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Site Name (Subject): SHEPARD CHEMICAL WORKS

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Division: WASTE MANAGEMENT

Section: SUPERFUND

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**SHEPARD CHEM. WORKS INC.**

NCD 980 801 484

*Folders*

1. General Correspondence file, 1991—1995

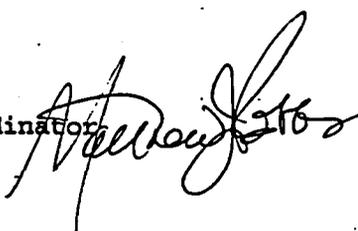
*Bound Reports*

1. Preliminary Assessment Report: January 1991
2. Site Inspection—References: February 1992
3. Site Inspection: March 1993

1995 DATE: August 22, 1995

SUBJECT: REMOVAL FROM EPA'S CERCLIS INVENTORY

FROM: Matthew J. Robbins, Brownfields Coordinator  
Waste Management Division, Region IV



TO: SHEPHARD CHEM WORKS INC  
HWY 74 E  
WILMINGTON  
NC 28405

EPA has identified the Brownfields Initiative as one of the Agency's top priorities. The term "brownfields" refers to previously used properties that may lie vacant because potential contamination makes them unmarketable to the private sector. EPA has recently announced a comprehensive Brownfields strategy, including Pilot grants to municipalities, to stimulate economic revitalization.

One part of the strategy has been for EPA to review its complete inventory of Superfund sites. These sites have been screened and determined to require no remedial action under the Federal Superfund Program based on information available as well as on conditions and policies that currently exist. This is to notify you that EPA has removed your facility from EPA's computer inventory known as CERCLIS. THIS DOES NOT INDICATE THAT THE STATE HAS MADE A SIMILAR DETERMINATION.

If you have any questions, please call me at 404/347-5059 ext. 6214.

cc: State Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

Shepard Chemical

DEC 29 1992

RECEIVED

JAN 03 1994

SUPERFUND SECTION

4WD-WPB

Ms. Pat DeRosa, Head  
CERCLA Branch  
NC Superfund Section  
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 been reviewed and accepted by the EPA-  
Region IV Site Assessment Section:

GA-Pacific Hardwood Sawmill                      Low Priority for ESI  
SSI-Phase 2  
NCD 000 773 507  
Halifax County

CP&L Sutton Steam Electric Plt                      Low Priority for ESI  
SSI-Phase 2  
NCD 000 830 646  
New Hanover County

Colejon Mechanical Corp.                              NFRAP  
SSI-Phase 1  
NCD 986 171 064  
Durham County

Martin Manufacturing Properties                      NFRAP  
SSI-Phase 2  
NCD 000 623 223  
Martin County

UNC, Airport Rd Landfill                              NFRAP  
SSI-Phase 2  
NCD 980 557 615  
Orange County

Long Manufacturing/ Tarboro                              NFRAP  
SI-Phase 1  
NCD 003 183 167  
Edgecomb County

(2)

Aeroquip Corp./Aerospace Div.      NFRAP  
PA  
NCD 040 042 426  
Nash County

Shepard Chemical Works      NFRAP  
SI  
NCD 980 801 484  
New Hanover County

General Electric Co./Mebane Op.      NFRAP  
SIP  
NCD 057 037 194  
Orange County

National Spinning Company      NFRAP  
SI  
NCD 003 196 847  
Beaufort County

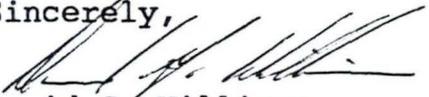
Fayetteville Coal Gas Plant Site      Low Priority for SI  
PA  
NCD 986 197 341  
Cumberland County

Washington Coal Gas Plant      Low Priority for SI  
PA  
NCD 986 197 275  
Beaufort County

Phillips Plating Company      Low Priority for ESI  
SI  
NCD 041 466 806  
Craven County

All NCDEHNR reports were well written and informative. If you have any questions regarding these decisions please call Cathy Amorosa at (404) 347-5065.

Sincerely,

  
David G. Williams  
Environmental Scientist

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



MEMORANDUM

October 15, 1993

TO: John Freeman, D.V.M., M.P.H., Chief  
Environmental Epidemiology

THROUGH: William L. Meyer, Director *WLM*  
Division of Solid Waste Management

THROUGH: Charlotte V. Jesneck, Head *CJ*  
Inactive Hazardous Sites Branch  
Superfund Section

FROM: Hanna Assefa, Environmental Toxicologist *HA*  
Inactive Hazardous Sites Branch  
Superfund Section

RE: Groundwater Sampling Results  
Shepard Chemical Works  
320 Eastwood Road  
Wilmington, New Hanover County, North Carolina 28043

Mr. Jim Morrison, owner of Shepard Chemical Works has brought it to our attention that Dr. Luanne Williams would like a copy of all the laboratory data in our files for the contaminated well at the Shepard Chemical Works site.

Enclosed is the laboratory data for the groundwater samples taken at the subject site by the NC Superfund Section on November 28, 1992 and June 5, 1993. Also included is the laboratory data for samples taken by Coastal Environmental Services for Shepard Chemical Works. Please note that the Superfund Section data has already been reviewed by Dr. Kenneth Rudo.

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

WLM/CVJ/HA/slb(FREEMAN.MO3)

Enclosure

cc: Dr. Kenneth Rudo (w/enclosures)  
Dr. Luanne Williams (w/enclosures)



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604-1148

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone 919-733-2801

Jonathan B. Howes, Secretary

August 9, 1993

Mr. B. R. Morrison, Jr.  
Shepard Chemical Works, Inc.  
P. O. Box 473  
Wilmington, N.C. 28402

RE: Shepard Chemical Works Inc.  
NCD 980 891 484

Dear Mr. Morrison:

The purpose of this letter is to inform you that the results of the samples obtained from the process well located on the property where the former Shepard Chemical Works, Inc. was located, have been received. These samples were collected on June 21, 1993.

The sample analysis indicated tetrachloroethene was detected at 10 micrograms per liter (ug/l). Since this is twice the EPA published Maximum Contaminant Level (MCL), the sample results were forwarded to the NCDEHNR Division of Epidemiology, Environmental Epidemiology Section to perform a Drinking Water Health Risk Evaluation for Chlorinated Solvents. According to the enclosed report by Kenneth Rudo, Ph.D., Toxicologist, "Continued consumption may pose an increased health risk over time."

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

Sincerely,

Harry Zinn  
Environmental Engineer  
Superfund Section

Enclosures

cc: Charlotte Jesneck  
Hanna Assefa  
File



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604-1148

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone 919-733-2801

Jonathan B. Howes, Secretary

March 5, 1993

MEMORANDUM

TO: John Freeman, D.V.M., M.P.H., Chief  
Environmental Epidemiology Section

FROM: Michael Kelly, Deputy Director *M Kelly*  
Division of Solid Waste Management

RE: Groundwater Sampling Results  
Shepard Chemical  
320 Eastwood Road  
Wilmington, New Hanover County, NC 28043

The private well at the subject site was sampled by the Superfund Section on November 28, 1992. The well is owned by Mr. Robert Morrison of 2905 Park Avenue, Wilmington, North Carolina, 28402. The following is a list of the contaminants and highest concentrations found in the groundwater sampled on this date.

CONTAMINANTS

CONCENTRATIONS (ppb)

	Superfund Section <u>November 28, 1992</u>
1,1,1 - Trichloroethane	1.1
Trichloroethylene	1k (see lab sheets)
Tetrachloroethylene	13.4

Based on these results, the Superfund Section requests a risk assessment for the groundwater exposure. If you have any questions concerning this matter, please contact Hanna Assefa, Environmental Toxicologist, or me at (919)-733-2801.

Attachments

MK\gj

cc: Hanna Assefa

Site Number NCD 980 891 484 Field Sample Number 016541  
 Name of Site Shepard Chemical Site Location Wilmington NC 28403  
 Collected By Harry Zimm ID# \_\_\_\_\_ Date Collected 1-23-92 Time 12:30 pm

Hazardous Waste  Solid Waste  Superfund

Sample Type  
Environmental Concentrate Comments  
 Ground water (1)  Solid (5) Shepard GW 01  
 Surface water (2)  Liquid (6) \_\_\_\_\_  
 Soil (3)  Sludge (7) \_\_\_\_\_  
 Other (4)  Other (8) \_\_\_\_\_

TCLP Compounds	
Inorganic Compounds	Results(mg/l)
_____ Arsenic	_____
_____ Barium	_____
_____ Cadmium	_____
_____ Chromium	_____
_____ Lead	_____
_____ Mercury	_____
_____ Selenium	_____
_____ Silver	_____

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DEC 21 1992

**SUPERFUND SECTION**

Organic Chemistry	Inorganic Chemistry
Results(mg/l)	Parameter Results(mg/l) (mg/l)
_____	<input checked="" type="checkbox"/> Arsenic <u>40.01</u>
_____	<input checked="" type="checkbox"/> Barium <u>0.12</u>
_____	<input checked="" type="checkbox"/> Cadmium <u>40.005</u>
_____	_____ Chloride
_____	<input checked="" type="checkbox"/> Chromium <u>40.01</u>
_____	_____ Copper
_____	_____ Fluoride
_____	_____ Iron
_____	<input checked="" type="checkbox"/> Lead <u>40.005</u>
_____	_____ Manganese
_____	<input checked="" type="checkbox"/> Mercury <u>40.0002</u>
_____	_____ Nitrate
_____	<input checked="" type="checkbox"/> Selenium <u>40.005</u>
_____	<input checked="" type="checkbox"/> Silver <u>40.05</u>
_____	_____ Sulfates
_____	_____ Zinc
_____	_____ pH
_____	_____ Conductivity
_____	_____ TDS
_____	_____ TOC
_____	<del>_____ Nitrate</del>
_____	<input checked="" type="checkbox"/> Cyanide <u>Sample acidified -</u>
_____	<u>must be preserved w/NaOH</u>
_____	<u>for CN- analysis - WCV</u>

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)	_____

Date Received \_\_\_\_\_ Reported by \_\_\_\_\_  
 Date Extracted \_\_\_\_\_ Date Reported \_\_\_\_\_  
 Date Analyzed \_\_\_\_\_ Lab Number \_\_\_\_\_  
 DHS 3191 (Revised 2/91)

019444 NOV 24 92

N.C. DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES  
 DIVISION OF LABORATORY SERVICES, ENVIRONMENTAL SCIENCES SECTION  
 BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, N.C. 27611

