-1994, ACGIH
5. 29 CFR 1910.1000.

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management



James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

January 12, 1995

Mr. John Gibson
Solid and Hazardous Waste Program Manager
Mecklenburg County Health Department
700 N. Tryon Street
Charlotte, NC 28202

RE: Site Inspection Prioritization
Toddville Operations Center
NCD 981 478 480

Dear Mr. Gibson:

David Lilley of the NC Superfund Section spoke with Sarah Edwards of your office today to notify you that the NC Superfund Section will conduct a site inspection of the subject site located in Mecklenburg County, North Carolina. The inspection will be conducted on January 24, 1995 by Bob Gandley of the NC Superfund Section.

The purpose of the inspection is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The inspection team will take samples around the site to determine if a hazardous condition exists. Additionally, they will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

This inspection is not an emergency situation but is a normal step in the evaluation of all uncontrolled and unregulated potential hazardous waste sites in North Carolina. You may want to have your representative meet the inspection team at the site. If so, please contact Bob Gandley at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

If the inspection indicates the need for future study of the site, we will contact your office to advise. If you have any questions, please don't hesitate to call David Lilley or me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

Enclosures

cc: Phil Prete
Doug Holyfield
Pat Williamson
Scott Ross
David Lilley
Donna Keith

P.O. Box 27687, Raleigh, North Carolina 27611-7687
An Equal Opportunity Affirmative Action Employer

Telephone 919-733-4996 FAX 919-715-3605
50% recycled/ 10% post-consumer paper

Trip Notification & Authorization

Prepared by: Bob Gandle

Today's Date: 1-10-95

*Use Black Ink or Typewriter only-Staff to fill out first 2 blocks only.

Site Trip.

Date of Trip: January 24, 1995

If trip date changed or cancelled note below:

Trip Date Changed To: _____ Cancelled: _____

NCD#: 981 478 480
City: Charlotte

Site Name: Toddville Operations Center
County: Mecklenburg

Reason for Trip: Site Investigation Prioritization
~~Collect MR samples for water pathway~~

Name of Hotel (Overnight Trip): _____ Hotel Telephone Number: () _____

Authorized by: David B. Kelly
Industrial Hygienist

Project Team Leader: Robert Gandle

Assistants: Jeanette Stanley, _____

Attach To Notification Form: 1 copy each: Preliminary Assessment Form (First page only)
Submit to the Industrial Hygienist Site Map
PA Transmittal Letter

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Mr. John Gibson Title: Solid & Haz. Waste Program Mgr.
(Note if Dr., M.P., etc.)
Telephone Number: (704) 336-5500

Notes: Health Department Official Contacted: Sarah Edwards
Back Up Letter Required: Yes No
Notified Ms. Edwards for Mr. Gibson
on 1-12-95 (OBL)

Note: Signed original to Data Manager

Duke Power Company
P.O. Box 33189
Charlotte, NC 28242

(704)373-4011



DUKE POWER



September 1, 1989

Ms. Charlotte Varlashkin
North Carolina Superfund Branch
401 Oberlin Road
Raleigh, North Carolina 27605

Subject: Risk Assessment for PCB at Duke Power
Toddville Operations Center, Charlotte

Dear Ms. Varlashkin:

As we discussed by telephone on August 30, 1989, you have reviewed the risk assessment Duke Power submitted to you August 1, 1989. For exposure to workers by soil ingestion/inhalation, your assessment finds the 1×10^{-6} cancer risk level to be 0.7 ppm PCB. Please review the exposure assumptions given in Table 3 of our report, which we feel are very conservative of potential on-site worker exposure, to see if this accounts for the discrepancy between your findings and ours. If our assumptions are similar, we can then compare our calculations to attempt to resolve the difference. A soil concentration of 0.7 ppm PCB, I would point out, would be below background for much of this portion of the city of Charlotte, according to historical data from Mecklenburg County Environmental Health.

These technical issues are best resolved in a meeting with the involved North Carolina Superfund Branch personnel, as Duke Power has requested. We ask that this be arranged for the end of this month so an agreement can be reached in time to remove the Toddville Operations Center from the priority list of the Inactive Hazardous Sites Program for the February 1990 revision.

Very truly yours,

David Roche

David P. Roche
Environmental Specialist
Corporate Materials Management

DPR/pck

cc: Mr. William Meyer



25
Ba 5/26

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

May 24, 1989

Ronald H. Levine, M.D., M.P.H.
State Health Director

Mr. Joe Harwood
Duke Power Company
P.O. Box 33187
Charlotte, NC 28242

Re: Inactive Hazardous Waste Sites Priority List
Duke Power, Toddville Operations
Charlotte, Mecklenburg County

Dear Mr. Harwood:

This letter notifies you that the subject site has been included on the Inactive Waste Sites Priority List in accordance with N.C. General Statutes Section 130A-310.2. The Priority List of eighty-five (85) sites is enclosed. The sites on the Priority List are ranked in decreasing order based on the Prioritization System which was adopted by the Commission of Health Services in February, 1989.

The owner of an inactive waste disposal site may or may not be the responsible party. The current owner will not be considered the responsible party if the owner purchased the property without knowledge or without a reasonable basis for knowing that hazardous substance or waste disposal had occurred.

If an inactive hazardous waste disposal site endangers human health or the environment, a remedial action can be ordered by the State. The Superfund Branch encourages responsible parties to clean up the site under a remedial action plan approved by the Branch.

The Prioritization System is available upon request from this office. Also, Superfund Branch File review procedures have been enclosed, if you would like to review specific files. If you need assistance regarding the Prioritization System or the Priority List, please contact our office at (919) 733-2801.

Sincerely,

Lee Crosby

Lee Crosby, Head
Superfund Branch
Solid Waste Management Section

LC/acr
Enclosures
SIS#600100036

TODAY'S DATE Sept. 3, 1986

Prepared by: Jack Butler (Staff member filling out form)

SITE TRIPS

TO: Lois Walker (Must receive 10 days before trip)

Site Investigation, Site Visit, or SI Follow-Up
Hardcopy

SITE NAME: Toddville Operations Center
NCD#: NC0981478480

CITY: Charlotte COUNTY: Mecklinburg

Hotel: None Telephone Number: NA

HEALTH DIRECTOR'S NAME Basil G. Delta, M.D. Telephone Number (704) 375-1885
Dept. of Env. Health John M. Barry, Ph.D. (704) 376-4603

DATE OF TRIP: Oct. 1, 1986

<input checked="" type="checkbox"/>	SI
<input type="checkbox"/>	Visit
<input type="checkbox"/>	SIP

Site Investigation
Site Visit (no enclosure needed)
Site Investigation Follow-up

Team Leader: Jack Butler
Assistants: Stan Atwood
Lee Crosby

Notification Procedure:

1. Above form goes to Lois 10 days prior to trip
2. Lois informs Lee Crosby in order for her to call Health Director
3. Standard letter of notification is prepared by Lois and mailed to:
Steve Reid (with PA and transmittal letter)
Area Field Supervisor
Health Director if requested

ENCLOSURE: PRELIMINARY ASSESSMENT FORM (1st page only)
TRANSMITTAL LETTER TO EPA

Given to Lois 9-3-86



NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
INTER OFFICE MEMORANDUM

DATE 4/2

TO Jack

FROM David Roland residence
well results?

in

→ Charlotte

(704) 398-1435

Please phone



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

21 April 1987

Ms. Denise Smith
EPA NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Smith:

SUBJECT: Site Inspection Report
Toddville Operations Center NC D981478480
610 Toddville Road
Charlotte, NC

Submitted herewith is the Site Inspection Report for the subject site. Based on our review of the available data we have concluded the following.

Toddville Operations Center is owned by Duke Power Company and has been used to service and store transformers and capacitors since 1956. The site is located just inside the city limits in an industrial/residential area on the northwest side of Charlotte.

A CERCLA Site Investigation was initiated after receiving a citizen's complaint of possible PCB contamination at the site. A PCB audit conducted at this site in 1981 by EPA reportedly did not find any problems.

On 19 November 1986, NC CERCLA Unit personnel visited the site and found several shallow wells still in use adjacent to the site. Two off-site wells were sampled. There are two wells on site which have not been used since 1971. One of the on-site wells was sampled without purging because of its size (8 in. casing, depth greater than 250 ft.). PCB's were detected at about 1 ppb in this well. Surface soil samples collected in storage areas contained up to .11 ppm PCBs. Subsurface samples (15 to 25 in.) did not contain PCBs.

Ms. Denise Smith
21 April 1987
Page 2

The underlying bedrock at the site is believed to belong to the diorite-granite complex. Saprolite is estimated to be 20 to 30 ft. thick, and the water table was measured to be 16 ft. below the surface.

If you have any questions, please contact me at (919) 733-2801.

Sincerely,



Stan Atwood, Toxicologist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

SA/tb/0323b

2 March 1987

TO: File
FROM: Stan Atwood *ja*
RE: Toddville Operations Center (704) 373-8494

I spoke by telephone with Mr. Joe Harwood, Environmental Affairs Specialist - Toddville Operations Center, about PCB oil disposal at the above facility. Special storage buildings are maintained on-site to hold PCB containing transformers and capacitors. Leaking transformers are drummed in the field before storing at the facility. Non-leaking transformers are packed in wooden crates. Periodically, the equipment is transported to Ensco where the PCB oil is incinerated. Mr. Harwood also said he would send me a copy of the EPA audit in 1981 at Toddville.

SA/tb/0187b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

January 21, 1987

MEMORANDUM

TO: Stan Atwood
Solid and Hazardous Waste Branch

FROM: *CGS* C. Gregory Smith, M.D., M.P.H.
Medical Epidemiologist
Environmental Epidemiology Branch

SUBJECT: Duke Power Company

Dr. Taylor and I have reviewed the laboratory results performed by Clayton Environmental Consultants and the State Lab on soil and wellwater samples taken from Duke Power Company's Toddville Operation's Center and the surrounding area. The concentration of PCB reported in the on-site well sample (i.e., 0.0012 ppm) constitutes an excess cancer risk of approximately 10^{-4} (1 in 10,000). In addition, the reported concentration of lead in the on-site well sample, 0.32 ppm, is above the EPA drinking water standard for lead -- 0.05 ppm. Based on these results, it is my opinion that the on-site well should not be used for human consumption. Further, these results should be forwarded to the Groundwater Section of Natural Resources and Community Development for further investigation as deemed necessary.

CGS:lp

C: Charlene Wiggins, Lead Epidemiologist, Environmental Epidemiology Branch



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

12 January 1987

TO: Greg Smith, M.D., M.P.H.
Environmental Epidemiology Branch

FROM: Stan Atwood, Toxicologist *SA*
Solid and Hazardous Waste Management Branch
CERCLA Unit

RE: Toddville Operations Center Sampling Results
NC D981478480

A CERCLA site investigation was conducted at the reference site on 19 November 1986. Ground water samples were taken from two residential wells adjacent to the property and from an on-site well. In addition four surface and subsurface soil samples were taken at three locations (Figure 1). It is important to note that a "grab" sample was taken from the on-site well. The size of the well (8 inch casing, depth greater than 250 ft.) made it impractical to purge. Split samples were requested by Duke Power. Both sets of laboratory data sheets are enclosed for your records.

On-site surface soils had PCB levels ranging from 0.37 to 11.74 ppm. Background and subsurface samples were below the detection limit. The on-site well sample contained 0.0012 ppm PCB and 0.32 ppm lead.

If you have any questions, please contact me at (919) 733-2801.

SA/tb/0342b

Enclosures



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

5 May 1987

Mr. David Roland
515 Toddville Road
Charlotte, NC 28214

Subject: 19 November 1986 water sampling.

Dear Mr. Roland:

Please find enclosed the results of water samples collected from your well on the above date. The results show no evidence of contamination in your well. Thank you for your cooperation. If you have any questions please contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Stan Atwood".

Stan Atwood, Toxicologist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

SA/tb/0234b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

13 January 1987

Mr. Joe Harwood
Duke Power Company
Design Engineering Department
P.O. Box 33189
Charlotte, NC 28242

Re: Toddville Operations Center Sampling Results
NC D981478480

Dear Mr. Harwood:

Enclosed are the results from analyses of soil and water samples collected at the referenced facility. We have recently received copies of your results from the split samples. Both sets of data are in close agreement with the possible exception of samples 6b and 6d. It appears that miscommunication led to mislabeling of these two samples. Nevertheless, the net results are the same.

Thank you for your cooperation. If you have any questions, please contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Stan Atwood".