Laboratory No. 923917

PURGEABLE COMPOUNDS

Date of Analysis 1/11/93

COMPOUND	µg/l
Dichlorodifluoromethane	U
Chloromethane	
√Vinyl Chloride	
Bromomethane	
Chloroethane	
Trichlorofluoromethane	
√1,1-Dichloroethylene	
Methylene Chloride	
tert-Butyl Methyl Ether	
√trans-1,2-Dichloroethylene	
Isopropyl ether	
1,1-Dichloroethane	
2,2-Dichloropropane	
√cis-1,2-Dichloroethylene	
Chloroform	
(BCM) Bromochloromethane	√
√1,1,1-Trichloroethane	U
1,1-Dichloropropene	U
√Carbon Tetrachloride	
√Benzene	
√1,2-Dichloroethane	√
√Trichloroethylene	K
√1,2-Dichloropropane	U
Bromodichloromethane	
Dibromomethane	
√Toluene	
1,1,2-Trichloroethane	√
√Tetrachloroethylene	13.4
1,3-Dichloropropane	U
Dibromochloromethane	
1,2-Dibromoethane (EDB)	
1-Chlorohexane	√

COMPOUND	µg/l
√Chlorobenzene	U
√Ethylbenzene	
1,1,1,2-Tetrachloroethane	
√p-Xylene	
√m-Xylene	
√o-Xylene	
√Styrene	
Bromoform	
Isopropylbenzene	
1,1,2,2-Tetrachloroethane	
Bromobenzene	
n-Propylbenzene	
1,2,3-Trichloropropane	
2-Chlorotoluene	
1,3,5-Trimethylbenzene	
4-Chlorotoluene	
tert-Butyl Benzene	
Pentachloroethane	
1,2,4-Trimethylbenzene	
sec-Butyl Benzene	
p-Isopropyltoluene	
1,3-Dichlorobenzene	
√1,4-Dichlorobenzene	
n-Butylbenzene	
√1,2-Dichlorobenzene	
Bis (2-Chloroisopropyl) Ether	
1,2-Dibromo-3-Chloropropane	
1,2,4-Trichlorobenzene	
Hexachlorobutadiene	
Naphthalene	
1,2,3-Trichlorobenzene	√

COMMENTS: *Unidentified peaks present*

MDL - Minimum Detection Limit for water (EPA Method 502.2), is 1.0 µg/l.

- J - Estimated value.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- U - Material was analyzed for but not detected.
- NA - Not analyzed.
- I/ - Tentative identification.
- √ - Regulated VOC
- T - Trihalomethane

N.C. Dept. of Environment, Health, & Natural Resources  
 DEHNR 3068-0 (Rev. 10/92 Laboratory Services)  
 #1532E D-18

RECEIVED  
 JAN 15 1993  
 SUPERFUND SECTION

Department of Environment,  
Health and Natural Resources  
Division of Epidemiology

James B. Hunt, Jr., Governor  
Jonathan B. Howes, Secretary



July 30, 1993

MEMORANDUM

TO: Michael A. Kelly, Deputy Director  
Division of Solid Waste Management

FROM: Kenneth Rudo, Ph.D., Toxicologist *KRK*  
Environmental Epidemiology Section

SUBJECT: Health Risk Evaluation  
Morrison Private Well  
New Hanover County



Attached is the Environmental Epidemiology Section's drinking water health risk evaluation for the well water sample from the above site. Recommendations for continued water use are also given.

If you have any further questions, please feel free to contact me at 3-3410.

KR:tm

Attachment(s)

North Carolina Department of Environment, Health, & Natural Resources  
Division of Epidemiology  
Environmental Epidemiology Section

Drinking Water Health Risk Evaluation For  
Chlorinated Solvents

New Hanover COUNTY

DATE 7/29/93

LABORATORY NUMBER 931743

Based on these analytical results, this water is contaminated with chlorinated solvents which have been widely used (both industrially and in home-use products) for many years. One chlorinated solvent, vinyl chloride, is known to cause cancer in humans. Many other chlorinated solvents have been shown to cause cancer in laboratory animals. However, none of these chemicals is known to cause cancer in humans.

Some chlorinated solvents have not been linked to cancer. For these chemicals, acceptable intake levels are much higher and are based on other health effects.

The U. S. Environmental Protection Agency has set maximum contaminant levels (MCL) for a number of chlorinated solvents. The MCL is the amount of a chemical that is considered acceptable in public drinking water supplies. The maximum contaminant level is not binding for users of private supply wells, but is a useful guideline.

<u>Chemical</u>	<u>This Well (ppb)</u>	<u>Maximum Contaminant Level (ppb)</u>
tetrachloroethylene	10 ppb	50 ppb

- ( ) This water is acceptable for all uses due to the very low levels present.
- ( ) Resample in about \_\_\_\_\_ month(s). (PLEASE INDICATE ON LAB SHEET THAT IT IS A RESAMPLE AND PROVIDE PREVIOUS SAMPLE NUMBER(S).)
- (✓) This water is significantly contaminated and should not be used for drinking or cooking. Prolonged bathing/showering should be avoided.
- ( ) This water is highly contaminated and should not be used for drinking, cooking or bathing/showering.

COMMENTS:

Current level is twice the EPA MCL. Continued consumption may pose an increased health risk over time.

For further information, contact Dr. Ken Rudo or Dr. Luanne Williams, Environmental Epidemiology Section, (919) 733-3410.



State of North Carolina  
 Department of Environment, Health, and Natural Resources  
 512 North Salisbury Street • Raleigh, North Carolina 27604

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
 Telephone 919 - 733-2801

Jonathan B. Howes, Secretary

MEMORANDUM

July 22, 1993

TO: Dr. Kenneth Rudo  
 Environmental Epidemiology

FROM: Michael A. Kelly, Deputy Director  
 Division of Solid Waste Management

RE: Groundwater Sampling Results  
 Shepard Chemical  
 320 Eastwood Road  
 Wilmington, New Hanover County, North Carolina 28043

The private well at the subject site was sampled by the Superfund Section on June 21, 1993. The well is owned by Mr. Robert Morrison of 2905 Park Avenue, Wilmington, North Carolina, 28402. The following is a list of the contaminants and highest concentrations found in the groundwater sampled on this date.

<u>Contaminants</u>	<u>Concentrations (ppb)</u>
	<u>Superfund Section</u> <u>June 21, 1993</u>
Tetrachloroethylene	10

Based on these results, the Superfund Section requests a risk assessment for human exposure to groundwater. If you have any questions concerning this matter, please contact Hanna Assefa, Environmental Toxicologist, or me at (919) 733-2801.

MAK/HA/sib(RUDO.MO1)

Attachments

cc: John Freeman, D.V.M., M.P.H., Chief (w/attachments)  
 Hanna Assefa (w/attachments)





RECEIVED

SEP 10 1993

SUPERFIND SECTION

September 2, 1993

Mrs. Charlotte Jesneck  
State of North Carolina  
Department of Environment  
Health and Natural Resources  
Raleigh, NC 27611

RE: Shepard Chemical Works  
Wilmington, NC

Dear Mrs. Jesneck,

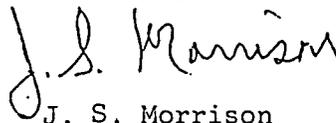
I am enclosing a copy of the test results that was tested by Oxford Laboratories, 1316 South Fifth Street, Wilmington, NC 28401, who are analytical and consulting chemist.

This test was conducted by Coastal Environmental Service Company of Wilmington, NC. Mr. William Burnett opened the well head for this test. The test showed a 4.10 and a 5.52 content of Tetrachloroethane, a number within the EPA limits. I hope you will come back and run another test. Please test this well before you condemn it.

At this time, I am contracting with a company to connect to city water, which will be completed around the middle of October, 1993.

I would like to ask for an extension considering the time limit of October 16th. I bring to your attention that this well has never been used for drinking, cooking or bathing.

Sincerely,

  
J. S. Morrison

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 07-23-93  
DATE REPORTED 08-02-93  
93W9512

1316 South Fifth Street  
Wilmington, N.C. 28401  
(919) 763-9793

PAGE 1 OF 5

SHEPPARD CHEMICAL  
425 ROBERT E. LEE DR.  
WILMINGTON, NC 28412

P.O. #

ATTENTION: JOE MORRISON  
919-762-4359

SAMPLE DESCRIPTION: WELL HEAD 07-23-93 FOR 6230D

1. WELL HEAD 07-23-93
2. DUPLICATE ANALYSIS (ALTERNATE COLUMN)

RESULTS

	<u>1</u>	<u>2</u>
5230D COMPOUNDS		
DATE ANALYZED	07-27	07-27
Dichlorodifluoromethane, PPB	<1	<1
Chloromethane, PPB	<1	<1
Vinyl Chloride, PPB	<1	<1
Bromomethane, PPB	<1	<1
Chloroethane, PPB	<1	<1
Fluorotrichloromethane, PPB	<1	<1
,1-Dichloroethylene, PPB	<1	<1
Chloromethane, PPB	<1	<1
trans-1,2-Dichloroethylene, PPB	<1	<1
,1-Dichloroethane, PPB	<1	<1
,2-Dichloropropane, PPB	<1	<1

# Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 07-23-93  
DATE REPORTED 08-02-93  
93W9512

1316 South Fifth Street  
Wilmington, N.C. 28401  
(919) 763-9793

PAGE 2 OF 5

SHEPPARD CHEMICAL  
425 ROBERT E. LEE DR.  
WILMINGTON, NC 28412

P.O. #

ATTENTION: JOE MORRISON

SAMPLE DESCRIPTION: WELL HEAD 07-23-93 FOR 6230D

1. WELL HEAD 07-23-93
2. DUPLICATE ANALYSIS (ALTERNATE COLUMN)

## RESULTS

	<u>1</u>	<u>2</u>
cis-1,2-Dichloroethylene, PPB	<1	<1
Chloroform, PPB	<1	<1
Bromochloromethane, PPB	<1	<1
1,1,1-Trichloroethane, PPB	(0.35)	(0.57)
1,1-Dichloropropene, PPB	<1	<1
Carbon Tetrachloride, PPB	<1	<1
Benzene, PPB	<1	<1
1,2-Dichloroethane, PPB	<1	<1
Trichloroethylene, PPB	<1	<1
1,2-Dichloropropane, PPB	<1	<1
Bromodichloromethane, PPB	<1	<1
Dibromomethane, PPB	<1	<1
1,3-Dichloropropene, PPB	<1	<1

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 07-23-93  
DATE REPORTED 08-02-93  
93W9512

1316 South Fifth Street  
Wilmington, N.C. 28401  
(919) 763-9793

PAGE 3 OF 5

SHEPPARD CHEMICAL  
425 ROBERT E. LEE DR.  
WILMINGTON, NC 28412

P.O. #

ATTENTION: JOE MORRISON

SAMPLE DESCRIPTION: WELL HEAD 07-23-93 FOR 6230D

1. WELL HEAD 07-23-93
2. DUPLICATE ANALYSIS (ALTERNATE COLUMN)

RESULTS

	<u>1</u>	<u>2</u>
Toluene, PPB	(0.54)	(0.47)
1,1,2-Trichloroethane, PPB	<1	<1
Tetrachloroethene, PPB	4.10	5.52
1,3-Dichloropropane, PPB	<1	<1
Dibromochloromethane, PPB	<1	<1
Chlorobenzene, PPB	<1	<1
Ethylbenzene, PPB	<1	<1
1,1,1,2-Tetrachloroethane, PPB	<1	<1
Total Xylenes, PPB	<1	<1
Styrene, PPB	<1	<1
Isopropylbenzene, PPB	<1	<1
Bromoform, PPB	<1	<1
1,1,2,2-Tetrachloroethane, PPB	<1	<1

DATE RECEIVED 07-23-93  
DATE REPORTED 08-02-93  
93W9512

1316 South Fifth Street  
Wilmington, N.C. 28401  
(919) 763-9793

PAGE 4 OF 5

SHEPPARD CHEMICAL  
425 ROBERT E. LEE DR.  
WILMINGTON, NC 28412

P.O. #

ATTENTION: JOE MORRISON

SAMPLE DESCRIPTION: WELL HEAD 07-23-93 FOR 6230D

1. WELL HEAD 07-23-93
2. DUPLICATE ANALYSIS (ALTERNATE COLUMN)

	<u>RESULTS</u>	
	<u>1</u>	<u>2</u>
1,2,3-Trichloropropane, PPB	<1	<1
n-Propylbenzene, PPB	<1	<1
Bromobenzene, PPB	<1	<1
1,3,5-Trimethylbenzene, PPB	<1	<1
o-Chlorotoluene, PPB	<1	<1
p-Chlorotoluene, PPB	<1	<1
tert-Butylbenzene, PPB	<1	<1
1,2,4-Trimethylbenzene, PPB	<1	<1
sec-Butylbenzene, PPB	<1	<1
p-Isopropyltoluene, PPB	<1	<1
1,3-Dichlorobenzene, PPB	<1	<1
1,4-Dichlorobenzene, PPB	<1	<1
n-Butylbenzene, PPB	<1	<1

DATE RECEIVED 07-23-93  
DATE REPORTED 08-02-93  
93W9512

1316 South Fifth Street  
Wilmington, N.C. 28401  
(919) 763-9793

PAGE 5 OF 5

SHEPPARD CHEMICAL  
425 ROBERT E. LEE DR.  
WILMINGTON, NC 28412

P.O. #

ATTENTION: JOE MORRISON

SAMPLE DESCRIPTION: WELL HEAD 07-23-93 FOR 6230D

1. WELL HEAD 07-23-93
2. DUPLICATE ANALYSIS (ALTERNATE COLUMN)

RESULTS

	<u>1</u>	<u>2</u>
o-Dichlorobenzene, PPB	<1	<1
1,2,4-Trichlorobenzene, PPB	<1	<1
Hexachlorobutadiene, PPB	<1	<1
Naphthalene, PPB	<1	<1
1,2,3-Trichlorobenzene, PPB	<1	<1

*Bruce A. Babson*  
BRUCE A. BABSON, CHEMIST

NORTH CAROLINA DEM SAMPLE SUBMISSION FORM:  
LABORATORY N.P.S.E.S. ID# 75

CLIENT: SHEPARD CHEMICAL COUNTY: NEW HANOVER

COLLECTED BY: WE BURNETT PURCHASE ORDER # \_\_\_\_\_

SOURCE OF SAMPLE CONTAINER(S): OXFORD LAR Y OTHER \_\_\_\_\_

TYPE OF SAMPLE(S): PLEASE INDICATE  
DEM \_\_\_\_\_ RCRA \_\_\_\_\_  
WASTEWATER \_\_\_\_\_ MONITORING WELL X  
SLUDGE \_\_\_\_\_ SOIL \_\_\_\_\_ OTHER \_\_\_\_\_

BOTTLE # SAMPLE LOCATION LOCATION CODE TIME COLLECTED DATE COLLECTED ANALYSIS REQUESTED

BOTTLE #	SAMPLE LOCATION	LOCATION CODE	TIME COLLECTED	DATE COLLECTED	ANALYSIS REQUESTED
1,2,3,4	WELL HEAD		12:45 P.M.	7/23/93	EDR 3420 (VOLATILE ORGANICS)
BLANK					

LABORATORY USE ONLY  
CLI LAB ID# 93W9212

CONDITIONS UPON ARRIVAL:  
PROPER PRESERVATION (ACID, BASE, CHEMICAL): YES Y NO \_\_\_\_\_  
IF NO, PLEASE EXPLAIN: \_\_\_\_\_

RECEIVED WITHIN REQUIRED HOLDING TIME: YES Y NO \_\_\_\_\_  
IF NO, PLEASE EXPLAIN: \_\_\_\_\_

RECEIVED IN WATER WITH ICE OR CHILLED TO 4c: YES Y NO \_\_\_\_\_  
IF NO, PLEASE EXPLAIN: \_\_\_\_\_

DATE RECEIVED: 7-23-93 TIME RECEIVED: 2:40

ACCEPTED: Y REJECTED: \_\_\_\_\_ BY: ABC

REASON REJECTED: \_\_\_\_\_  
RE-SAMPLE REQUESTED: YES \_\_\_\_\_ NO \_\_\_\_\_

SPECIAL COMMENTS: \_\_\_\_\_

\* ATTN: MR. JOE MORRISON



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604-1148

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone 919-733-2801

Jonathan B. Howes, Secretary

August 9, 1993

Mr. B. R. Morrison, Jr.  
Shepard Chemical Works, Inc.  
P. O. Box 473  
Wilmington, N.C. 28402

RE: Shepard Chemical Works Inc.  
NCD 980 891 484

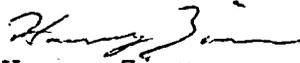
Dear Mr. Morrison:

The purpose of this letter is to inform you that the results of the samples obtained from the process well located on the property where the former Shepard Chemical Works, Inc. was located, have been received. These samples were collected on June 21, 1993.

The sample analysis indicated tetrachloroethene was detected at 10 micrograms per liter (ug/l). Since this is twice the EPA published Maximum Contaminant Level (MCL), the sample results were forwarded to the NCDEHNR Division of Epidemiology, Environmental Epidemiology Section to perform a Drinking Water Health Risk Evaluation for Chlorinated Solvents. According to the enclosed report by Kenneth Rudo, Ph.D., Toxicologist, "Continued consumption may pose an increased health risk over time."

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

Sincerely,

  
Harry Zinn  
Environmental Engineer  
Superfund Section

Enclosures

cc: Charlotte Jesneck  
Hanna Assefa  
File

State of North Carolina  
Department of Environment,  
Health and Natural Resources  
Division of Epidemiology

James B. Hunt, Jr., Governor  
Jonathan B. Howes, Secretary



July 30, 1993

MEMORANDUM

TO: Michael A. Kelly, Deputy Director  
Division of Solid Waste Management

FROM: Kenneth Rudo, Ph.D., Toxicologist *KMR*  
Environmental Epidemiology Section

SUBJECT: Health Risk Evaluation  
Morrison Private Well  
New Hanover County



Attached is the Environmental Epidemiology Section's drinking water health risk evaluation for the well water sample from the above site. Recommendations for continued water use are also given.

If you have any further questions, please feel free to contact me at 3-3410.

KR:tm

Attachment(s)

North Carolina Department of Environment, Health, & Natural Resources  
Division of Epidemiology  
Environmental Epidemiology Section

Drinking Water Health Risk Evaluation For  
Chlorinated Solvents

New Hanover COUNTY

DATE 7/21/93 LABORATORY NUMBER 931743

Based on these analytical results, this water is contaminated with chlorinated solvents which have been widely used (both industrially and in home-use products) for many years. One chlorinated solvent, vinyl chloride, is known to cause cancer in humans. Many other chlorinated solvents have been shown to cause cancer in laboratory animals. However, none of these chemicals is known to cause cancer in humans.

Some chlorinated solvents have not been linked to cancer. For these chemicals, acceptable intake levels are much higher and are based on other health effects.

The U. S. Environmental Protection Agency has set maximum contaminant levels (MCL) for a number of chlorinated solvents. The MCL is the amount of a chemical that is considered acceptable in public drinking water supplies. The maximum contaminant level is not binding for users of private supply wells, but is a useful guideline.

<u>Chemical</u>	<u>This Well (ppb)</u>	<u>Maximum Contaminant Level (ppb)</u>
tetrachloroethylene	10 ppb	5 ppb

- ( ) This water is acceptable for all uses due to the very low levels present.  
( ) Resample in about \_\_\_\_\_ month(s). (PLEASE INDICATE ON LAB SHEET THAT IT IS A RESAMPLE AND PROVIDE PREVIOUS SAMPLE NUMBER(S).)
- (✓) This water is significantly contaminated and should not be used for drinking or cooking. Prolonged bathing/showering should be avoided.
- ( ) This water is highly contaminated and should not be used for drinking, cooking or bathing/showering.

COMMENTS:

Current level is twice the EPA MCL. Continued consumption may pose an increased health risk over time.

For further information, contact Dr. Ken Rudo or Dr. Luanne Williams, Environmental Epidemiology Section, (919) 733-3410.

**PURPOSE:** To convey meaningful health-based recommendations about continued use of drinking water which may contain chemical contaminants.

**PREPARATION:**

- 1) Public health toxicologist prepares original.
- 2) Three (3) copies are made and sent to Environmental Health Section for distribution (1 copy for Environmental Health Section, 1 copy for local health department, and 1 copy for well owner(s)).

**DISPOSITION:**

**Environmental Epidemiology Section:** This form will be kept within the Section for five (5) years and transferred to Records Services for five (5) years, then destroyed.

**Recipient Agencies:** This form will be used as guidance for the specific well sample(s) indicated, retained until need ends, then destroyed.



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone 919 - 733-2801

Jonathan B. Howes, Secretary

MEMORANDUM

July 22, 1993

TO: Dr. Kenneth Rudo  
Environmental Epidemiology

FROM: Michael A. Kelly, Deputy Director  
Division of Solid Waste Management

RE: Groundwater Sampling Results  
Shepard Chemical  
320 Eastwood Road  
Wilmington, New Hanover County, North Carolina 28043



The private well at the subject site was sampled by the Superfund Section on June 21, 1993. The well is owned by Mr. Robert Morrison of 2905 Park Avenue, Wilmington, North Carolina, 28402. The following is a list of the contaminants and highest concentrations found in the groundwater sampled on this date.

Contaminants

Concentrations (ppb)

Superfund Section  
June 21, 1993

Tetrachloroethylene

10

Based on these results, the Superfund Section requests a risk assessment for human exposure to groundwater. If you have any questions concerning this matter, please contact Hanna Assefa, Environmental Toxicologist, or me at (919) 733-2801.