Stan Atwood, Toxicologist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

SA/tb/0342b

Enclosures

P. O. BOX 33189

DUKE POWER COMPANY
GENERAL OFFICES
422 SOUTH CHURCH STREET
CHARLOTTE, N. C. 28242

TELEPHONE: AREA 704
373-4011

Ref 8

March 6, 1987

Mr. Stan Atwood ✓
North Carolina Department of Human Resources
Solid and Hazardous Waste Management Branch
P. O. Box 2091
Raleigh, North Carolina 27602-2091

Re: PCB Compliance Inspection Report
File Nos: GAH-0207, ENV-0106

Dear Mr. Atwood:

At the request of Joe Harwood, I am forwarding to you a copy of the report on the PCB compliance inspection at the Toddville General Stores and Transformer Shop. This inspection was conducted on December 15 and 16, 1981 by R. G. Stryker of the EPA Region IV Pesticides and Toxic Substances Enforcement Office.

Please contact me at 704/373-5201 if you have any questions about this report.

Yours truly,

S. B. Hager, Chief Engineer
Civil/Environmental Division



By: M. A. Lascara
Design Engineer I

MAL/mdc

Enclosure

cc w/o encl: Central Records
J. E. Harwood

Kalpan

PCB COMPLIANCE INSPECTION REPORT

SECTION A. FACILITY SUMMARY

Duke Power Company
Toddville Storage Facility
610 Toddville Road
P.O. Box 33189
Charlotte, N.C. 28242
Mecklinberg County

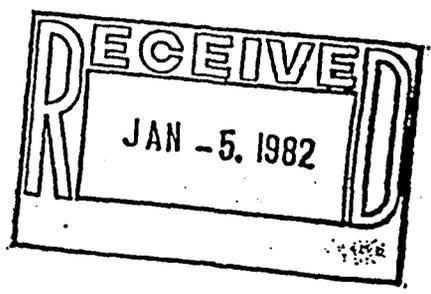
Carl Horn, Chairman of the Board, Duke Power Co.
Bill Lee, President, Duke Power Co.

Facility Representatives: David P. Roche, Assoc. Biologist (704) 373 5846
Warren Baker, Manager of Toddville facility.

SECTION B. INSPECTION/REVIEW

Inspected by: *Robert L. Steyer* EPA, R-IV, PTSB

Reviewed by: _____ EPA, R-IV, PTSB



SECTION C. INVENTORY

1.a. The company is currently in the process of placing all PCB items on a computer inventory system. PCB capacitors while inventoried, are only maintained so far as the Annex VI records are concerned to those locations within the company where 40 or more large capacitors are in use, stored for use, or in storage for disposal (Toddville facility only).

1.b. All PCB transformers are identified by location where known to contain PCBs either from the name plate or from testing of the contents.

1.c. PCB articles, liquids and PCB containers are being stored in Annex III facilities at the Toddville location.

2.a.(2). There is no listing available for each of the 118476 large high voltage capacitors known to be PCB-filled.

2.a.(3). Company representatives did not have any figures available as to the number of non-PCB large, high-voltage capacitors.

2.b. No figures were available for large, low voltage capacitors. To Mr. Roache's knowledge, no low voltage capacitors were in the company system.

C.3 Company records identify 148 PCB transformers in service containing a total of 161824 kgs of PCB liquids. A list of individual sites of each transformer was not obtained as an inordinate amount of effort on the part of the company would have been required to consolidate the listing from the PCB records.

C.5. The combined total of PCBs in kgs for both in service and in storage for use is 354,993.8 kg.s. An additional 266,478 kgs of PCBs are in storage for disposal for a sum total of 621,471.8 kgs. An additional 444 intact capacitors are in open storage on pallets adjacent to the storage facility.

C.8. Consistent, and sometimes heavy, rain showers precluded sampling of the storage yard where intact capacitors and a single flushed PCB transformer are being stored for disposal. There was no visible evidence of contamination in or around the storage site.

SECTION D. STORAGE AND HANDLING

D.2. Two buildings on either side of a concrete pad are used for housing PCB items. Both buildings were specifically built for PCB Annex III storage requirements. The older building (designated building A) was constructed in 1978. Its dimensions are 28'W x 32'L x 12'H with a continuous 6" curb. Its capacity is 448 cu. ft.. Currently 200, 55 gal. drums of PCB liquids are being stored in the building. The second building (designated building B) was constructed in 1980. Its dimensions are 32'W x 60' L x 12 'H with a continuous 24" curb. Its capacity is 4840 cu. ft.. The remaining 86 drums of PCB liquids (See PCB Inventory Balance as of 12-14-81 attached) are held in Building B along with 292 drums of PCB articles (Capacitors and/or debris). The transformer listed on the inventory sheet has been drained and flushed and is in open storage adjacent to the 444 capacitors stored on pallets.

SECTION E. DECONTAMINATION

E.1. All transformers sent in for repair from throughout the company's system come into the transformer repair shop operated by the transmission division of the company. Before repair or maintenance is begun on any transformer regardless of size, an oil sample is taken and sent to the analytical laboratory in the main facility building. A PCB analysis is run on the oil with one of three available gas chromatographs. If the analysis indicated less than 20 parts per million PCB, the report is listed as trace. At levels above this, a second analysis confirms the first and the actual amount in ppm is listed on the report. Turn around time for most samples is 30 minutes. Roche indicated that less than 5% of the distribution transformers so far tested exceed 50 ppm. In a separate section of the transformer shop an area has been prepared for working on PCB transformers. It is currently company policy that anytime a PCB transformer is removed from service, it will be drained, flushed and cycled for disposal. A sheet metal basin with 4" high sides and a pumping system with a manual back-up is used when working with a PCB transformer to catch any oil spilled during the draining and flushing. New kerosene is used each time. The kerosene level within the transformer is at least to the top of the core, and allowed to set at least 24 hours before being drained. The barrels of PCB liquids and PCB contaminated kerosene is removed to the storage facility generally within 24 hours after the flushing operation is completed.

SECTION F. RECORDS

All records appeared to be in compliance with Annex III and Annex VI guidelines. The company ID tag used to tag and follow the disposition of PCB articles to the storage facility, and logs maintained both within the "PCB Plan for Duke Power Company" guidelines and a separate log maintained by Mr. Baker, the Toddville facility manager, provide a double check on the movement, storage and disposition of all PCB items.

The attached PCB inventory balance dated 12/14/81 was taken from the log maintained by Mr. Baker. Additional information maintained in Mr. Baker's log is the date and location of all PCB items sent for disposal. PCBs disposed during 1980 were sent to CERCO/CER, 5092 Aber Rd., Williamsburg, OH. with a single shipment consigned to Waste Management of Alabama. A contract is currently being negotiated with Ensco in Arkansas for disposal of the capacitors currently in storage.

The annual report is maintained and updated by David Roche in the main offices of Duke Power located in the Wachovia Building in Charlotte. The last annual report ended on December 31, 1980. Some of the figures obtained for this report are more current, being taken from the daily log maintained at the Toddville facility.

RIVERBEND STEAM PLANT

Before beginning the inspection of the Toddville facility, I met David Roche at the Riverbend Steam Plant for the purpose of inspecting and observing the high efficiency boiler used by Duke Power for incineration of PCB contaminated oils below 500 ppm. The Riverbend Steamplant manager is Al Hornsby and the superintendent of operations is Jim Greer.

The plant has four operating boilers constructed in the early 1950's. Three boilers constructed in the 1920's are retired from service. Unit No. 7 is used for PCB contaminated oil incineration. Its rated power capacity is 130 megawatts.

Oil is injected through one of two oil injection systems which may be used to fire the boiler after shutdown. The contaminated oil is drawn from a 20,000 gal. storage tank located adjacent to the NW corner of the plant. The oil is metered through a flow meter for injection at the rate of 4 to 5 gallons per minute. If at any time, the boiler should drop below 75% of full capacity, an automatic trip device shuts down the pump located at the storage tank. At full load the boiler consumes 40 tons of pulverised coal per hour. The rate of oil injection is thus well below the 10% level. The oil is injected into the boiler under approximately 90 psi. The average retention time in the boiler's fire chamber is 2 to 3 seconds at some 3000 degrees F. During the contaminated oil burns, a CO continuous strip monitor is in operation. An alarm and warning light automatically function if the CO level goes above 100 ppm. Oxygen levels are monitored continuously during boiler operations at all times. Inspection of strip charts recorded during the test burns indicated oxygen levels averaged 4.2 ppm and CO levels of 20 to 30 ppm.

Total contaminated oil burned during July 22, 23, & 24; August 18th; and Sept. 1 was 10,698 gallons. Flow meter readings were some 30 to 40 % above these levels as recorded by physical measurements taken at the storage tank source. The flow meter problem is thought to be corrected now through better calibration. The average rate of burn during the above listed dates was 180 gal.s/hr.

Roche indicated the Riverbend facility was picked for a number of reasons. It was close to the Toddville storage site. It is one of the most advanced plants on the Duke System for air pollution control devices. It is equipped with hot side precipitators which are among the most efficient in operation.

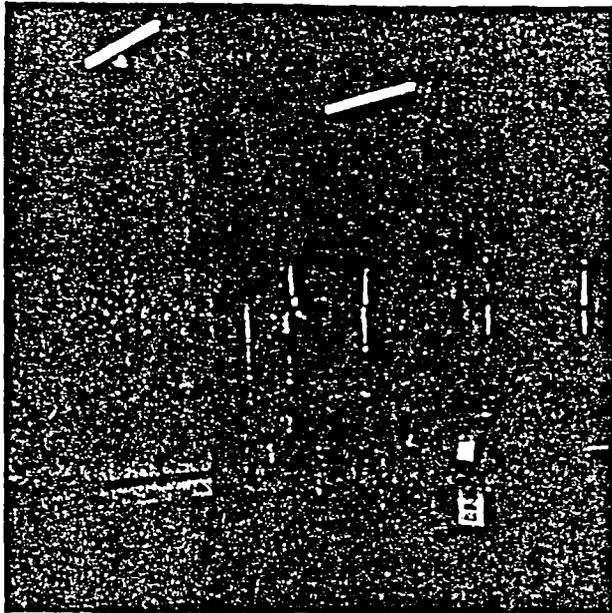
The company also uses this facility to burn mineral oil removed from nonPCB transformers which is no longer suitable for recycling and reuse. Roche said over 40,000 gallons of waste mineral oil had been burned in the boiler.

One item was noticed during the inspection which may be of some importance. At the transformer repair shop, a mineral oil filtration and recycling facility is used to clean mineral oil of sediment, water and gases. The filters in the system consist of a multiple pad series plus three large cylinders filled with a sandy particulate material. *Is there any possibility that low concentrations of PCBs in mineral oil testing less than 50 ppm could accumulate in these filtering systems to rather high levels? Many thousands of gallons of mineral oil may pass through the filters before they are changed. If the PCBs were adhering to the sediment particles, they would be strained out and left in the filters. Roche did not seem to think there was much possibility for this to occur, but I am inclined to believe it could very easily.

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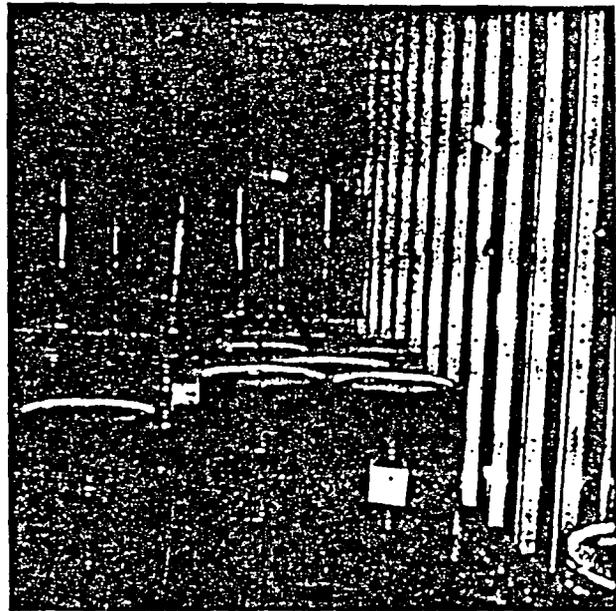
Duke Power Co., Toddville Facility

Annex III Storage Buildings.



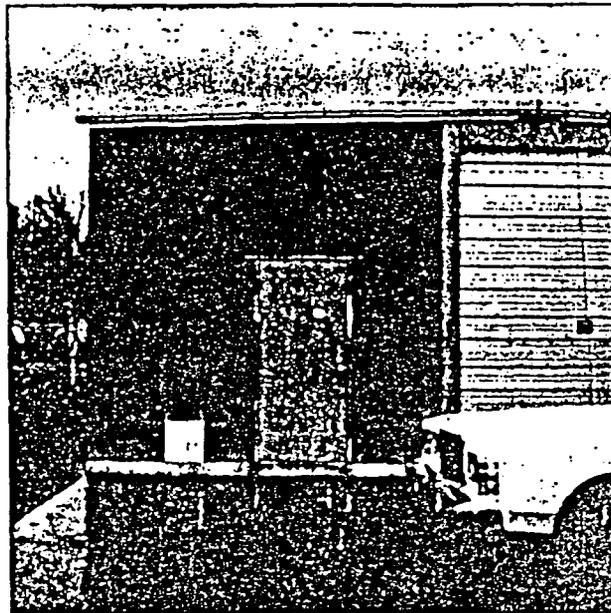
PCB Storage
12-15-81
RGS

Interior
Bldg. A.



PCB Storage
12-15-81
RGS.

Interior
Bldg. A.



PCB Storage Bldg. Toddville
fac. Bldg B
12-15-81 RGS Duke Power

DUKE POWER COMPANY
FOSSIL PRODUCTION DEPARTMENT
P.O. BOX 33189, 422 SOUTH CHURCH STREET
CHARLOTTE, N.C. 28242
(704) 373-4011

September 27, 1982

Mr. R. G. Stryker
Enforcement Officer
EPA Environmental Research Center (MD7)
Research Triangle Park, NC 27711

Subject: PCB Analysis of Spent Fuller's Earth
from Mineral Oil Reprocessing
File: GS-709.25

Dear Mr. Stryker:

Attached for your information are the results of our laboratory's analysis of spent Fuller's Earth which had been used in filtering recycled mineral oil at our Toddville Road facility. The two samples were analyzed by gas chromatograph/electron capture detection. A concentration of less than 5 ppm PCB was detected in both samples of Fuller's Earth. If you have any questions, please call me at (704)373-8775.

Very truly yours,

David Roche

D. P. Roche
Associate Biologist

DPR:jsc

Attachments

bcc: R. E. Holmes
B. K. Sipe
J. E. Harwood
H. Pauley w/b attachments

September 7, 1982

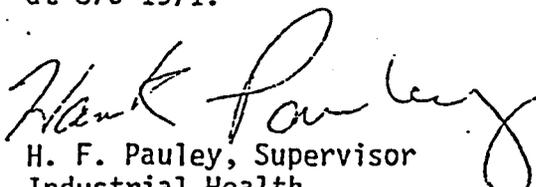
Memo to: F. L. Tatum, Manager
Substation Maintenance
Toddville

Subject: Determination of PCB's in Fuller's Earth
GS-709.25

A sample (#082582P) of the Fuller's Earth filtering media from the transformer oil recycling system at Toddville was analyzed for the determination of PCB's. As you requested, the analysis was performed by Production Environmental Services.

The media sample was extracted by using the United States Environmental Protection Agency "Interim Method for the Sampling and Analysis of Priority Pollutants (PCB's) in Sediments and Fish Tissue."

The results showed 4.6 ppm of Aroclor 1260 present in the Fuller's Earth. If there are any questions concerning the data, please call John Mease at 875-1971.


H. F. Pauley, Supervisor
Industrial Health
Production Environmental Services

JMR/sm

cc: J. R. Mease
J. G. Nunn
R. D. Jones

August 27, 1982

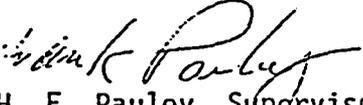
Memo to: F. L. Tatum, Manager
Substation Maintenance
Toddville

Subject: Determination of PCB's in Fuller's Earth
GS-709.25

A sample of the Fuller's Earth filtering media from the transformer oil recycling system at Toddville was analyzed for the determination of PCB's. As you requested, the analysis was performed by Production Environmental Services. Due to the high background, it was necessary to clean up and reanalyze the sample several times.

The media sample was extracted by using the United States Environmental Protection Agency "Interim Method for the Sampling and Analysis of Priority Pollutants (PCB's) in Sediments and Fish Tissue."

The results showed 3.3 ppm of Aroclor 1260 present in the Fuller's Earth. If there are any questions concerning the data, please call John Mease at 875-1971.


H. F. Pauley, Supervisor
Industrial Health
Production Environmental Services

JMR/sm

cc: J. R. Mease
J. G. Nunn



United States
Environmental Protection
Agency

NOTICE OF INSPECTION

Name of Firm

Duke Power Company

Firm Address

*P. O. Box 35189
Charlotte, N.C. 28242*

Inspector Name and Address

*Robert G. Stryker
EPA-ERC (MD-7)
Research Triangle Park, N.C. 27711*

Date

12-15-81

Time

8:55 AM

Inspector's Signature

Robert G. Stryker

Name and Title of Recipient

David Roche, Assoc. Biologist

Title

Enforcement Officer

Signature of Recipient

David P. Roche

REASON FOR INSPECTION *Annex III & Annex VI routine inspection.*

Under the authority of Section 11 of the Toxic Substances Control Act



For the purpose of inspecting (including taking samples, photographs, statements, and other inspection activities) an establishment, facility, or other premises in which chemical substances or mixtures or articles containing same are manufactured, processed or stored, or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyance being used to transport chemical substances, mixtures, or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls and facilities) bearing on whether the requirements of the Act applicable to the chemical substances, mixtures, or articles within or associated with such premises or conveyance have been compiled with.



In addition, this inspection extends to (circle appropriate letters):

- | | |
|--------------------|--------------------|
| (A) Financial data | (D) Personnel data |
| (B) Sales data | (E) Reserach data |
| (C) Pricing data | |

The nature and extent of inspection of such data specified in A through E above as follows:



United States
Environmental Protection
Agency

TSCA INSPECTION
CONFIDENTIALITY NOTICE

Inspector Name Robert G. Stryker

Inspector Address
EPA-ERC (MD-7)
Research Triangle Park, N.C. 27711

Facility
Duke Power Co.

Facility Address
*P.O. Box 33189
Charlotte, NC 28242*

Chief Executive Officer of Firm
Carl Horn

Title
Chairman of the Board

Name of Individual to Whom Notice Given
David Roche

Title
Assoc. Biologist

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 U.S.C. 552; EPA regulations issued thereunder, 40 CFR Part 2; and the Toxic Substances Control Act, Section 14. EPA is required to make inspection data available in response to FOIA requests unless the Administrator of the Agency determines that the data contains information entitled to confidential treatment.

Any or all the information collected by EPA during the inspection may be claimed confidential if it relates to trade secrets or commercial or financial matters that you consider to be confidential. If you make claims of confidentiality, EPA will disclose the information only to the extent, and by means of the procedures, set forth in the regulations (cited above) governing EPA's treatment of confidential information. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information you have claimed and certified confidential.

To Claim Confidential Information

To claim information confidential, you must certify that each claimed item meets all of the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).

3. The information is not publicly available elsewhere.

4. Disclosure of the information would cause substantial harm to your company's competitive position.

At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time, you may make claims that some or all of the information is confidential and meets the four criteria listed above.

If you are not authorized by your company to make confidentiality claims, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials to the Chief Executive Officer of your firm within two days of this date. The Chief Executive Officer must return a statement specifying any information which should receive confidential treatment.

The statement from the Chief Executive Officer should be addressed to: Document Control Officer

EPA, R-IV, PTSEB
345 Courtland Street
Atlanta, GA 30365

and mailed by registered, return-receipt-requested mail within seven (7) calendar days of receipt of this Notice.

Failure by your firm to submit a written request that information be treated as confidential, either at the completion of the inspection or by the Chief Executive Officer within the seven-day period, will be treated by EPA as a waiver by your company of any claims for confidentiality regarding the inspection data.

To be completed by facility official receiving this notice

I have received and read this Notice.

If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the company's chief executive officer. If there is another company official who should also receive this information, please designate below.

Name
David Roche

Name
W.A. Haller

Title
Assoc. Biologist

Title
Manager, Tech & Env. Services

Signature
David P. Roche

Address
P.O. Box 33189

Date
December 15, 1981

Charlotte, NC 28242



United States
Environmental Protection
Agency

EPA Regional Office Address
345 Courtland Street.
Atlanta, Ga. 30365

DECLARATION OF CONFIDENTIAL
BUSINESS INFORMATION

Date

12-15-81

Name of Individual

David Roche

Title

Assoc. Biologist

Firm Name

Duke Power Company

Firm Address

P.O. Box 33189
Charlotte, NC 28242

Information Designated as Confidential Business Information:

Acknowledgment by Claimant

The undersigned acknowledges that the information described above is designated as Confidential Business Information under Section 14(c) of the Toxic Substances Control Act. The undersigned further acknowledges that he/she is authorized to make such claims for his/her firm.

The undersigned also certifies that each item described above meets all of the following criteria: (1) The company has taken measures to protect the confidentiality of the information and it intends to continue to take such measures; (2) The information is not, and has not been reasonably attainable without the company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding); (3) The information is not publicly available elsewhere; and (4) Disclosure of the information would cause substantial harm to the company's competitive position.

Signature (Owner, Operator, Agent)

Name of Inspector

Title

Robert G. Stryker, Enforcement Officer

Title

Inspector's Signature

Robert G. Stryker



United States
Environmental Protection
Agency

RECEIPT FOR
SAMPLES AND DOCUMENTS

Name of Firm

Duke Power Co

Firm Address

P. O. Box 33189
Charlotte, NC 28242

Inspector Name

Robert G. Stryker

Inspector Address

EPA-ERC (MD-7)
Research Triangle Park, N.C. 27711

Name of Individual

David P Roche

Title

Assoc. Biologist

Date Collected

12-16-81

Duplicate Samples Requested and Received

() Yes

(X) No

Sample Numbers

—

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Toxic Substances Control Act.

Receipt for the document(s) and/or sample(s) described is hereby acknowledged:

PCB Inventory Balance sheet as of 12/14/81

SPCC Plan for Riverbend Steam Station
dated 10/24/79.

PCB Plan for Duke Power Co. revised 6/5/81

3 photos of Annex III storage facility

Signature of Inspector

Robert G. Stryker

Signature of Owner, Operator, or Agent

David P. Roche

Title

Enforcement Officer

Title

Assoc. Biologist

PCB INVENTORY BALANCE
AS OF 12/14/81
TODDVILLE STORES FACILITY

	<u>No. of Drums</u>	<u>Net Weight</u>	<u>Gross Weight</u>
PCB's Stored in Drums: (Thru #507)	292	100,287	117,747
Containing Capacitors:	251	86,270	101,270
Containing Dirt, Debris, Etc.:	41	14,017	16,477

Capacitors Stored on Pallets:

Number of Pallets:	26
Number of Capacitors:	444
Weight of Capacitors:	37,141

Liquid Greater Than 500 PPM:

Number of Drums:	286	86
Net Weight:	148,731	
Gross Weight:	165,891	

Liquid Less Than 500 PPM:

Number of Drums:	0
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PCB Transformers:	1
Total Weight:	6,568
Total Cubic Feet:	160

12/14/81

bc

PCB COMPLIANCE INSPECTION REPORT

SECTION A. FACILITY SUMMARY

Name and address of facility (include county, state, and zip code)

Duke Power Co., Toddville Storage Facility

601 Toddville Rd

Charlotte, N.C. Mecklinberg County

Responsible Official	Title	Phone
<u>Sec. cover sheet</u>	_____	_____

Facility Representative	Title	Phone
<u>David Roche</u>	<u>Assoc. Biologist</u>	_____
<u>Warren Baker</u>	<u>Facility Manager</u>	_____

SECTION B. INSPECTION/REVIEW

Signatures	Agency	Date
Inspected by <u></u>	<u>EPA, RIV-PTSB</u>	<u>12-15-81</u>
Inspected by _____	_____	_____
Reviewed by _____	_____	_____

SECTION C. INVENTORY

1. As of July 2, 1978, did facility contain in service, stored for future use, or stored for disposal:

- a. 50 or more large high or low voltage capacitors? YES NO N/A* C/A**
- b. 1 or more PCB transformers? YES NO N/A C/A
- c. 45 kgs (99.4 lbs) or more PCB chemical substances or PCB mixtures? YES NO N/A C/A

2. Does the facility use large capacitors?

YES NO N/A C/A

(If yes, characterize below.)

a. Large High Voltage

- 1) Total number of large high voltage PCB capacitors 118476
- 2) List number, size, location, and type of large high voltage capacitors below:

<u>No.</u>	<u>Size</u>	<u>Type</u>	<u>Kg PCBs Each</u>	<u>Area Located</u>	<u>No. Properly Marked</u>	<u>No. in Service</u>	<u>No. Stored for Use</u>	<u>No. Stored for Disposal</u>
<i>See comments</i>								

3) Total number of large, high voltage non-PCB capacitors _____

b. Large Low Voltage

- 1) Total number of large, low voltage PCB capacitors _____

*Not applicable
**Comments attached

2) List number, size, and type of large low voltage capacitors

<u>No.</u>	<u>Size</u>	<u>Type</u>	<u>Kg PCBs Each</u>	<u>Area(s) Located</u>	<u>No. Properly Marked</u>	<u>No. in Service</u>	<u>No. Stored for Use</u>	<u>No. Stored for Disposal</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

3) Total number of large, low voltage non-PCB capacitors

See Comments

c. Other Capacitors

1) Total number of other capacitors with PCBs _____

2) List of other capacitors

<u>No.</u>	<u>Size</u>	<u>Type</u>	<u>Each</u>	<u>Area (s)</u>	<u>No. in Service</u>	<u>No. Stored for Use</u>	<u>No. Stored for Disposal</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

3) Total number of other non-PCB capacitors

not available

3. Does the facility use PCB transformers?

(If yes, characterize below)

YES NO N/A C/A

No.	Size	Type	Kg/Gal of		No. Properly Marked	Area(s) Located	No. in Service	No. Stored for Use	No. Stored for Disposal
			PCBs or Mixtures	No. Each Total					
148				161,824					1

4. Does the facility contain other PCBs, PCB equipment (e.g., electromagnets, electric motors, hydraulic systems, heat transfer systems, compressors), or containers of PCBs or PCB mixtures?