MAK/HA/slb(RUDO.MO1)

Attachments

cc: John Freeman, D.V.M., M.P.H., Chief (w/attachments)  
Hanna Assefa (w/attachments)





RECEIVED  
MAR 13 1993  
SUPERFUND SECTION



*Howes*



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604

James B. Hunt, Jr., Governor

Jonathan B. Howes, Secretary

March 16, 1993

MEMORANDUM

TO: Michael Kelly, Deputy Director  
Division of Solid Waste Management

FROM: Kenneth Rudo, Ph.D., Toxicologist *KMR*  
Environmental Epidemiology Section

SUBJECT: Health Risk Evaluation  
Robert Morrison Private Well Sample  
Wilmington, New Hanover County, North Carolina

Attached is the Environmental Epidemiology Section's drinking water health risk evaluation for the well water sample from the above site. Recommendations for continued water use are also given.

If you have any further questions, please feel free to contact me at 733-3410.

KR:tm

Attachment(s)

North Carolina Department of Environment, Health, & Natural Resources  
 Division of Epidemiology  
 Environmental Epidemiology Section

Drinking Water Health Risk Evaluation For  
 Chlorinated Solvents

New Hanover COUNTY

DATE 3/15/93

LABORATORY NUMBER 923917

Based on these analytical results, this water is contaminated with chlorinated solvents which have been widely used (both industrially and in home-use products) for many years. One chlorinated solvent, vinyl chloride, is known to cause cancer in humans. Many other chlorinated solvents have been shown to cause cancer in laboratory animals. However, none of these chemicals is known to cause cancer in humans.

Some chlorinated solvents have not been linked to cancer. For these chemicals, acceptable intake levels are much higher and are based on other health effects.

The U. S. Environmental Protection Agency has set maximum contaminant levels (MCL) for a number of chlorinated solvents. The MCL is the amount of a chemical that is considered acceptable in public drinking water supplies. The maximum contaminant level is not binding for users of private supply wells, but is a useful guideline.

<u>Chemical</u>	<u>This Well (ppb)</u>	<u>Maximum Contaminant Level (ppb)</u>
tetrachloroethylene	13.4 ppb	5 ppb
1,1,1-trichloroethane	1.1 ppb	200 ppb
trichloroethylene	~1 ppb	5 ppb

- ( ) This water is acceptable for all uses due to the very low levels present.
- ( ) Resample in about \_\_\_\_\_ month(s). (PLEASE INDICATE ON LAB SHEET THAT IT IS A RESAMPLE AND PROVIDE PREVIOUS SAMPLE NUMBER(S).)
- This water is significantly contaminated and should not be used for drinking or cooking. Prolonged bathing/showering should be avoided.
- ( ) This water is highly contaminated and should not be used for drinking, cooking or bathing/showering.

COMMENTS:

Levels of tetrachloroethylene exceed the EPA MCL and may pose an increased health risk over time upon continued consumption.

For further information, contact Dr. Ken Rudo or Dr. Luanne Williams, Environmental Epidemiology Section, (919) 733-3410.

PURPOSE: To convey meaningful health-based recommendations about continued use of drinking water which may contain chemical contaminants.

PREPARATION:

- 1) Public health toxicologist prepares original.
- 2) Three (3) copies are made and sent to Environmental Health Section for distribution (1 copy for Environmental Health Section, 1 copy for local health department, and 1 copy for well owner(s)).

DISPOSITION:

Environmental Epidemiology Section: This form will be kept within the Section for five (5) years and transferred to Records Services for five (5) years, then destroyed.

Recipient Agencies: This form will be used as guidance for the specific well sample(s) indicated, retained until need ends, then destroyed.

SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Receipt for Samples

samples described below were collected in connection with the administration, enforcement, and documentation of the:

North Carolina Hazardous Waste Management Rules, 10 NCAC 10F

North Carolina Solid Waste Management Rules, 10 NCAC 10G

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Toxic Substances Control Act (TSCA), 15 U.S.C. §2601, et seq., specifically Section 11 of TSCA, 15 U.S.C. § 2610.

NC SUPERFUND SECTION

DOVER NICHOLSON 401 OBERLIN RD RALEIGH NC 27605  
 Inspector's Name Inspector's Address 919.762-4359

HEPARD CHEMICAL 320 EASTWOOD RD WILMINGTON NC 28403  
 Name of Firm Firm Address

ROBERT MORRISON OWNER 2905 PARK AVE WILMINGTON NC 28403  
 Owner, Operator, or Agent Title

SAMPLE NUMBER	COLLECTED		SAMPLE TYPE			DUPLICATE SAMPLES			SAMPLE LOCATION	
	DATE	TIME	WATER	SOIL	OTHER	OFFERED	ACCEPTED	REJECTED	ON-SITE	OFF-SITE
01-10	11/22/92	1230	X	—	—	X			GAVE MR. MORRISON 11-LITER NONACIDIFIED	X

Receipt for the sample(s) described above is hereby acknowledged:

[Signature]  
 Signature of Inspector

Environmental Engr.  
 Title

Receipt/rejection of duplicate or split samples is hereby acknowledged:

[Signature]  
 Signature of Firm Owner, Operator, or Agent

OWNER  
 Title

REMARKS

N. C. DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES  
 DIVISION OF LABORATORY SERVICES, ENVIRONMENTAL SCIENCE SECTION  
 P.O. BOX 7 - 306 N. WILMINGTON ST., RALEIGH, N.C. 27611

Laboratory No. 923917

PURGEABLE COMPOUNDS

Date of Analysis 1/11/93

COMPOUND	µg/l
Dichlorodifluoromethane	U
Chloromethane	
√Vinyl Chloride	
Bromomethane	
Chloroethane	
Trichlorofluoromethane	
√1,1-Dichloroethylene	
Methylene Chloride	
tert-Butyl Methyl Ether	
√trans-1,2-Dichloroethylene	
Isopropyl ether	
1,1-Dichloroethane	
2,2-Dichloropropane	
√cis-1,2-Dichloroethylene	
Chloroform	
(BCM) Bromochloromethane	√
√1,1,1-Trichloroethane	U
1,1-Dichloropropene	U
√Carbon Tetrachloride	
√Benzene	
√1,2-Dichloroethane	√
√Trichloroethylene	JK
√1,2-Dichloropropane	U
Bromodichloromethane	
Dibromomethane	
√Toluene	
1,1,2-Trichloroethane	√
√Tetrachloroethylene	13.4
1,3-Dichloropropane	U
Dibromochloromethane	
1,2-Dibromoethane (EDB)	
1-Chlorohexane	√

COMPOUND	µg/l
√Chlorobenzene	U
√Ethylbenzene	
1,1,1,2-Tetrachloroethane	
√p-Xylene	
√m-Xylene	
√o-Xylene	
√Styrene	
Bromoform	
Isopropylbenzene	
1,1,2,2-Tetrachloroethane	
Bromobenzene	
n-Propylbenzene	
1,2,3-Trichloropropane	
2-Chlorotoluene	
1,3,5-Trimethylbenzene	
4-Chlorotoluene	
tert-Butyl Benzene	
Pentachloroethane	
1,2,4-Trimethylbenzene	
sec-Butyl Benzene	
p-Isopropyltoluene	
1,3-Dichlorobenzene	
√1,4-Dichlorobenzene	
n-Butylbenzene	
√1,2-Dichlorobenzene	
Bis (2-Chloroisopropyl) Ether	
1,2-Dibromo-3-Chloropropane	
1,2,4-Trichlorobenzene	
Hexachlorobutadiene	
Naphthalene	
1,2,3-Trichlorobenzene	√

COMMENTS: *Unidentified peaks present*

MDL - Minimum Detection Limit for water (EPA Method 502.2), is 1.0 µg/l.

- J - Estimated value.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- U - Material was analyzed for but not detected.
- NA - Not analyzed.
- 1/ - Tentative identification.
- √ - Regulated VOC
- T - Trihalomethane

N.C. Dept. of Environment, Health, & Natural Resources  
 DEHNR 3068-0 (Rev. 10/92 Laboratory Services)  
 #1532E D-18

**RECEIVED**  
 JAN 15 1993  
 SUPERFUND SECTION

SOLID WASTE MANAGEMENT DIVISION  
SUPERFUND SECTION

CERCLA

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling:  Generator  Transporter  
 Treatment Facility  Storage Facility  
 Disposal Facility  Landfill  
 Other: Cercla

Company's Name Shepard Chemicals Telephone: 719 762-4359

Address 320 Eastwood Road Wilmington NC 28403

Collector's Name [Signature] Telephone: 719 733 2801  
signature

Date Sampled 6-21-93 Time Sampled 13:45 p

Type of Process Generating Waste Pesticide Reformulation + Repackaging

Field Information: \_\_\_\_\_

Field Sample No. <sup>15550</sup> ↓ 15550 <sup>15551</sup> ↓ 15551

Chain of Possession:

<u>[Signature]</u> signature	<u>Erwin Ewert</u> title	<u>6-21 / 6-22-93</u> inclusive dates
<u>Vicki Painter</u> signature	<u>Chemist</u> title	<u>6-22-93</u> inclusive dates
_____ signature	_____ title	_____ inclusive dates

Results Reported:

<u>[Signature]</u> signature	<u>Chemist</u> title	<u>6-28-93</u> date
---------------------------------	-------------------------	------------------------

# 931742 - 931743

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.





SOLID WASTE MANAGEMENT DIVISION  
SUPERFUND SECTION

CERCLA

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling:  Generator  Transporter  
 Treatment Facility  Storage Facility  
 Disposal Facility  Landfill  
 Other: Cercla

Company's Name Shepard Chemicals Telephone: 919 762-4359

Address 320 Eastwood Road Wilmington NC 28405

Collector's Name [Signature] Telephone: 919 733 2801  
signature

Date Sampled 6-21-93 Time Sampled 13:75 p

Type of Process Generating Waste Pesticide Reformulation & Repackaging

Field Information: \_\_\_\_\_

Field Sample No. 15550 15501  
15550 15551

Chain of Possession:

<u>[Signature]</u> signature	<u>Erwin Ewer</u> title	<u>6-21 / 6-22-93</u> inclusive dates
<u>Vicki Painter</u> signature	<u>Chemist</u> title	<u>6-22-93</u> inclusive dates
signature	title	inclusive dates

Results Reported:

[Signature] Chemist 6-28-93  
signature title date  
# 931742 - 931743

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.











SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Shepard Chemical Works, Inc. ID # NCD 980 801 484

Location P.O. Box 473, US Highway 74 East,  
Wilmington, New Hanover County, NC

Proposed Date of Investigation June 21, 1993

Date of Briefing June 18, 1993

Date of Debriefing June 22, 1993

Nature of Visit (check one): Sampling Visit X  
On-Site Reconnaissance (SI)         
Site Investigation       

Health Department Official Contacted Tom Stich's phone answering machine

Date of Contact June 16, 1993

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>Harry Zinn</u>	<u>team leader, recon</u>	<u>Harry Zinn</u>
Team 1 <u>David Lilley</u>	<u>health and safety</u>	<u>David B. Lilley</u>

Plan Preparation:

Prepared By: David Lilley, Industrial Hygiene Consultant

Reviewed By: Jack Butler, Environmental Engineer

David B. Lilley  
Jack Butler

**B. SITE/WASTE CHARACTERISTICS**

Waste Type(s)  Liquid  Solid  Sludge  Gas  
 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
<u>Pyrethrin</u>	<u>Odor Threshold (OT) = no data</u>	<u>5 mg/m<sup>3</sup></u>
<u>Diazion</u>	<u>OT = no data</u>	<u>0.1 mg/m<sup>3</sup></u>
<u>Lindane</u>	<u>OT = "practically odorless"</u>	<u>0.5 mg/m<sup>3</sup></u>
<u></u>	<u>3.9 - 21.3 mg/m<sup>3</sup></u>	<u></u>
<u>Copper</u>	<u>OT = no data</u>	<u>1 mg/m<sup>3</sup></u>
<u>Varsol</u>	<u>OT = 1 - 30 ppm</u>	<u>100 ppm</u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>

**UNDERGROUND UTILITIES CHECKLIST**

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

Facility Description: Size 1 acre Buildings yes: 2  
Disposal Methods Being Investigated Potential spillage of raw materials and product, potential leakage of above ground 500 gallon Varsol tank.  
Unusual Features on Site (dike integrity, power lines, terrain, etc.):  
none known

History of the Site: This company has been in operation at this location since 1957. Shepard Chemical Works (SCW) distributes and formulates various insecticidal, wood treatment, and disinfectant products. The majority of products sold by SCW are made off-site and distributed by SCW. SCW does formulate a copper naphthenate wood treatment solution and an insectide. The company claims absolutely no chemical waste is generated during distribution or formulation.

C. HAZARD EVALUATION

The site can be toured and sampled in level D protection. PVC gloves will be worn while collecting water samples. Steel toed hiking boots will be worn while conducting tour and sampling.

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 Wear goggles, face shield, and PVC gloves while preparing acid preserved samples, goggles and PVC gloves while collecting acid preserved samples. Avoid breathing acid vapors. Rinse pipetts with deionized water before disposing of in trash bag.

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 groundwater 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 980 801 484

Location of Nearest Phone: on-site: this is an operational facility

Hospital (Address and Phone Number)

New Hanover Memorial Hospital, 2131 S. 17th Street, Wilmington, NC

(919) 343-7000

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Turn left onto Route 74, and bear left when 74 merges with Route 17. Stay on 17/74 to 17th Street and turn left. The hospital is about 7 miles from the site.

PREVAILING WEATHER CONDITIONS AND FORECAST Partly cloudy with a chance of rain, highs in the 80s.

**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 checked="" type="checkbox"/>	Eye Wash Unit	<input checked="" type="checkbox"/>	Rainsuit
<input type="checkbox"/>	HNU	<input checked="" type="checkbox"/>	Gloves (PE/PVC/nitrile/cloth)
<input type="checkbox"/>	OVA	<input type="checkbox"/>	Boots/Boot Covers
<input type="checkbox"/>	Explosimeter	<input type="checkbox"/>	Coveralls (tyvek/saranex)
<input type="checkbox"/>	Radiation Monitor	<input checked="" type="checkbox"/>	Eye Protection
<input checked="" type="checkbox"/>	Decontamination Materials	<input checked="" type="checkbox"/>	Hard Hat

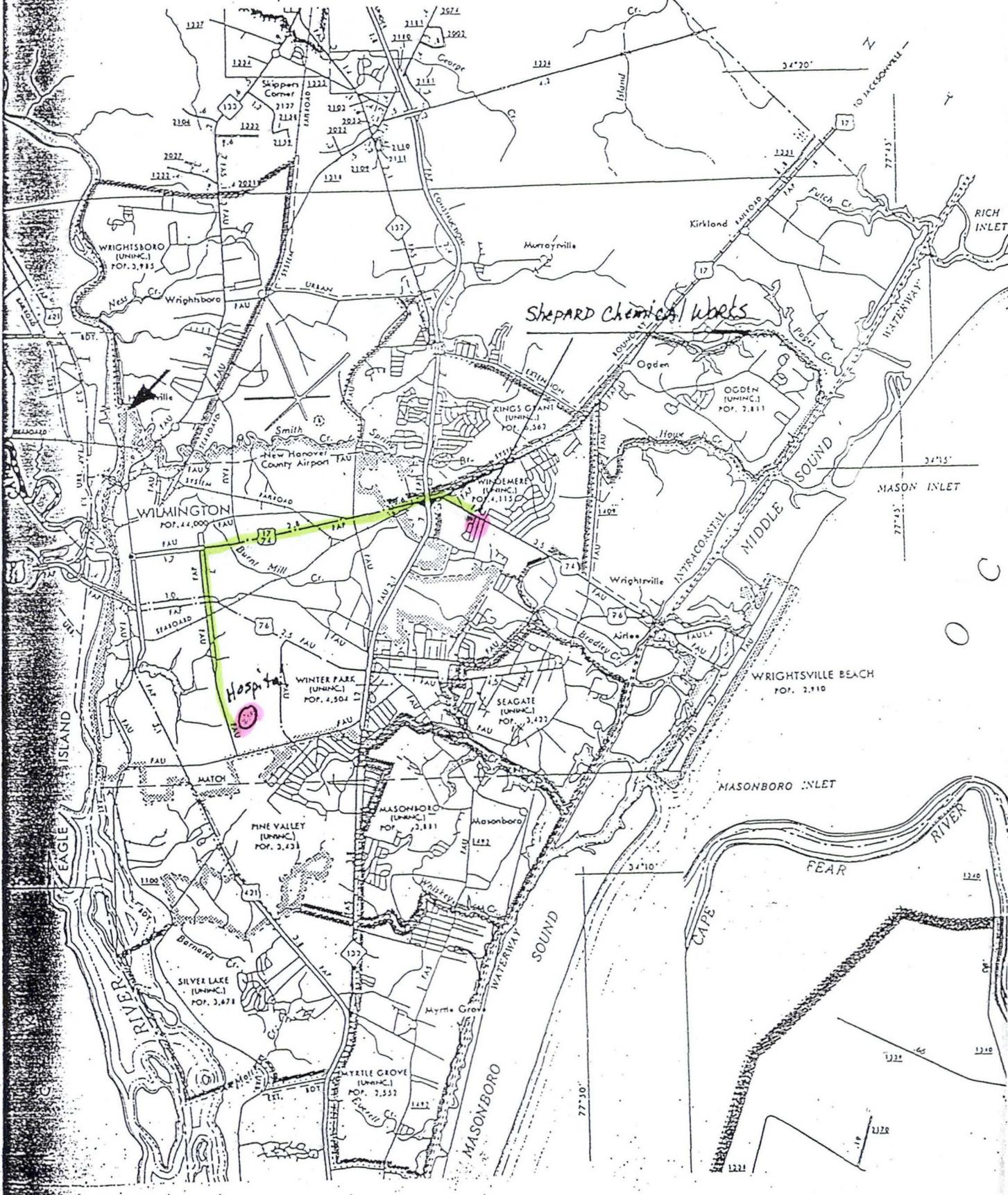
Poison Control Center - State Coordinator  
Duke University Medical Center  
Telephone: 1-800-672-1697  
Box 3024  
Durham, NC 27710

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

safeform.177b

# NEW HANOVER COUNTY

## NORTH CAROLINA



HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Pyrethrins (active insecticidal constituents in pyrethrum flowers)

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula I: $C_{21}H_{28}O_3$ II: $C_{22}HO_5$	1
Natural Physical State at 25°C <u>liquid</u>	2
Vapor Pressure <u>low</u> mm Hg at 20°C	3
Melting Point _____ °F/°C Boiling Point <u>boils at fraction</u> <u>of an atmosphere</u>	1
Flash Point ( <u>open</u> or closed cup) <u>180-190</u> °C/°F	3
Solubility - H <sub>2</sub> O <u>practically insoluble</u>	1
Other <u>alcohol, petroleum ether, kerosene,</u> <u>carbon tetrachloride, ethylene dichloride, nitromethane</u>	1

Physical Features: (odor, color, etc.) Viscous brown resin (3)

II. TOXICOLOGICAL DATA (as Pyrethrum)

Standards: 5 mg/m<sup>3</sup> (4) TLV      5 mg/m<sup>3</sup> (5) PEL      5,000 mg/m<sup>3</sup> (3)

Routes of Exposure: Inhalation, Ingestion, Skin and/or eye contact

Acute/Chronic Symptoms: Skin problems, sneezing, asthma, in animals: convulsions, paralysis (3)

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

Chemical Name: Pyrethins

III. HAZARDOUS CHARACTERISTICS

Ref

A. Combustibility Yes  No  6  
Toxic by-products Highly toxic fumes 6  
are imminent \_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_ \_\_\_\_\_

C. Reactivity Hazard Data not available 6

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. The Merck Index, 11th Edition, 1989.
2. The Condensed Chemical Dictionary, Hawley, 11th, Edition, 1987.
3. NIOSH Pocket Guide to Chemical Hazards, 1990
4. Threshold Limit Values and Biological Exposure Indices for 1990-1991, ACGIH
5. 29 CFR 1910.1000
6. Chemical Hazard Response Information System, US Coast Guard, 1985.