YES NO N/A C/A

(If yes, characterize below)

Item	Kg PCB/ Gal.		No. Properly Marked	No. in Service	No. Stored for Use	No. Stored for Disposal
	Liquid	Size				

5. Based on the above inventory, what is the estimated amount of PCB chemical substances or PCB mixtures in service or stored for disposal at this facility?

In Service _____ (kgs)
 In Storage for Use } 354,993.8 (kgs)

In Storage for Disposal 266 478 (kgs) *plus 444 capacitors*
Total 621, 471.8 (kgs) *on pallets in open storage.*

6. Were there observations of leaks or spills or any signs of improper disposal of PCB substances or mixtures?
(If yes, document and sample.) YES ___ NO N/A ___ C/A ___
7. Was there any indication that waterways in the vicinity have been contaminated by spills, leaks, or improper disposal?
(If yes, document and sample.) YES ___ NO N/A ___ C/A ___
8. Were samples collected for analysis of PCB residual concentration?
YES ___ NO N/A ___ C/A

SECTION D. STORAGE AND HANDLING

1. Location:

a. Does the facility have its own storage site for PCBs?

YES NO ___ N/A ___ C/A ___

b. If the storage site is not within the boundary of the facility, give the site's name and address. _____

2. Physical requirements: Does storage site:

a. Provide protection from rainfall? YES NO ___ N/A ___ C/A ___

b. Meet floor requirements with 6-inch continuous curbs? YES NO ___ N/A ___ C/A ___

c. Meet containment volume requirements? YES NO ___ N/A ___ C/A ___

1) What is total containment volume at storage site (Batch & Reservoir Volume)?

Bldg A - 448 cu ft
Bldg B - 4840 cu ft

2) What is the internal volume of the largest oil article or container stored within?

55 gal.

3) What is the total internal volume of all containers within the storage site?

528 / 55 gal drums
& 4 caps.

4) Is item 1) greater than 2 times item 2)

YES NO N/A C/A

or 25% of item 3) above?

YES NO N/A C/A

5) Is the area within the curbed area void of drains, valves, expansion joints, or other openings?

YES NO N/A C/A

(If no, document location of opening, drainage path, and ultimate disposal location in log book.)

6) Is storage site located above the 100 year flood water elevation level?

YES NO N/A C/A

7) Are storage areas adequately marked? YES NO N/A C/A

3. Containers:

a. Are all PCB storage containers which are located within storage areas marked and dated?

YES NO N/A C/A

b. Do PCB containers comply with DOT specifications?

YES NO N/A C/A

4. Storage Site Operations:

a. Are storage containers marked and arranged so they can be located by date?

YES NO N/A C/A

- 1) What is total containment volume of storage site (width x length x height)? 5233
(both buildings)
- 2) What is the internal volume of the largest PCB article or container stored within?
55 gal
- 3) What is the total internal volume of all containers within the storage site?
575/55 gal drums

- d. Is moveable equipment decontaminated by approved procedures?
YES NO ___ N/A ___ C/A
- e. Are PCB containers stored and handled in a manner that protects them from accidental breakage or damage?
YES NO ___ N/A ___ C/A ___

5. Other Storage Areas:

- a. Are any non-leaking PCB articles temporarily being stored outside prescribed storage area?
YES NO ___ N/A ___ C/A

Have they been there for fewer than 30 days?

- Transformer drained & flushed ^{2/25/81.}* YES ___ NO N/A ___ C/A
- b. Are there any large high voltage capacitors next to the storage site?

YES NO ___ N/A ___ C/A ___

- i. Are they on pallets?
YES NO ___ N/A ___ C/A ___

- ii. Is there adequate space within the storage site to contain 10% of the volume of the above mentioned capacitors?

YES NO ___ N/A ___ C/A ___

SECTION E. DECONTAMINATION

1. Does the facility drain or cleanse PCB transformers or other equipment containing PCB chemical substances or mixtures prior to disposal? (*A+ Transformer Repair Shop*)

YES NO ___ N/A ___ C/A

Lab sample of oil from each dist. transformer brought in for service, 3 ml. sample tested by GLC. Approximately 5% of xformers tested are over 750 ppm PCBs.

2. Is the drainage and solvent filling site adequate to protect against spills and leaks and consequent contamination of surrounding area and waterways?

YES NO ___ N/A ___ C/A

3. Do solvents to be used for removing PCBs contain less than 0.05% PCBs? *Virgin Kerosene used in flushing.*

Perthane used for wash down.

YES NO ___ N/A ___ C/A ___

4. Was a sample of the solvent that was used for PCB removal obtained?

YES ___ NO N/A ___ C/A

5. Was the rinse volume of the dilutant approximately equal to the container's total volume?

Cone & bushing always covered.

Averages 75 to 80% of total volume of transformers.

YES NO ___ N/A ___ C/A ___

6. Are PCB containers completely filled with solvent and allowed to stand for 18 hours before being drained?

24 hrs. generally elapse before drainage.

YES NO ___ N/A ___ C/A ___

7. Are the drained PCB chemical substances or PCB solvent mixtures properly disposed of or stored?

Transferred to annex III storage

YES NO ___ N/A ___ C/A

8. Are solvents or materials which have been used for decontamination of PCB equipment disposed of or stored in the same manner as PCB mixtures?

YES NO ___ N/A ___ C/A

9. If decontamination procedures were not observed during inspection, did facility representatives demonstrate knowledge of proper decontamination procedures?

YES NO ___ N/A ___ C/A ___

10. Does facility have written decontamination procedures?

See attachment - Duke PCB Plan,

YES NO ___ N/A ___ C/A

SECTION F. RECORDS

1. Do records indicate:

a. Date of receipt of PCB materials? YES NO ___ N/A ___ C/A ___

- b. Date PCBs are removed from service? YES X NO ___ N/A ___ C/A ___
- c. Date PCBs are placed in storage? YES X NO ___ N/A ___ C/A ___
- d. Date PCBs are placed in transport for disposal? YES X NO ___ N/A ___ C/A ___

2. Do records indicate:

- a. That all PCB articles or PCB containers stored for disposal before January 1, 1983, have been removed from storage and disposed of before January 1, 1984?

(If no, document in log book.) YES ___ NO ___ N/A X C/A ___

- b. That PCBs stored for disposal after January 1, 1983, have been removed from storage and disposed of within one year of the date placed in storage?

(If no, document in log book.) YES ___ NO ___ N/A X C/A ___

3. Do records indicate the total quantity of PCB articles, substances, or mixtures remaining in service at the end of a calendar year?

- a. PCB transformers

1) Quantity 148

2) Weight of PCB substances or mixtures contained in transformers 161824 kgs.

- b. PCB capacitors

1) Quantity large high voltage 118,476 ~~X~~ large low voltage N/A

2) Quantity others N/A

3) Weight of PCB substances or mixtures contained in capacitors

371,480 gals kgs.
or 193169.8 kgs.

- c. PCB containers

Weight of PCB substances or mixtures in containers

See attached Toddville 12/14/81 kgs.
inventory list.

4. Do records indicate the total quantity of PCB substances or mixtures in PCB containers not in service?

YES NO N/A C/A

(If yes, characterize below.)

See Inventory sheet

a. Removed from service _____ kgs.

b. Placed in storage for disposal _____ kgs.

c. Placed in transport for disposal _____ kgs.

5. Do records indicate the total quantity of PCB transformers not in service?

YES NO N/A C/A

(If yes, characterize below.)

a. Removed from service

1) Quantity 1

2) Weight of PCBs contained 1290 kgs.

b. Placed in storage for disposal

1) Quantity 1

2) Weight of PCBs contained 0 kgs. Oil drained, flushed & barreled.

c. Place in transport for disposal

1) Quantity 20 (All transformers drained & flushed)

2) Weight of PCBs contained 22,522.5 kgs. on haul in storage

6. Do records indicate the total quantity of large high and low voltage capacitors not in service?

(No data on large low V capacitors.)

YES NO N/A C/A

(If yes, characterize below.)

a. Removed from service 1549 ~~3533~~ capacitors

b. Placed in storage for disposal OH as of 1-1-80 62

1) Quantity High voltage 1549 Low voltage _____

2) Weight of PCBs contained 105,329.15 kgs. includes soil & debris.

c. Placed in transport for disposal

1) Quantity High Voltage Low voltage

2) Weight of PCBs contained 1443 kg.

758 drums - 117,806.6 Kg total capacitors and debris.

7. Do records indicate the location of the initial disposal or storage facility for PCBs removed from service?

(If yes, list location of facility.) YES NO N/A C/A

Tallville Storage Facility →

1. Cerco/Car
2. Waste Mgmt of Al.

8. Do records indicate name of owner or operator of disposal or storage facilities?

(If yes, list name of owner or operator.)

YES NO N/A C/A

Duke Power Co.

9. Does annual report include records of disposition of PCB chemicals, articles, and mixtures?

YES NO N/A C/A

10. Does annual report contain:

a. Date and source of PCB articles, chemicals, and mixtures received?

YES NO N/A C/A

b. Date and type of articles, chemicals, and mixtures removed from service?

YES NO N/A C/A

c. Accounting of amount received, amount removed, and amount remaining at facility?

YES NO N/A C/A

11. Are pertinent documents, correspondence, or permits to or from federal, state, or local agencies maintained for a period of five years?

YES NO N/A C/A

12. If owners or operators maintain more than one facility that contains PCBs in the quantities prescribed in A.1, are records and documents kept at a single location?

(If yes, list the location.)

YES NO N/A C/A

Duke Power Co, Waco, Va Bldg.
Charlottesville, N.C.

13. If facility has closed down storage or disposal operations, has regional administration been properly notified?

YES NO N/A C/A

14. Do facility records for PCBs received, in service, in storage, or disposed of, correspond to inventory data compiled in Section A5? (If no, indicate area of discrepancy.)

YES NO N/A C/A

1 December 1986

TO: File

FROM: Jack Butler

RE: Telephone conversation with Mat Butcher, Duke Power, about
Toddville Operations Center, NC D981478480.

Mr. Butcher contacted our office on this date to discuss the statistical treatment of the data from the subject site. He was informed that the Students T Test would be used on each set of 4 samples taken to determine outliers or hot spots.

JB/tb/pc

18 November 1986

TO: File
FROM: Mary Giguere MG
RE: Toddville Operations Center
NC D981478480
Sample Preservation

Any well or ground water samples that are taken for volatile organic analyses, that have no visible sediment, will be preserved with 4 drops of hydrochloric (HCl) acid. Any well or ground water samples taken for metal analyses, that contain no visible sediment, will be preserved with 3 ml of nitric acid. If the pH of the metals samples is not less than 2, acid will be added until the pH is less than 2 and greater than 1 (1 pH 2). Samples with 3 ml of nitric acid will be marked with a check mark on the sample container cap. Any sample with more than 3 ml of nitric acid will be labeled with the amount of acid added.

Goggles and gloves will be worn while measuring acids and collecting samples. Pasteur pipets will be used for measuring the hydrochloric acid. These can be disposed of after rinsing. Graduated pipets will be used for the nitric acid. These will be rinsed and returned to the equipment room.