Chemical Name: Diazinon

III. HAZARDOUS CHARACTERISTICS

Ref

A. Combustibility Yes X No \_\_\_\_\_ 3

Toxic by-products Oxides of sulfur and of phosphorus  
are generated in fires 3

not pertinent

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_ 3

C. Reactivity Hazard No reaction with common materials 3

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. The Merck Index, 11th Edition, 1989.
2. The Condensed Chemical Dictionary, Hawley, 11th, Edition, 1987.
3. Chemical Hazard Response Information System, US Coast Guard, 1985.
4. Threshold Limit Values and Biological Exposure Indices for 1990-1991, ACGIH
5. 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Lindane

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C6 H6 C16</u>	<u>1</u>
Natural Physical State at 25°C <u>solid</u>	<u>1</u>
Vapor Pressure <u>9.4 x 10<sup>-6</sup></u> mm Hg at 20°C	<u>1</u>
Melting Point <u>112.5</u> °F/°C Boiling Point <u>614</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>N/A</u> °C/°F	<u>2</u>
Solubility - H <sub>2</sub> O <u>insoluble</u>	<u>1</u>
Other <u>soluble in acetone, benzene, ethanol,</u> <u>ether</u>	<u>1</u>

Physical Features: (odor, color, etc.) white crystalline substance with  
a lightly musty odor (3)

II. TOXICOLOGICAL DATA (suspect carcinogen)

skin skin  
Standards: 0.5 mg/m<sup>3</sup> (4) TLV 0.5 mg/m<sup>3</sup> (5) PEL 1000 mg/m<sup>3</sup> (3) IDLH

Routes of Exposure: skin absorption, inhalation and ingestion (3)

Acute/Chronic Symptoms: Acute: dizziness, heartache, nausea, vomiting,  
diarrhea, tremors, convulsions, circulatory collapse; Chronic: sensitivity,  
EEG disturbances and possible liver damage, Suspect carcinogen. (3)

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

Chemical Name: Lindane

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard corrosive to metals 2

D. Corrosivity Hazard yes/no pH: \_\_\_\_\_

Neutralizing agent: \_\_\_\_\_

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

IV. REFERENCES

1. The Merck Index, 11th Edition, 1989.
2. NIOSH/OSHA Pocket Guide to Chemical Hazards, 1990.
3. Documentation of the TLV, 4th Edition, 1980.
4. Threshold Limit Values and Biological Exposure Indices for 1991-92, ACGIH
5. 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Copper

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>CU</u>	<u>1</u>
Natural Physical State at 25°C <u>solid</u>	<u>1</u>
Vapor Pressure <u>N.A.</u> mm Hg at 20°C	<u>1</u>
Melting Point <u>1083</u> °F/°C Boiling Point <u>2595</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>NA</u> °C/°F	<u>1</u>
Solubility - H <sub>2</sub> O <u>CuSO<sub>4</sub>:35%, CuCl: 0.006%</u>	<u>1</u>
Other <u>Dissolves readily in nitric and hot sulfuric acids; in hydrochloric and dilute sulfuric acids slowly, but only when exposed to the atmosphere.</u>	<u>2</u>
Physical Features: (odor, color, etc.) <u>Solid with a distinctive reddish color (2).</u>	

II. TOXICOLOGICAL DATA

Standards: 1 mg/m<sup>3</sup> (3) TLV    1 mg/m<sup>3</sup> (4) PEL    NA (1) IDLH

Routes of Exposure: Inhalation, Ingestion, Skin Contact, Eye Contact

Acute/Chronic Symptoms: Irritation of mucous membranes and throat, nasal perforation, eye irritation, metal taste, dermatitis

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

Chemical Name: Copper

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  as powder 2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard Oxidizers, alkalis, sodium azide, 1  
acetylene

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) Pocket Guide to Chemical Hazards, NIOSH, 1990  
(2) The Condensed Chemical Dictionary, Sax, 11th  
Edition, 1987.  
(3) Threshold Limit Values and Biological Exposure  
Indices for 1990-91, ACGIH.  
(4) 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Lindane

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C6 H6 C16</u>	1
Natural Physical State at 25°C <u>solid</u>	1
Vapor Pressure <u>9.4 x 10<sup>-6</sup></u> mm Hg at 20°C	1
Melting Point <u>112.5</u> °F/°C Boiling Point <u>614</u> °F/°C	2
Flash Point (open or closed cup) <u>N/A</u> °C/°F	2
Solubility - H <sub>2</sub> O <u>insoluble</u>	1
Other <u>soluble in acetone, benzene, ethanol,</u>	1
<u>ether</u>	

Physical Features: (odor, color, etc.) white crystalline substance with a lightly musty odor (3)

II. TOXICOLOGICAL DATA (suspect carcinogen)

skin skin  
Standards: 0.5 mg/m<sup>3</sup> (4) TLV 0.5 mg/m<sup>3</sup> (5) PEL 1000 mg/m<sup>3</sup> (3) IDLH

Routes of Exposure: skin absorption, inhalation and ingestion (3)

Acute/Chronic Symptoms: Acute: dizziness, heartache, nausea, vomiting, diarrhea, tremors, convulsions, circulatory collapse; Chronic: sensitivity, EEG disturbances and possible liver damage, Suspect carcinogen. (3)

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

Chemical Name: Lindane

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard corrosive to metals 2

D. Corrosivity Hazard yes/no pH: \_\_\_\_\_

Neutralizing agent: \_\_\_\_\_

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

IV. REFERENCES

1. The Merck Index, 11th Edition, 1989.
2. NIOSH/OSHA Pocket Guide to Chemical Hazards, 1990.
3. Documentation of the TLV, 4th Edition, 1980.
4. Threshold Limit Values and Biological Exposure Indices for 1992-93, ACGIH
5. 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Copper

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>CU</u>	<u>1</u>
Natural Physical State at 25°C <u>solid</u>	<u>1</u>
Vapor Pressure <u>N.A.</u> mm Hg at 20°C	<u>1</u>
Melting Point <u>1083</u> °F/°C Boiling Point <u>2595</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>NA</u> °C/°F	<u>1</u>
Solubility - H <sub>2</sub> O <u>CuSO<sub>4</sub>:35%, CuCl: 0.006%</u>	<u>1</u>
Other <u>Dissolves readily in nitric and hot sulfuric acids; in hydrochloric and dilute sulfuric acids slowly, but only when exposed to the atmosphere.</u>	<u>2</u>

Physical Features: (odor, color, etc.) Solid with a distinctive reddish color (2).

II. TOXICOLOGICAL DATA

Standards: 1 mg/m<sup>3</sup> (3) TLV    1 mg/m<sup>3</sup> (4) PEL    NA (1) IDLH

Routes of Exposure: Inhalation, Ingestion, Skin Contact, Eye Contact

Acute/Chronic Symptoms: Irritation of mucous membranes and throat, nasal perforation, eye irritation, metal taste, dermititis

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

Chemical Name: Copper

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  as powder 2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard Oxidizers, alkalis, sodium azide, 1  
acetylene

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) Pocket Guide to Chemical Hazards, NIOSH, 1990
- (2) The Condensed Chemical Dictionary, Sax, 11th  
Edition, 1987.
- (3) Threshold Limit Values and Biological Exposure  
Indices for 1990-91, ACGIH.
- (4) 29 CFR 1910.1000



Chemical Name: Stoddard solvent

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes X No      1  
Toxic by-products                       
  

B. Flammability LEL     ? UEL     ? 1

C. Reactivity Hazard incompatible with strong oxidizers 1

D. Corrosivity Hazard yes/no pH:             

Neutralizing agent:   

E. Radioactive Hazard		Exposure Rate	
Background	yes/no	<u>                    </u>	<u>                    </u>
Alpha particles	yes/no	<u>                    </u>	<u>                    </u>
Beta particles	yes/no	<u>                    </u>	<u>                    </u>
Gamma radiation	yes/no	<u>                    </u>	<u>                    </u>

IV. REFERENCES

(1) Pocket Guide to Chemical Hazards-NIOSH, 1990  
(2) The Merck Index, 11th Edition, 1989  
(3) Threshold Limit Values and Biological/Exposure  
Indices for 1992-93, ACGIH  
(4) 29 CFR 1910.1000



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone (919) 733-4996

Jonathan B. Howes, Secretary

June 16, 1993

Mr. Tom Stich  
Sanitarian Supervisor  
New Hanover County Health Department  
2029 South 17th Street  
Wilmington, NC 28401

RE: Site Visit  
Shepard Chemical Works, Inc.  
NCD 980 801 484

Dear Mr. Stich:

David Lilley of the NC Superfund Section left a message on your answering machine today to notify you that the NC Superfund Section will conduct a site visit of the subject site located in New Hanover County, North Carolina. The visit will be conducted on June 21, 1993 by Harry Zinn of the NC Superfund Section.

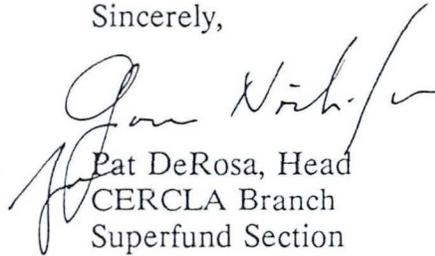
The purpose of the visit is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to groundwater.

You may want to have your representative meet the inspection team at the site. If so, please contact Harry Zinn at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

Mr. Stich  
June 16, 1993  
Page 2

If the visit 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: Dexter Matthews  
Doug Holyfield  
Debbie Crane  
Angie Coppola  
David Lilley  
File

Federal  
Trip Notification & Authorization

Prepared by: HARRY ZIHN

Today's Date: 6-15-93

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

Site Trip

Date of Trip: 6-21-93

If trip date changed or cancelled note below:

Trip Date Changed To: \_\_\_\_\_ Cancelled: \_\_\_\_\_

NCD#: 980 801 484 Site Name: Shepard Chemical Works Inc.  
City: Wilmington County: New Hanover

Reason for Trip: Sampling Trip

Name of Hotel (Overnight Trip): \_\_\_\_\_ Hotel Telephone Number: ( ) \_\_\_\_\_

Authorized by: David B. Lilly  
Industrial Hygienist

Project Team Leader: HARRY ZIHN

Assistants: DAVID LILLEY, \_\_\_\_\_

Attach To Notification Form: 1 copy each: Preliminary Assessment Form (First page only)  
Submit to the Site Map  
Industrial Hygienist 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. Tom Stich Title: Sanitarian Supervisor

(Note if Dr., M.P., etc.) 343 6666

Telephone Number: (919) 251-3250

Notes: Health Department Official Contacted: Tom Stich's phone machine  
Back Up Letter Required: Yes  No

Notified Mr. Stich via his phone machine  
on 6-16-93 (PRI)

Note: Signed original to Data Manager



State of North Carolina  
Department of Environment, Health, and Natural Resources  
512 North Salisbury Street • Raleigh, North Carolina 27604-1148

James B. Hunt, Jr., Governor

Division of Solid Waste Management  
Telephone 919-733-2801

Jonathan B. Howes, Secretary

March 5, 1993

**MEMORANDUM**

TO: John Freeman, D.V.M., M.P.H., Chief  
Environmental Epidemiology Section

FROM: Michael Kelly, Deputy Director *Michael Kelly*  
Division of Solid Waste Management

RE: Groundwater Sampling Results  
Shepard Chemical  
320 Eastwood Road  
Wilmington, New Hanover County, NC 28043

The private well at the subject site was sampled by the Superfund Section on November 28, 1992. The well is owned by Mr. Robert Morrison of 2905 Park Avenue, Wilmington, North Carolina, 28402. The following is a list of the contaminants and highest concentrations found in the groundwater sampled on this date.

CONTAMINANTS

CONCENTRATIONS (ppb)

	Superfund Section <u>November 28, 1992</u>
1,1,1 - Trichloroethane	1.1
Trichloroethylene	1k (see lab sheets)
Tetrachloroethylene	13.4

Dr. Freeman  
March 5, 1993  
page 2

Based on these results, the Superfund Section requests a risk assessment for the groundwater exposure. If you have any questions concerning this matter, please contact Hanna Assefa, Environmental Toxicologist, or me at (919)-733-2801.