MG/tb/0354b

P. O. BOX 33189

DUKE POWER COMPANY
GENERAL OFFICES
422 SOUTH CHURCH STREET
CHARLOTTE, N. C. 28242

CERCLA
TELEPHONE: AREA 704
373-4011

received
Nov. 14, 1986

November 12, 1986

Mr. Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section
N.C. Department of Human Resources
P. O. Box 2091
Raleigh, North Carolina 27602-2091

Re: PCB Sampling at Toddville
File Nos: ENV-0106, ENV-0309, GAH-0207

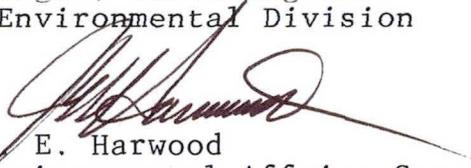
Dear Mr. Butler:

This is to advise you that Duke Power Company will proceed with your proposed sampling plan at our Toddville site. We also agree with the revised sampling plan as detailed in your letter of November 6, 1986.

Messrs. D. W. Anderson and W. D. Baker will meet your sampling team at the entrance to the Toddville site on Wednesday, November 19, at 11:00 AM. Should you have any questions or comments, please contact D. W. Anderson (704/373-4976) or M. A. Lascara (704/373-5201).

Sincerely,

S. B. Hager, Chief Engineer
Civil/Environmental Division


By: J. E. Harwood
Environmental Affairs Specialist

MAL/mdc

cc: Central Records

12 November 1986

TO: File
FROM: Jack Butler
RE: Site inspection and sampling at Toddville Operation Center Site
NC D981478480.

Michael LaScara, Duke Power, (704-373-5201) contacted our office on this date to inform us that their legal department had approved our sampling plan. It was confirmed that this sampling would be done on November 19, 1986. Our team plans to arrive at about 10:30 or 11:00 a.m. and probably stay for about 2 hours. Mr. LaScara said he was sending a letter confirming these times and dates.

JB/tb/0342b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

9 November 1986

Mr. Don Willard
Solid and Hazardous Waste Division
Mecklenburg County Health Department
249 Billingsley Road
Charlotte, NC 28211

COURIER 515

Dear Don:

The CERCLA Unit site investigation of the Toddville Operation Center scheduled for 2 October 1986 has been tentatively rescheduled for 19 November 1986. If you or your staff would like to be present during sample collection please contact Jack Butler, environmental engineer, or me at (919) 733-2801.

Sincerely,

Lee Crosby

Lee Crosby, CERCLA Unit Manager
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

LC/tb/0342b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

November 6, 1986

Mr. Joe Harwood
Duke Power Company
Design Engineering Department
P.O. Box 33189
Charlotte, N.C. 28242

Subject: Site sampling at Toddville Operations Center, N.C.
NC D981478480

Dear Mr. Harwood:

As discussed in our meeting on November 4, 1986, the sampling plan at the Toddville Operations Center Site is being expanded to address concerns expressed by Duke Power Co. The sampling map included in our letter of October 1, 1986 remains unchanged, however, instead of collecting one surface and one subsurface soil sample in each of the 2 soil sampling areas, 4 surface and 4 subsurface soil samples will be collected in each of the 2 soil sampling areas. These soil sampling areas are in the transformer and capacitor storage areas west and south of the main warehouse building. In addition, a set of 4 surface and 4 subsurface background soil samples will be collected for reference. The 4 sampling points within these 2 sampling and one background areas will be at the corners of a 10 ft. square to be laid out in each area. The intent is to make all samples representative of their respective areas and to allow statistical analysis of the data. This statistical analysis will be used to aid in determining the significance of any PCB concentrations that may be found. The student's t-test to be used in this statistical analysis is described in EPA #SW-963, revised March 1983, Ground-Water Monitoring Guidance for Owners and Operators of Interim Status Facilities. A copy of the applicable section of this document is enclosed for your use.

As also discussed in our meeting on November 4, 1986, the initial well sample will be a grab sample from the unpurged well. It is understood that any PCB concentration above the detection limit will only indicate potential contamination that will require additional testing involving purging of the well to confirm. As also discussed, Duke Power will be responsible for uncapping and resealing the well that is sampled.

Mr. Joe Harwood
November 6, 1986
Page 2

Our sampling team will provide all sampling containers and will split all samples with Duke Power. Please feel free to comment on this sampling plan to our office at (919) 733-2801. I will be contacting you in the near future to confirm our tentative sampling date of November 19, 1986. Thank you for your cooperation.

Sincerely,



Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

JB/tb/0338b

Enclosure

cc: Dave Anderson, Duke Power Co.
Michael Lascara, Duke Power Co.
William L. Meyer, NC DHR/DHS
Lee Crosby, NC DHR/DHS
Carol Schiller, NC DHR/DHS

Solid Waste



Ground-Water Monitoring Guidance for Owners and Operators of Interim Status Facilities

Variance

The variance is an average of the squares of the differences between the actual value and the mean, and is a measure of variability. The mean and variance are used in the Student's t-test to determine whether any changes in the concentration of the indicator parameters are statistically significant. In this context, the variance may be defined as: the sum of the squares of the differences of the individual measurements and the mean, divided by one less than the number of measurements. Symbolically, the sample variance is calculated as follows:

$$s^2 = \frac{\sum_{i=1}^n (X_i - \bar{X})^2}{n - 1}$$

- where
- s^2 = sample variance;
 - X_i = value of each measurement;
 - \bar{X} = mean of the measurements;
 - Σ = "the sum of" a set of numbers from the first value (where $i = 1$) to the last value (where $i = n$). In this case, the squared differences of the measurements and the mean are added; and
 - n = the number of measurements.

Student's t-test

[Note: The methodology for application of the Student's t-test presented in this guidance document differs from that offered in the May 2, 1980, background document for ground-water monitoring. Although both methods could be appropriate, the one recommended in this guidance document is preferred.]

The Student's t-test is a statistical method used to determine the significance of a change between initial background and subsequent parameter values and must be calculated at least semi-annually for each well for each indicator parameter. Using all the available background data (n_b readings), calculate the background mean (\bar{X}_b) and background variance (s_b^2). For the single monitoring well under investigation (n_m readings), calculate the monitoring mean (\bar{X}_m) and monitoring variance (s_m^2).

The t-test uses these data summary measures to calculate a t-statistic (t^*) and a comparison t-statistic (t_c). The t^* value is compared to the t_c value and a conclusion reached as to whether there has been a statistically significant change in the indicator parameter value.

The t-test for the difference of two groups is given by:

$$t^* = \frac{\bar{X}_m - \bar{X}_b}{\sqrt{\frac{s_m^2}{n_m} + \frac{s_b^2}{n_b}}}$$

If the t^* is negative (except for pH), then there is no significant difference between the monitoring data and background data.

The t-statistic (t_c) against which t^* will be compared, necessitates finding t_b and t_m from Table 2-4 where,

t_b = Table 2-4 with (n_b-1) degrees of freedom, 0.01 level of significance; and

t_m = Table 2-4 with (n_m-1) degrees of freedom, 0.01 level of significance.

[NB: if pH is being examined, use 0.005 as the level of significance]. Finally, the special weightings W_b and W_m are defined as:

$$W_b = \frac{s_b^2}{n_b} \quad \text{and} \quad W_m = \frac{s_m^2}{n_m}$$

and so the comparison t-statistic is

$$t_c = \frac{W_b t_b + W_m t_m}{W_b + W_m}$$

The t-statistic (t^*) is now compared with the comparison t-statistic (t_c) using the following decision-rule:

If t^* is equal to or larger than t_c , then conclude that there most likely has been an increase in indicator parameter. [In the case for pH, it is decrease if the t^* as originally calculated was negative, and increase if the original t^* was positive.]

If t^* is less than t_c , then conclude that most likely there has not been a change in indicator parameter.

The procedure described above is known as Cochran's Approximation to the Behrens-Fisher solution of the comparison of two independent samples with unequal population variances. For further information, see Snedecor and Cochran (1967) or Steel and Torrie (1960).

Table 2-4

The Critical t-values at the 0.01 and 0.005 Levels
of Significance

<u>Degrees of Freedom</u>	<u>Level of Significance = 0.01 99%</u>	<u>Level of Significance = 0.005 99.5%</u>
1	31.821	63.657
2	6.965	9.925
3	4.541	5.841
4	3.747 ^v	4.604
5	3.365	4.032
6	3.143	3.707
7	2.998	3.499
8	2.896	3.355
9	2.821	3.250
10	2.764	3.169
11	2.718	3.106
12	2.681	3.055
13	2.650	3.012
14	2.624	2.977
15	2.602	2.947
16	2.583	2.921
17	2.567	2.898
18	2.552 ^v	2.878
19	2.539	2.861
20	2.528	2.845
21	2.518	2.831
22	2.508	2.819
23	2.500	2.807
24	2.492	2.797
25	2.485	2.787
26	2.479	2.779
27	2.473	2.771
28	2.467	2.763
29	2.462	2.756
30	2.457	2.750
40	2.423	2.704
60	2.390	2.660
120	2.358	2.617
	2.326	2.576

Adapted from Table III, Statistical Tables for Biological, Agricultural and Medical Research, Fisher and Yates, 1963.

Toddville Facility
Duke Power + SHWMB

4 November 1986

	<u>AGENCY</u>	<u>PHONE</u>
Lee Crosby	DHR/DHS	(919) 733-2801
MICHAEL LASCARA	DPC	704 372-5201
DAVE ANDERSON	DPC.	704-373-4976
JOE HARWOOD	DPC	704-373-8494
Carol M. Schills	SHWMB	919-733-2178
Bill Meyer	"	"
Jack Butler	DHR/DHS	(919) 733-2801

4 November 1986

1. Duke wants clean up standards on the front end

2. Twice the # of samples for statistical T Test

Bill Meyer - requests this - (at least 4 soil samples)

ex: 0, 0, 0, 55000 ppm
follow up sampling

DAVE ANDERSON

3. WHAT would a + reading mean?
WHAT is the epidemiological std?

carol skiller

4. Branch's responsibility is to follow up on the request to investigate

Joe Harwood

15-20 ppm - PCB left on roadside

DAVE PhD Biochemistry
wants laboratory protocol

use our samples & our bottles - Bill Meyer

additional sampling plan
purged well issue -

(**)



J. Butler

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

October 23, 1986

Mr. J. E. Harwood
Duke Power Company
Design Engineering Department
P.O. Box 33189
Charlotte, N.C. 28242

Dear Mr. Harwood,

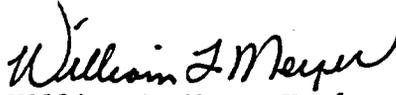
I am writing in response to your request to cite the statutes and regulations which authorize the investigation and proposed sampling of the Toddville Operations Center near Charlotte, N.C. by the Solid and Hazardous Waste Management Branch. The Solid and Hazardous Waste Management Branch is investigating a complaint received by the N.C. Division of Health Services concerning the possible contamination of soil and ground water located on the Toddville Site. The authority for the investigation and proposed sampling, to date, are several.

1. Pursuant to N.C.G.S. §130A-4, the Secretary of the Department of Human Resources has the authority and responsibility to administer and enforce the provisions of this chapter (Ch.130A).
2. The Secretary shall have the authority to make sanitary and health investigations and inspections, N.C.G.S. §130A-5.
3. This authority may be delegated under N.C.G.S. §130A-6. and, in this instance, has been delegated to the Solid and Hazardous Waste Management Branch.
4. To carry out the provisions of Ch.130A, the right of entry upon the premises of any place where entry is necessary has been given, N.C.G.S. §130A-17 and delegated to Solid and Hazardous Waste Management Branch.
5. If consent for entry is not obtained, an administrative search and inspection warrant shall be obtained pursuant to N.C.G.S. §15-27.2. However, if an imminent hazard exists, no warrant is required for entry upon the premises, N.C.G.S. §130A-17.
6. Pursuant under N.C.G.S. §130A-19 and §130A-20, action may be taken to abate a public health nuisance or an imminent hazard, respectively.

Based on the delegated authority and the authorization by the N.C.G.S., the Solid and Hazardous Waste Management Branch intends to proceed with its investigation and proposed sampling of the Toddville Operations Center. I look forward to your cooperation in these matters. An alternative is for the Solid and Hazardous Waste Management Branch to refer the complaint to the U.S. Environmental Protection Agency, Region IV CERCLA Program.

I look forward to meeting with you and your technical staff on November 4, 1986, as planned, to discuss the technical requirements of the investigation and proposed sampling.

Sincerely,



William L. Meyer, Head
Solid and Hazardous Waste Management Branch

cc: L. Crosby
J. Butler
J. Rhodes
C. Schiller

CMS/WLM/rt/Harwood

P. O. BOX 33189

DUKE POWER COMPANY
GENERAL OFFICES
422 SOUTH CHURCH STREET
CHARLOTTE, N. C. 28242

TELEPHONE: AREA 704
373-4011

October 20, 1986

Mr. Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section
North Carolina Department of Human Resources
P.O. Box 2091
Raleigh, NC 27602-2091

Re: Duke File No: ENV-0309

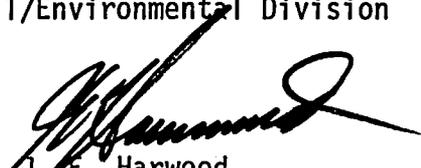
Dear Mr. Butler:

This letter confirms our telephone conversation last week regarding the proposed sampling at the Toddville Operations Center. As I expressed to you, Duke Power Company will need a written statement issued by your office citing the appropriate statutes and regulations which authorize the investigation and proposed sampling. I would appreciate you furnishing this information at your earliest convenience so that it may be reviewed by our Legal Department prior to sampling. I am advised that the state of the law is not clear in this area and Duke will require a reasonable time to review the information you submit. As we discussed, I am sure that you can understand Duke's need to know specifically under what authority this sampling will take place.

With regard to the technical requirements of your proposed sampling program, our technical staff has some questions that they would like to discuss with you prior to sampling. As we agreed, a meeting to discuss these matters has been tentatively set for November 4th in Raleigh at 2:00 p.m. We look forward to meeting with you at that time. If you have any questions or comments, please contact me at 704-373-8494.

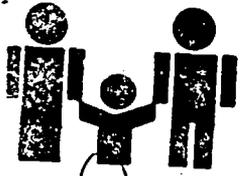
Very truly yours,

S. B. Hager, Chief Engineer
Civil/Environmental Division


BY: J. E. Harwood
Environmental Affairs Specialist

MAL/sgj

cc: Central Records



NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
INTER OFFICE MEMORANDUM

DATE 10-23-86

TO Jack

FROM Teresa

Conf room is reserved
for you.

Nov. 4
from 2-5.



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

October 1, 1986

Mr. Joe Harwood
Duke Power Company
Design Engineering Department
P.O. Box 33189
Charlotte, NC 28242

SUBJECT: Site sampling at Toddville Operations Center, NC D981478480

Dear Mr. Harwood:

In response to an anonymous citizen's complaint received by our office, the NC CERCLA Unit would like to collect environmental samples at the Duke Power Toddville Operations Center. The purpose of this sampling is to determine if PCB's are present in the soil on site or in area groundwater and to aid in determining the presence of any potential public health threat.

Enclosed please find a copy of a sampling plan map for the Toddville Operations Center site. On this map the well our sampling team would like to sample and the approximate location of intended soil samples are labeled. A surface and subsurface soil sample is desired at each of the two soil sampling locations. Our team would also like to collect a sample of any standing water found on the site as a representative of surface runoff. This sample will be dependent on weather conditions.

As we have discussed, our office requests that Duke Power be responsible for uncapping and resealing the well that is sampled. The approximately 3 1/2 inch diameter hand auger holes created by subsurface soil sampling can be left for reference or refilled by our sampling team as you desire. Our sampling team will provide all sampling containers and be more than happy to split samples with Duke Power. Please feel free to comment on this sampling plan to our office at (919) 733-2801. I will be contacting you in the near future to arrange a mutually acceptable date and time for this sampling. Thank you for your cooperation.

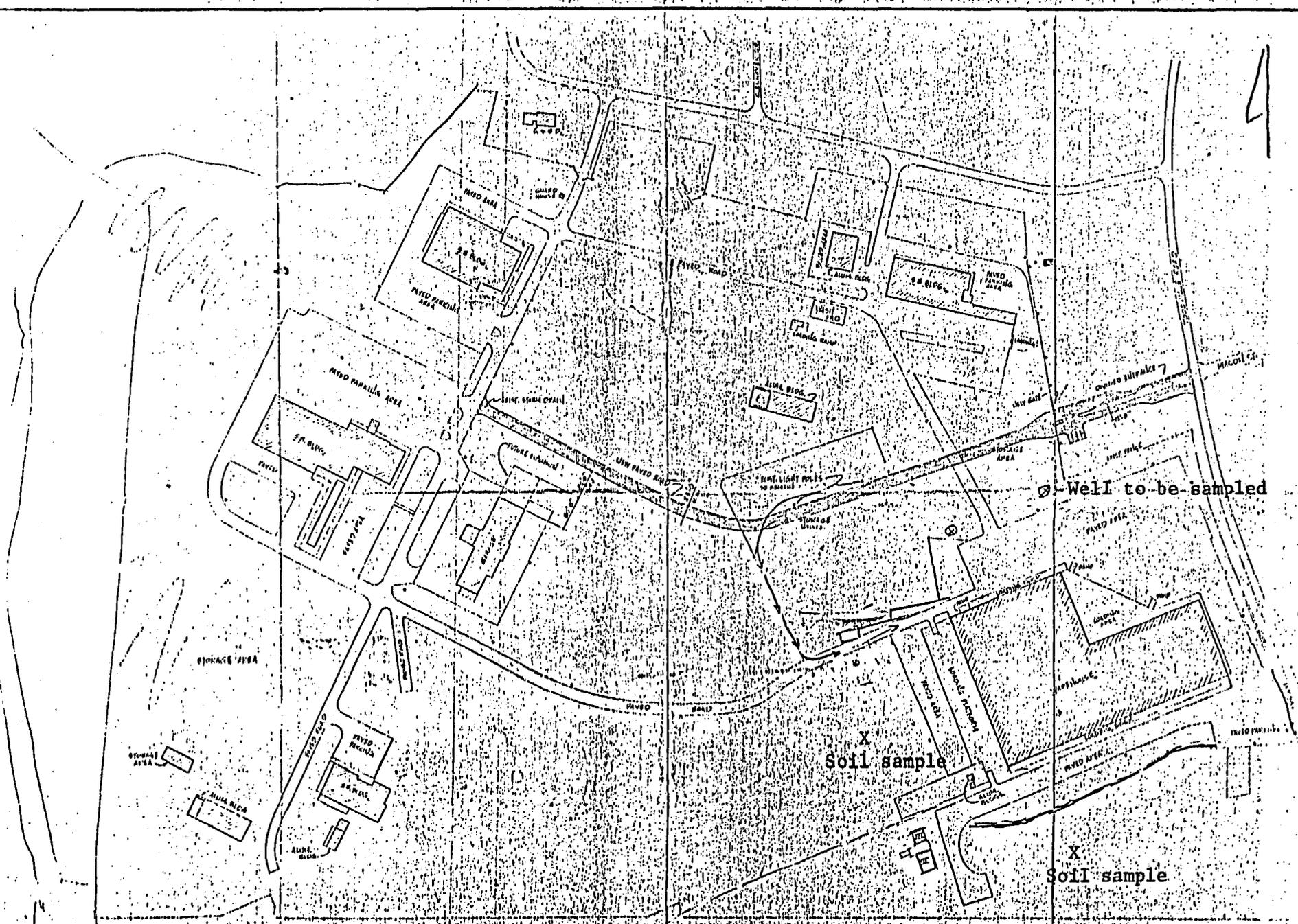
Sincerely,

A handwritten signature in cursive script that reads "Jack Butler".

Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

JB/tb/0210b

Enclosure



PARTIAL SITE PLAN

● WELL
 ○ LIGHT BOLT
 ▨ PAVED AREA

OX 100-1000	PROJ. NO.
REVISIONS	REVISIONS BY
	DATE

PROJECT TITLE
 1000-1000-1000-1000
 1000-1000-1000-1000
 1000-1000-1000-1000
 1000-1000-1000-1000

SHEET
 1
 OF
 2
 SHEETS

1 October 1986

TO: File
FROM: Jack Butler
RE: Telephone conversation with Marilyn Conner, Duke Power.

A message was left with Ms. Conner on this date to inform Joe Harwood that our sampling at the Toddville Operations Center originally scheduled for October 2, 1986 had been postponed. Mr. Harwood is out of town on this date.

JB/tb/0210b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

September 19, 1986

Mr. Joe Harwood
Duke Power Company
Design Engineering Department
P.O. Box 33189
Charlotte, NC 28242

SUBJECT: Site sampling at Toddville Operations Center, NC D981478480

Dear Mr. Harwood:

As discussed in our telephone conversation on September 18, 1986, the NC CERCLA Unit plans to collect soil and water samples at the Duke Power Toddville Operations Center on October 2, 1986. These samples will consist of a groundwater "grab" sample from the eastern on-site well, surface and subsurface soil samples from the transformer and capacitor storage areas west and south of the main warehouse building, and possibly surface runoff rain water if available.

In order to obtain samples from the on-site well our office requests that Duke Power be responsible for uncapping the well prior to sampling and resealing the well after sampling. As discussed in our telephone conversation on September 18, the well to be sampled is the most accessible, eastern most well. This sample will be a "grab" sample of the water in the unpurged well. This type of sampling will not necessitate water treatment and disposal associated with purging of a well.

A hand auger will be used to collect the subsurface soil samples. This auger creates an approximately 3 1/2 inch diameter hole that can be left for reference or refilled by our sampling team as you desire. The surface water runoff sample will be dependent on weather conditions.

The purpose of this sampling is to determine if PCB's are present in the soil on site or area groundwater and to aid in determining the presence of any public health threat. If you have any questions or comments please contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Jack Butler".

Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

JB/tb/0210b

18 September 1986

TO: File
FROM: Jack Butler
RE: Telephone conversation with Joe Harwood, Duke Power Co.
(704) 373-8494) about S.I. at Toddville Operations Center,
NC D981478480

Mr. Harwood was contacted on this date to inform him of our intention to perform a site inspection at the Toddville Operations Center site on October 2, 1986. Mr. Harwood requested that a sampling plan be submitted to him at:

Duke Power Co.
Design Engineering Department
P.O. Box 33189
Charlotte, NC 28242

Mr. Harwood was informed that our sampling would be as follows:

1. Grab water sample from on-site well.
2. Surface runoff water is available.
3. Surface and subsurface soil at two locations west and south of the warehouse building that was visited on August 20, 1986.

JB/tb/0210b

16 September 1986

TO: File

FROM: Jack Butler

RE: Telephone conversation with Henry Sutton, Mecklenburg County Health Department, about S.I. at Toddville Operations Center NC D981478480.

Mr. Sutton contacted our office to confirm our planned S.I. at the Toddville Operations Center site at about 11:00 a.m. on October 2, 1986. Mr. Sutton was informed that we planned to sample soil on the site, a grab sample from a well on the site, surface run-off water, and off site wells.

JB/tb/0321b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

8 September 1986

TO: Steve Reid, Public Information Officer
DHR Public Information Office

FROM: Lee Crosby, CERCLA Unit
Solid and Hazardous Waste Management Branch

RE: NC CERCLA Site Investigation
Toddville Operations Center - Mecklenburg
NCD981478480

The CERCLA Unit will conduct a site investigation of the Toddville Operations Center in Charlotte on 1 October 1986. The preliminary assessment form and the transmittal letter to EPA are attached.

If you need additional information, please contact Jack Butler or me at 733-2801.

LW/0271b

cc: RCRA Area Supervisor- Julian Foscue

Attachments



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

8 September 1986

Mr. Don Willard
Solid and Hazardous Waste Section
Mecklenburg County Health Department
1200 Blythe Blvd
Charlotte, NC 28203

Courier 515A

Dear Don:

To confirm our telephone conversation of this morning, the CERCLA Unit of the Solid and Hazardous Waste Management Branch will conduct a site investigation at the Toddville Operations Center in Charlotte on Thursday, 2 October 1986. Copies of the preliminary assessment and transmittal letter have been enclosed for your information.

We plan to travel to Charlotte the morning of the site investigation and anticipate that we will arrive at approximately 11:00 a.m. We appreciate your involvement at previous CERCLA site investigations and look forward to working with you on this site as well.

If you have any questions, please do not hesitate to contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Lee Crosby".

Lee Crosby, CERCLA Unit Manager
Solid and Hazardous Waste Management Branch
Environmental Health Section

LC/lw/0271b



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

3 September 1986

Ronald H. Levine, M.D., M.P.H.
State Health Director

Ms. Denise Smith
EPA NC CERCLA Project Officer
Air and Hazardous Material Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Smith:

SUBJECT: Preliminary Assessment Report
Toddville Operations Center NC D981478480
Charlotte, NC 28242

Enclosed please find the Preliminary Assessment report for the subject site. The recommended priority for the site is based on review of the available data.