Attachments

MK\gj

cc: Hanna Assefa

Receipt for Samples

samples described below were collected in connection with the administration, enforcement, and documentation of the:

- North Carolina Hazardous Waste Management Rules, 10 NCAC 10F
- North Carolina Solid Waste Management Rules, 10 NCAC 10G
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Toxic Substances Control Act (TSCA), 15 U.S.C. §2601, et seq., specifically Section 11 of TSCA, 15 U.S.C. § 2610.

NC SUPERFUND SECTION

ROVER NICHOLSON 401 OBERLIN RD RALEIGH NC 27605  
 Director's Name Inspector's Address 919 762-4359

HEPARD CHEMICAL 320 EASTWOOD RD WILMINGTON NC 28403  
 of Firm Firm Address 2905 PARK AVE WILMINGTON NC 28403

ROBERT MORRISON OWNER  
 Owner, Operator, or Agent Title

SAMPLE NUMBER	COLLECTED		SAMPLE TYPE			DUPLICATE SAMPLES			SAMPLE LOCATION	
	DATE	TIME	WATER	SOIL	OTHER	OFFERED	ACCEPTED	REJECTED	ON-SITE	OFF-SITE
10-01	11/23/92	1230	X	-	-	X			X	
<del>REMAINDER OF TABLE IS CROSSED OUT</del>										

Receipt for the sample(s) described above is hereby acknowledged:

*[Signature]*  
 Signature of Inspector

ENVIRONMENTAL ENGR.  
 Title

Receipt/rejection of duplicate or split samples is hereby acknowledged:

*[Signature]*  
 Signature of Firm Owner, Operator, or Agent

OWNER  
 Title

N. C. DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES  
 DIVISION OF LABORATORY SERVICES, ENVIRONMENTAL SCIENCES SECTION  
 P.O. BOX 26047 - 306 N. WILMINGTON ST., RALEIGH, N.C. 27611

Laboratory No. 923917

PURGEABLE COMPOUNDS

Date of Analysis 1/11/93

COMPOUND	µg/l
Dichlorodifluoromethane	U
Chloromethane	
√Vinyl Chloride	
Bromomethane	
Chloroethane	
Trichlorofluoromethane	
√1,1-Dichloroethylene	
Methylene Chloride	
tert-Butyl Methyl Ether	
√trans-1,2-Dichloroethylene	
Isopropyl ether	
1,1-Dichloroethane	
2,2-Dichloropropane	
√cis-1,2-Dichloroethylene	
Chloroform	
(BCM) Bromochloromethane	√
√1,1,1-Trichloroethane	U
1,1-Dichloropropene	U
√Carbon Tetrachloride	
√Benzene	
√1,2-Dichloroethane	√
√Trichloroethylene	JK
√1,2-Dichloropropane	U
Bromodichloromethane	
Dibromomethane	
√Toluene	
1,1,2-Trichloroethane	√
√Tetrachloroethylene	13.4
1,3-Dichloropropane	U
Dibromochloromethane	
1,2-Dibromoethane (EDB)	
1-Chlorohexane	√

COMPOUND	µg/l
√Chlorobenzene	U
√Ethylbenzene	
1,1,1,2-Tetrachloroethane	
√p-Xylene	
√m-Xylene	
√o-Xylene	
√Styrene	
Bromoform	
Isopropylbenzene	
1,1,2,2-Tetrachloroethane	
Bromobenzene	
n-Propylbenzene	
1,2,3-Trichloropropane	
2-Chlorotoluene	
1,3,5-Trimethylbenzene	
4-Chlorotoluene	
tert-Butyl Benzene	
Pentachloroethane	
1,2,4-Trimethylbenzene	
sec-Butyl Benzene	
p-Isopropyltoluene	
1,3-Dichlorobenzene	
√1,4-Dichlorobenzene	
n-Butylbenzene	
√1,2-Dichlorobenzene	
Bis (2-Chloroisopropyl) Ether	
1,2-Dibromo-3-Chloropropane	
1,2,4-Trichlorobenzene	
Hexachlorobutadiene	
Naphthalene	
1,2,3-Trichlorobenzene	√

COMMENTS: Unidentified peaks present

MDL - Minimum Detection Limit for water (EPA Method 502.2), is 1.0 µg/l.

- J - Estimated value.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- U - Material was analyzed for but not detected.
- NA - Not analyzed.
- 1/ - Tentative identification.
- √ - Regulated VOC
- T - Trihalomethane

N.C. Dept. of Environment, Health, & Natural Resources  
 HNR 3068-0 (Rev. 10/92 Laboratory Services)

1532E D-18

RECEIVED

JAN 15 1993

SUPERFUND SECTION

SHEPHERD CHEMICAL Field Notes

1030 23 NOV 92

JOE MORRISON

ROBERT MORRISON

OWNERS

PRIOR TO 1957 - NOTHING

1957 TO 1964 - DEER TONGUE LEAF (TOB. FAVORING)

1964 TO 1991 - SHEPHERD CHEMICAL

NOV 91 - SHUT DOWN

2 ABOVE GRD VARSOL TANKS IN BACK.

NO MANUFACTURING - ONLY REFORMULATING & REPACKAGING.

NO SPILLS, NO DISPOSALS, NO OBVIOUS DISCOLORATIONS

WELL - 1 1/4" DIA (?) 50 FT DEEP

JET PUMP

★ SAMPLE GW-01 1230 11/23/92 SHEPARD CHEM WELL

RAN WATER FOR 15 MINUTES

1 1/4" DIA (?) 50' DEEP

SAMPLED FROM TAP INSIDE BLDG. ONLY TAP

OTHER THAN "FILTHY" SINK. TAP ONLY 2" FROM

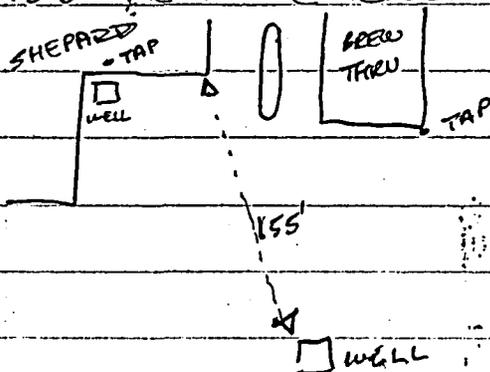
FLOOR. USED 4 OZ. JAR TO FILL ALL BOTTLES.

★ SAMPLE GW-02 1300 11/23/92 "BREW-THRU" WELL

RAN WATER FOR 15 MINUTES. WELL IN WELLHOUSE.

LOCKED. OWNER COULD NOT FIND KEY. WELL IS

155' FROM CORNER OF SHEPARD CHEM.



MIRE DOSKEY "BREW-THRU"

414 EASTWOOD RD

WILMINGTON NC 28403

919 452-8082

WELL 2 1/2 YRS OLD.

BUILT 2 1/2 YRS AGO. GORDON SCOTT

RESIDENT

GW-03

JAMIE HOBBS

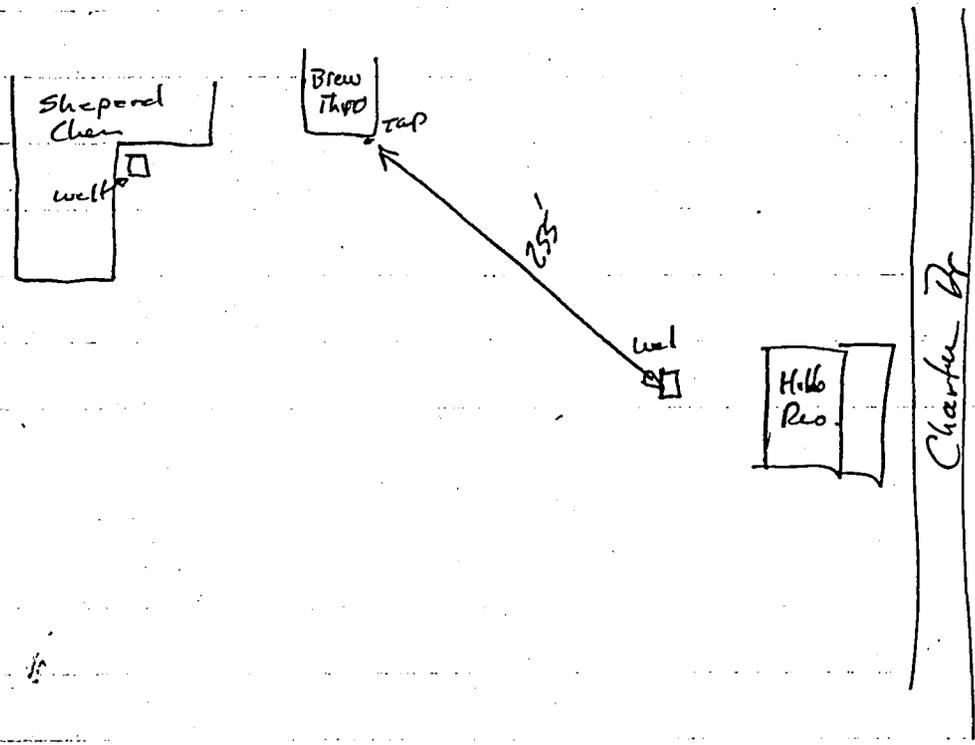
12 CHARTER DR

919 452-5271

WILMINGTON NC 28403

OWNER: HERBERT WALKER

RALEIGH NC



PINE STATE DAIRY - F.M. HARRELL, GARAGE MNGR.  
165 VISION DR WILMINGTON 28403  
1 WELL . 160' 4" DIA. SUB PUMP. (NOT SAMPLED)  
EMPLOYEES - 12

CITY OPTICAL HAS A WELL.