The Duke Power Toddville Operations Center is on approximately 115 acres of land and includes a warehouse that has been used by Duke Power for approximately 30 years. Several acres of land just west and south of this warehouse have been used to store equipment including capacitors and transformers since the warehouse was built. Some of the capacitors reportedly contained oil with high concentrations of PCB's. Some of the transformers may also have contained oil with PCB's. Servicing of transformers, including changing and filtering of transformer oil has also occurred in this area in the past.

Two wells on site were taken out of service when city water became available to the facility in about 1971. The area surrounding the facility is presently served by city water, however, it is believed that many of the houses in the immediate vicinity predate the availability of city water service. These houses may therefore still have usable wells.

Because of the potential for ground water contamination at this site a medium priority for inspection is recommended. If you have any questions please contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Jack Butler".

Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

II. IDENTIFICATION

01 STATE NC	02 SITE NUMBER D981478480
----------------	------------------------------

PART I - INFORMATION AND ASSESSMENT

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Toddville Operations Center	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 610 Toddville Road
--	---

03 CITY Charlotte	04 STATE NC	05 ZIP CODE 28242	06 COUNTY Mecklenburg	07 COUNTY CODE 60	108 CONG DIST 09
----------------------	----------------	----------------------	--------------------------	----------------------	---------------------

09 COORDINATES: LATITUDE 35° 16' 32" LONGITUDE 80° 54' 58"

10 DIRECTIONS TO SITE (Starting from nearest public road) From I-85 exit northwest onto Hwy. 27 (Thrift Road/Freedom Drive). Approx. 1.8 miles from I-85 turn right onto Toddville Road. Site is just north of railroad tracks.

III RESPONSIBLE PARTIES

01 OWNER (if known) Duke Power Co.	02 STREET (Business, mailing, residential) 422 South Church Street
---------------------------------------	---

03 CITY Charlotte	04 STATE NC	05 ZIP CODE 28242	06 TELEPHONE NUMBER (704) 373-4011
----------------------	----------------	----------------------	---------------------------------------

07 OPERATOR (if known and different from owner) Duke Power Co.	08 STREET (Business, mailing, residential) 610 Toddville Road
---	--

09 CITY Charlotte	10 STATE NC	11 ZIP CODE 28242	12 TELEPHONE NUMBER (704) 399-7550
----------------------	----------------	----------------------	---------------------------------------

13 TYPE OF OWNERSHIP (Check one)

A. PRIVATE B. FEDERAL: _____ (Agency) C. STATE D. COUNTY E. MUNICIPAL
 F. OTHER: _____ (Specify) G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) (CERCLA 103c)

A. RCRA 3001 DATE RECEIVED: _____ B. UNCONTROLLED WASTE SITE DATE RECEIVED _____ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION BY (Check all that apply)
 YES DATE _____ A. EPA B. EPA CONTRACTOR C. STATE D. OTHER CONTRACTOR
 E. LOCAL HEALTH OFFICIAL F. OTHER: _____

NO CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

<input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	03 YEARS OF OPERATION	<input type="checkbox"/> UNKNOWN
	1956 Present	
	BEGINNING YEAR ENDING YEAR	

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Site used for approx. 30 yrs. to store and service electrical equipment including transformers and capacitors. Transformer oil possibly also used in past for dust suppression. Two wells on site have been capped since 1971. Surrounding area served by city water

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION however some houses may have wells.
This is not a RCRA facility.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

A. HIGH B. MEDIUM C. LOW D. NONE
(Inspection required promptly) (Inspection required) (Inspection on time available basis) (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Joe Harwood	02 OF (Agency/Organization) Duke Power Co.	03 TELEPHONE NUMBER (704) 373-8494
---------------------------	---	---------------------------------------

02 PERSON RESPONSIBLE FOR ASSESSMENT Jack Butler	05 AGENCY ORGANIZATION NC DHR/DHS SHW Mgmt. Br.	03 TELEPHONE NUMBER (919) 733-2801	08 DATE 08/27/86
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POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. IDENTIFICATION

01 STATE NC	02 SITE NUMBER D981478480
----------------	------------------------------

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION 2 wells on site not used since 1971.
 Possible private wells in area. Possible contamination from transformer and capacitor oil containing PCB's.

01 B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 E. DIRECT CONTACT 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 F. CONTAMINATION OF SOIL 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 AREA POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION Possible use of transformer oil for
 (Acres)
 dust suppression in past. Possible spills of oil containing PCB's in past.

01 G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION 2 wells on site capped in 1971.
 Possible private wells in area.

01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

II. IDENTIFICATION

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

01 STATE NC 02 SITE NUMBER D981478480

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [] J. DAMAGE TO FLORA 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 [] K. DAMAGE TO FAUNA 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
04 NARRATIVE DESCRIPTION

01 [] L. CONTAMINATION OF FOOD CHAIN 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
04 NARRATIVE DESCRIPTION (include name(s) of species)

01 [] M. UNSTABLE CONTAINMENT OF WASTE (Spills/runoff/standing leaking drums) 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 [] N. DAMAGE TO OFFSITE PROPERTY 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
04 NARRATIVE DESCRIPTION

01 [] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
04 NARRATIVE DESCRIPTION

01 [] P. ILLEGAL/UNAUTHORIZED DUMPING 02 [] OBSERVED (DATE:) [] POTENTIAL [] ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV. COMMENTS

V. SOURCES OF INFORMATION (Site specific references, e. g., state files, sample analysis, reports)

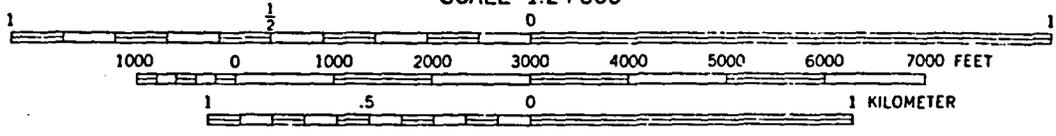
As previously cited.

MOUNTAIN ISLAND LAKE QUADRANGLE

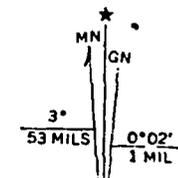
NORTH CAROLINA

7.5 MINUTE SERIES (TOPOGRAFIC)

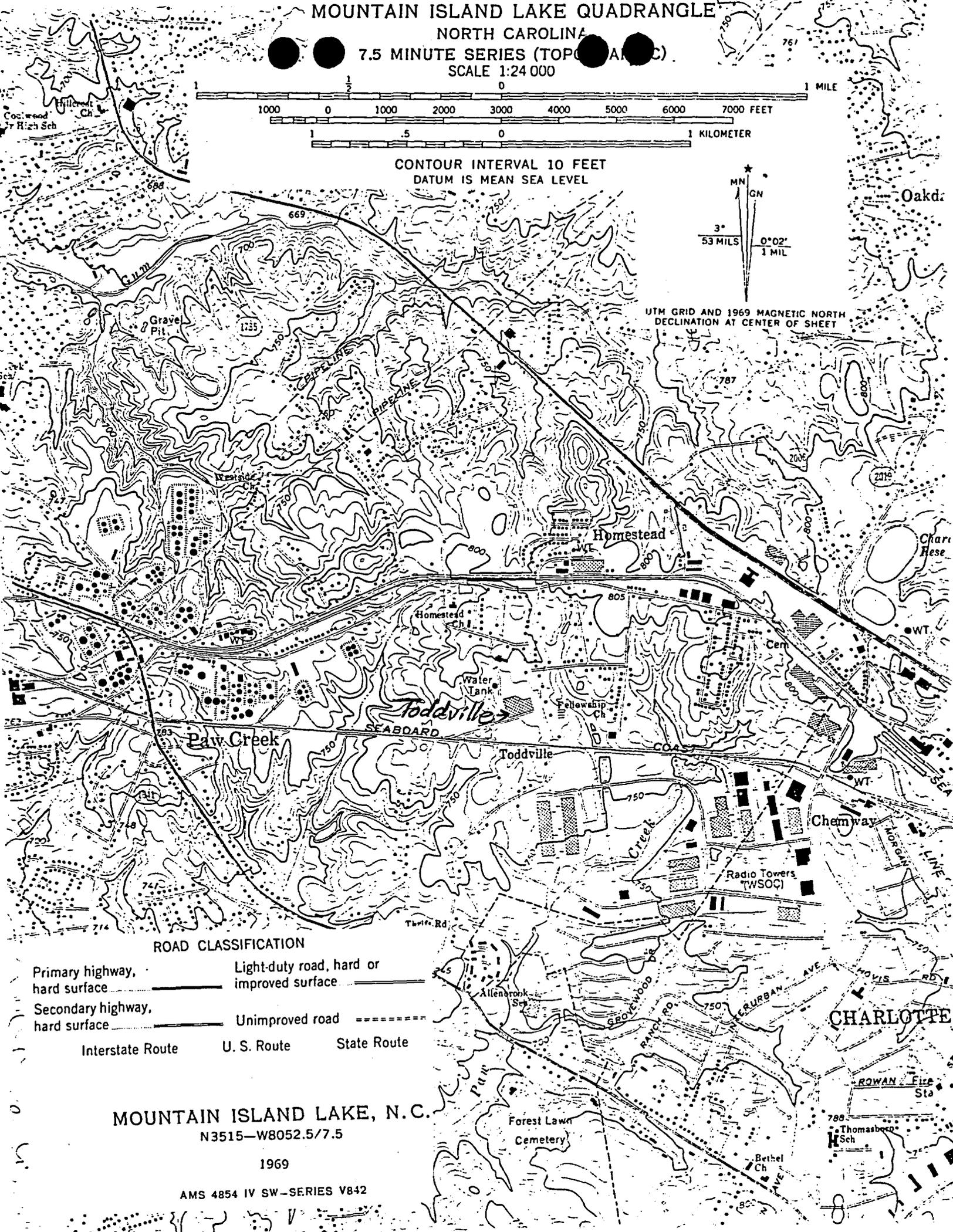
SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL



UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Interstate Route
- Light-duty road, hard or improved surface
- Unimproved road
- U. S. Route
- State Route

MOUNTAIN ISLAND LAKE, N. C.
N3515-W8052.5/7.5

1969

AMS 4854 IV SW - SERIES V842

~~For the attention of~~
Mack

Joe Harwood
Send copy of letter
EPA sent back
person req. info
re PCB
sent to Joe Harwood

704 373-8444

Duke Power Co
Design Eng. Dept.
PO Box 33189
Charlotte NC
28242

Recd. from
Mack Henderson
on 8-22-86

Aug 20
Freedom Drive
10:45 Shoney's



file

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

June 13, 1986

Mr. David Anderson, Chairman
Solid & Hazardous Waste Committee
Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

Dear Mr. Anderson:

Recently the Solid and Hazardous Waste Management Branch was forwarded a confidential complaint concerning Duke Power's Toddville site. Of concern is possible PCB contamination of soil and ground water.

In order to evaluate possible contamination it is requested that Duke Power allow the Branch to collect soil samples and sample the well at this location. Any assistance you or Duke Power could lend would be greatly appreciated. To that end it is further requested that you reply to this request by June 30, 1986.

If further information is needed concerning this matter, please contact me or Mack Henderson at (919) 733-2178.

Sincerely,

Jerry Rhodes

Jerry Rhodes, Assistant Branch Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

JR:mh:bw

CC: Bill Baker(WC2250)

Dr David Anderson

Chairman Solid & Hazard Waste Committee
Duke Power Co. (EC1150)

SPO Box 33189

Charlotte 28242

cc Bill Baker (WE 2250)

16 July 1986

Duke Power Toddville site

Name	Agency	Phone
Lee Crosby	DHR/ SHW	
Jerry Rhodes	" "	(919) 733-2178
Mack Henderson	" "	
Wm Larry Porter.	Duke	704 373 4825
JOE HARWOOD	Duke	704 - 373 - 8494

DUKE POWER COMPANY

GENERAL OFFICES
422 SOUTH CHURCH STREET
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
373-4011

June 30, 1986

Mr Jerry Rhodes, Assistant Branch Head
Solid & Hazardous Waste Management Branch
Environmental Health Section
North Carolina Department of Human Resources
P O Box 2091
Raleigh, NC 27602-2091



Re: Duke File No ENV-0309.

Dear Mr Rhodes:

Pursuant to your letter of June 13, 1986 concerning possible PCB contamination at our Toddville site and our telecon of June 30, 1986; I have attached a list of some general questions we need to have you answer before we can effectively respond to your request to conduct sampling at the site. Also, as we discussed, the U.S. Environmental Protection Agency-Region IV conducted an extensive 2-day PCB audit of our Toddville site in December, 1981 and no problems were noted. When we meet as scheduled on July 17, 1986, we will review this EPA audit report with you as well as the ongoing PCB control program we have at the site.

If you have any questions prior to our scheduled meeting, please contact me at 704-373-4976 or J E Harwood at 704-373-8494.

Very truly yours,

S B Hager, Chief Engineer
Civil-Environmental Division

David W. Anderson

By: David W Anderson, Chairman
Solid & Hazardous Waste Committee

DWA/cgs

Attachment

Attachment

Information requested concerning proposed PCB sampling at Duke Power Company's Toddville site.

- 1) What areas of the Toddville site are you proposing to sample and test?
- 2) What type of sampling and analytical procedures will be utilized?
- 3) Are you principally investigating soil or groundwater contamination?
- 4) Is there any specific time or incident being investigated?
- 5) Is there any specific statute or regulation under which you are seeking to collect samples at the Toddville site?
- 6) Are there any specific cleanup procedures and practices which the North Carolina Department of Human Resources utilizes for PCB contamination of soil or water?

General Statutes includes but not limited to

130A-17 Right of Entry

130A-19 Public Health Nuisance

130A-20 Imminent hazard require determination by sec.

→ 130A 4B

1527.2 Administrative Search Warrant

130A-5 (4) make sanitary and health investigations
& inspections

^{USC}
42 ~~§~~ 9604 CERCLA § 104 (a) (b)

(a) removal and other remedial action by
President (b) investigations, monitoring, etc by
President

(c) access to its records (A) right to enter
(B) inspect and obtain samples



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365



AUG 5 1986

MEMORANDUM

SUBJECT: EPA Guidance & Policy

FROM: Chief, Waste Planning Section
Residuals Management Branch

TO: All State Directors
EPA Region IV

Attached is a letter titled, "Recommendation on Removal Action Level for PCB's in Soil Based on Health Effect." Sites contaminated with polychlorinated biphenyls (PCBs) are regulated under CERCLA.

If there are any questions regarding this letter, please feel free to direct them to Joe Sangster of my staff at (404) 347-7603.

Otis Johnson, Jr.

Attachment

Jack
If it's needed, could
you include these
in our Todville + Heavy-
Duty files. Stan has
a copy too. Lee

RECOMMENDATION ON REMOVAL ACTION LEVEL FOR PCBs IN SOIL
BASED ON HEALTH EFFECT

WES
STATES

BMD
FRP
JMP

This memo sets forth the advisory limitations of polychlorinated biphenyls (PCBs) in soil considered permissible in protecting the health of the public affected by contaminated sites regulated under CERCLA. This is prepared in response to a request by the Office of Emergency and Remedial Response to provide a recommendation concerning the limitations based on exposure and health assessments as described in detail in the draft Office of Health and Environmental Assessment (OHEA) report entitled "Development of Health Advisories for Polychlorinated Biphenyls (PCBs)" dated July 25, 1985, updated as "Development of Advisory Levels for Polychlorinated Biphenyls (PCB) Cleanup" in December 1985; and subsequently revised to delete the 1-day advisory levels and to include the 10-day advisory levels.

Human intakes of PCBs from drinking water and soil are assumed to occur independent of each other, because drinking water can come from a clean public water system. The main focus of this exposure analysis is to define the levels of PCBs which will require soil removal action or up to which the soil should be cleaned. The OHEA report summarizes ten-day, noncancer, and long-term oncogenic advisory levels for PCB cleanup in terms of the ranges of the permissible PCB concentration in soil. These ranges resulted due to several types of commercial PCBs evaluated with different vapor pressures and the variations in soil-air partition coefficients of PCBs affecting their environmental distribution. One-day and long-term noncancer advisory levels could not be developed at this time mainly due to lack of health effect information.

The permissible PCB levels in soil are obtained by setting the average daily intake rates from pertinent pathways for short-term and long-term exposures equal to acceptable intake rates corresponding to each exposure period. The levels thus estimated may represent the minimum levels to which PCBs must be cleaned up not to exceed the acceptable intake rates. The acceptable intake rates are determined by analyzing animal data for short-term and chronic health effects. Estimation of the combined intake rates from all pathways considered requires exposure evaluations which include the use of fate and transport models to estimate exposure concentrations. The pathways considered in evaluating exposures relative to soil PCB limits are ingestion of soil, inhalation of contaminated air, dermal contact with contaminated soil, and ingestion of contaminated food. Since soil ingestion occurs only during childhood, exposure occurring during this period needs to be averaged over an individual's lifetime to estimate the daily intake rate for lifetime exposure.

The depletion of PCBs from soil caused by volatilization is accounted for in the exposure analysis by solving a partial differential equation simulating PCB vapor diffusion through the soil air-phase pores, and the distribution of PCBs between air and soil phases. Boundary conditions assume that the air-phase resistance is relatively small compared to the diffusional resistance in the soil air-phase pores. The available experimental data reasonably follow the time-emission rate relationship predicted from the models based on this assumption. Since the depletion rate varies over time, it is averaged over the exposure period. Depletion averaged over a time should lead to a lesser inhalation exposure than that based on the model assuming that depletion does not occur.

For the purpose of applying different levels of stringency for PCB cleanup from soils, the areas of potential exposures are classified into two categories according to the types of exposure pathways. The most stringent requirements for protecting human health are applied to the area where exposure pathways are soil ingestion, inhalation, and dermal contact. The less stringent requirements are applied to the area where human exposure occurs by inhalation only. In the former case, related human activities and the likelihood of human contact with contaminants are highest, and hence, in all likelihood the affected population is located on the contaminated site. Examples include areas occupying residential communities. In the latter case, there is no likelihood of human contact with the contaminated soil, the entrance to the contaminated site is prohibited or the area is remotely located from human population. Prohibition of entrance to the site could require special precautionary measures such as installing fences.

Permissible levels of PCBs in soil can be determined on a site-specific basis as a function of the type of PCBs at the site, soil/air partitioning characteristics, and potential of human ingestion and dermal contact. Since the application of the methodology is cumbersome, if not difficult, for use in each site evaluation, the limitations set forth in this memo are intended to alleviate such burden on regulators within the framework of stringency requirements enumerated above. However, each regulator may perform site-specific evaluation, once detailed information is available.

The attached table shows advisory values for soil according to the classes

of the area where the sites are located. The upper limits of the ranges of permissible PCB concentration in soil are selected for long-term advisory levels; these may be most applicable to sites abandoned some time ago. The lower limits are selected for 10-day advisory levels because the PCB depletion will be small during the short-term period. The permissible PCB levels in soil for lifetime intake are based on the current Agency policy recommending the upper bound estimate of 10^{-6} risk for known or suspected carcinogens to protect the public in populated areas.

For the area subject to potential of exposure by soil ingestion, inhalation, and dermal contact, the 10-day noncancer advisory level is 42 ug/g if the site becomes accessible to population immediately after spill or cleanup. The long-term oncogenic health advisory corresponding to the upper bound estimate for 10^{-6} risk is 6 ug/g with at least 25 cm (10 inches) thick soil cover material initially free of PCB contamination below the detection limit (normally about 0.1 ug/g). The use of soil or its equivalent cover material will reduce the health risk by an order of magnitude (i.e., from 10^{-5} to 10^{-6}).

Advisory levels for PCB cleanup for the other areas assume that exposure pathways are totally by inhalation. Since the remotely located area cannot be completely inaccessible to human activities, because maintenance personnel or on-site workers should be present on the facility or near the property fence area, permissible levels for this area are assumed to be the same as those based on on-site inhalation only. If any other pathways are a possibility, a case-by-case assessment will be needed to arrive at an acceptable level of PCBs in soil.

The 10-day advisory level for on-site exposure by inhalation only is

47 ug/g if exposure occurs immediately after spill or clean-up. The long-term advisory levels are 2 ug/g when no cover is applied and 20 ug/g when at least 25 cm thick soil cover or equivalent material initially free of PCBs (or below the detection limit) is used. Although a higher permissible level may be theoretically possible for some PCBs, as shown in the OHEA report when soil cover is used, capillary tension between contaminant and soil could cause the contaminant level to rise towards the soil surface, and result in emission rates higher than what can be predicted from the soil cover thickness applied. Currently, no comprehensive data base exists to evaluate the effect of capillary tension on the extent of emission rate increase. Until this uncertainty is better defined, it is difficult to assess how a level higher than 20 ug/g will cause unacceptable exposures for on-site inhalation once a 25 cm cover has been applied.

Lack of health effect data prevents development of 1-day advisory levels. In the absence of such data, it is recommended that the 10-day advisories be also used as the 1-day advisory levels.

A need may arise for applying less stringent risk requirements for some areas such as sparsely-populated or remotely located areas. Some contaminated areas may be made inaccessible to the public so that population could be subject to off-site inhalation rather than on-site inhalation. These are a few examples for which soil PCB levels higher than those shown in the attached table could be allowed. This situation needs to be evaluated on a case-by-case basis. For example, if the acceptable level is considered at 10^{-5} risk for the area remotely located, the cleanup level can be as high as 20 ug/g without applying cover material.

RECOMMENDED ADVISORY LEVELS FOR PCB CLEANUP FROM SOIL

Area According to Route of Human Exposure	Permissible Levels (ug/g) for		
	10-Day Advisory	Chronic Intake Advisory ^a	
		No Cover	25 cm Cover
Soil Ingestion, Inhalation, Dermal Contact ^b	42	0.6	6 ^c
Inhalation Only ^d	47	2	20 ^c

^aCorresponding to 10⁻⁶ risk.

^bExposure is assumed to occur on the contaminated site.

^cAdvisory levels for chronic intake based on applying 25 cm of clean cover containing PCBs below detection limit (about 0.1 ppm).

^dBased on inhalation exposure on site or at the fence line.



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

21 August 1986

Ms. Denise Smith
EPA NC CERCLA Project Officer
Air and Hazardous Material Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Smith:

SUBJECT: ERRIS List Addition

On July 16, 1986 the N.C. CERCLA Unit was informed of a complaint that had been received by the N.C. Division of Health Services involving possible ground water contamination at the Duke Power Toddville Operations Center on the northwest edge of Charlotte, NC. This facility is on approximately 115 acres of land and includes a warehouse that has been used by Duke Power for approximately 30 years. Several acres of land just west and south of this warehouse have been used to store equipment including capacitors and transformers since the warehouse was built. Some of the capacitors reportedly contained oil with high concentrations of PCB's. Some of the transformers may also have contained oil with PCB's. Servicing of transformers, including changing and filtering of transformer oil has also occurred in this area in the past.

The complaint received by the N.C. Division of Health Services claimed that the water in one or both of 2 wells on the site may be contaminated with PCB's. These wells were taken out of service when city water became available to the facility in about 1971. The area surrounding the facility is presently served by city water, however, it is believed that many of the houses in the immediate vicinity predate the availability of city water service. These houses may therefore still have usable wells.

Ms. Denise Smith
21 August 1986
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Because of the potential for ground water contamination at this site, it is recommended that this facility be added to the ERRIS List. If EPA concurs with this recommendation a preliminary assessment and site investigation will be performed to address environmental and public health issues at this site. The following information is provided as required for addition to the ERRIS list:

1. Site Name: Toddville Operations Center
2. Address (specific location needed-use map if necessary): 610 Toddville Road
3. City: Charlotte
4. County: Mecklenburg
5. State: North Carolina 28242
6. County code: 60
7. Congressional district: 09
8. Site discovery date: July 16, 1986
9. Contact person: Jack Butler

If you have any questions please contact me at (919) 733-2801.

Sincerely,



Jack Butler, Environmental Engineer
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

JB/tb/0214b



file

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

June 13, 1986

Mr. David Anderson, Chairman
Solid & Hazardous Waste Committee
Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

Dear Mr. Anderson:

Recently the Solid and Hazardous Waste Management Branch was forwarded a confidential complaint concerning Duke Power's Toddville site. Of concern is possible PCB contamination of soil and ground water.

In order to evaluate possible contamination it is requested that Duke Power allow the Branch to collect soil samples and sample the well at this location. Any assistance you or Duke Power could lend would be greatly appreciated. To that end it is further requested that you reply to this request by June 30, 1986.

If further information is needed concerning this matter, please contact me or Mack Henderson at (919) 733-2178.

Sincerely,

A handwritten signature in cursive script that reads "Jerry Rhodes".

Jerry Rhodes, Assistant Branch Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

JR:mh:bw

CC: Bill Baker (WC2250)