---

EASTWOOD SHOPPING CTR 323 EASTWOOD RD  
919 791-0908 WILMINGTON NC 28403  
371 2770 392 3173  
SKIPPER WELL SERVICES EMPLOYEES - 20 (?)  
JOHN THOMPSON - MGR. / PART OWNER  
HENRY E. MILLER, JR. / SHOPPING CTR OWNER



State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

William L. Meyer  
Director

November 17, 1992

Mr. Tom Stich  
Sanitarian Supervisor  
Environmental Health Division  
New Hanover County Health Department  
2029 South 17th Street  
Wilmington, NC 28401

RE: Site Inspection  
On-Site Sampling  
Shepard Chemical Works, Inc.  
NCD 980 801 484

Dear Mr. Stich:

David Lilley of the NC Superfund Section spoke with Harriet Mitchell of your office today to notify you that the NC Superfund Section will conduct a site inspection of the subject site located in New Hanover County, North Carolina. The inspection will be conducted on November 23, 1992 by Harry Zinn 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 on and 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 Harry Zinn at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

Mr. Stich  
11-17-92  
Page 2

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: Dexter Matthews  
Doug Holyfield  
Don Follmer  
Angie Coppola  
David Lilley  
File

Federal  
Trip Notification & Authorization

Prepared by: HARRY ZINN

Today's Date: 11-16-92

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

Site Trip

Date of Trip: 11-23-92

If trip date changed or cancelled note below:  
Trip Date Changed To: \_\_\_\_\_ Cancelled: \_\_\_\_\_

NCD#: 980 801 484 Site Name: Shepard Chemical Works Inc.  
City: Wilmington County: NEW HANOVER

Reason for Trip: SI Sampling Trip

Name of Hotel (Overnight Trip): \_\_\_\_\_ Hotel Telephone Number: ( ) \_\_\_\_\_

Authorized by: [Signature]  
Industrial Hygienist

Project Team Leader: HARRY ZINN

Assistants: GRAVER NICHOLSON,

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. Tom Stich Title: Sanitarian Supervisor  
(Note if Dr., M.P., etc.)  
Telephone Number: (919) 251 3250

Notes: Health Department Official Contacted: Harriet Mitchell  
Back Up Letter Required: Yes  No   
Notified Ms. Mitchell on 11-17-92 (DBL)

Note: Signed original to Data Manager

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Shepard Chemical Works, Inc. ID # NCD 980 801 484

Location P.O. Box 473, US Highway 74 East,  
Wilmington, New Hanover County, NC

Proposed Date of Investigation December 12, 1991

Date of Briefing December 11, 1991

Date of Debriefing December 13, 1991

Nature of Visit (check one): On-Site Reconnaissance (PA) \_\_\_\_\_  
On-Site Reconnaissance (SI)  X   
Site Investigation \_\_\_\_\_

Health Department Official Contacted Sharon Neuschafer for Tom Stich

Date of Contact December 2, 1991

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>Harvey Allen</u>	<u>team leader, recon</u>	<u>Harvey A. Allen</u>

Plan Preparation:

Prepared By: David Lilley, Industrial Hygienist David Lilley  
Reviewed By: Jack Butler, Environmental Engineer Jack Butler



Facility Description: Size no data Buildings yes: 2  
Disposal Methods Being Investigated Potential spillage of raw materials  
and product, potential leakage of above ground 500 gallon Varsol tank.  
Unusual Features on Site (dike integrity, power lines, terrain, etc.):  
none known

History of the Site: This company has been in operation at this location  
since 1957. Shepard Chemical Works (SCW) distributes and formulates  
various insecticidal, wood treatment, and disinfectant products. The  
majority of products sold by SCW are made off-site and distributed by SCW.  
SCW does formulate a copper napthenate wood treatment solution and an  
insectide. The company claims absolutely no chemical waste is generated  
during distribution or formulation.

C. HAZARD EVALUATION

The site can be toured in level D protection. No sampling will be  
conducted at this time. Steel toed work boots will be worn while touring  
the site.

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.  
No sampling will be conducted at this time, sampling may take place on a  
later date.

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 980 801 484

Location of Nearest Phone: on-site: this is an operational facility

Hospital (Address and Phone Number)

New Hanover Memorial Hospital, 2131 S. 17th Street, Wilmington, NC

(919) 343-7000

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Turn left onto Route 74, and bear left when 74 merges with Route 17. Stay on 17/74 to 17th Street and turn left. The hospital is about 7 miles from the site.

PREVAILING WEATHER CONDITIONS AND FORECAST Partly cloudy with a chance of rain, highs in the 50s.

**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"/>	Rainsuit
<input type="checkbox"/>	HNU	<input type="checkbox"/>	Gloves (PE/PVC/nitrile/cloth)
<input type="checkbox"/>	OVA	<input checked="" type="checkbox"/>	Boots/Boot Covers
<input type="checkbox"/>	Explosimeter	<input type="checkbox"/>	Coveralls (tyvek/saranex)
<input type="checkbox"/>	Radiation Monitor	<input type="checkbox"/>	Eye Protection
<input checked="" type="checkbox"/>	Decontamination Materials	<input checked="" type="checkbox"/>	Hard Hat

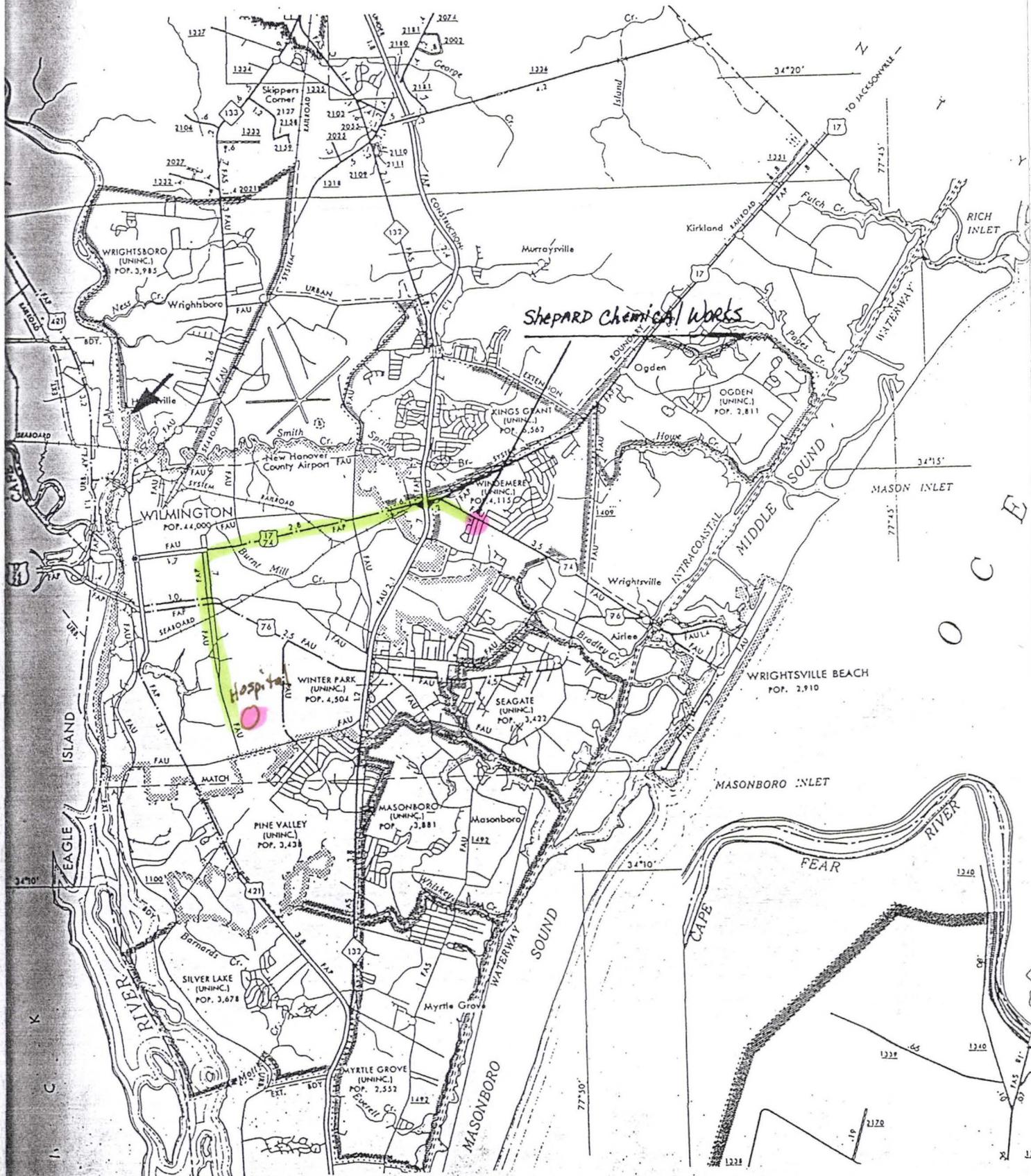
Poison Control Center - State Coordinator  
Duke University Medical Center  
Telephone: 1-800-672-1697  
Box 3024  
Durham, NC 27710

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

safeform.177

# NEW HANOVER COUNTY

## NORTH CAROLINA



TO BE COMPLETED BY PROJECT MANAGER

PROJECT MANAGER: Harvey Allen PROJECT: Shepard Chem. Works  
INVESTIGATION DATE: December 12, 1991  
RECONNAISSANCE X SAMPLING VISIT       

Materials Used (Please insert a number in the blank)

<u>      </u> Air Purifying respirator cartridges	<u>      </u> Gloves (nitrile)
<u>      </u> Eye Wash Units	<u>      </u> Gloves (cloth)
<u>      </u> First Aid Kit	<u>      </u> Boot covers
<u>      </u> Gloves (polyethylene)	<u>      </u> Coveralls (tyvek)
<u>      </u> Gloves (PVC)	<u>      </u> Coveralls (saranex)

Respirator Worn By \_\_\_\_\_ Approximate Time in Respirator \_\_\_\_\_

Air Monitoring Data (Include Calibration Reading)

HNU: \_\_\_\_\_  
OVA: \_\_\_\_\_  
Explosimeter: \_\_\_\_\_  
Radiation Meter: \_\_\_\_\_

*(on-site recon & interview,  
no sampling)*

If the maximum personal protective equipment as outlined in the Hazard Evaluation Section was not used, please justify:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Visitors Present

Tyrene M. J. Tyburski  
Harvey Allen  
\_\_\_\_\_  
\_\_\_\_\_

Organization Represented

GPO  
NCSS  
\_\_\_\_\_  
\_\_\_\_\_

Harvey Allen

Signature

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Pyrethrins (active insecticidal constituents in pyrethrum flowers)

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula I: <u>C<sub>21</sub>H<sub>28</sub>O<sub>3</sub></u> II: <u>C<sub>22</sub>H<sub>30</sub>O<sub>5</sub></u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>2</u>
Vapor Pressure <u>~0</u> mm Hg at 20°C	<u>3</u>
Melting Point _____ °F/°C Boiling Point <u>boils at fraction</u> <u>of an atmosphere</u>	<u>1</u>
Flash Point (open or closed cup) <u>180-190</u> °C/°F	<u>3</u>
Solubility - H <sub>2</sub> O <u>practically insoluble</u>	<u>1</u>
Other <u>alcohol, petroleum ether, kerosene,</u> <u>carbon tetrachloride, ethylene dichloride, nitromethane</u>	<u>1</u>

Physical Features: (odor, color, etc.) Viscous brown resin (3)

II. TOXICOLOGICAL DATA (as Pyrethrum)

Standards: 5 mg/m<sup>3</sup> (4) TLV      5 mg/m<sup>3</sup> (5) PEL      5,000 mg/m<sup>3</sup> (3)

Routes of Exposure: Inhalation, Ingestion, Skin and/or eye contact

Acute/Chronic Symptoms: Skin problems, sneezing, asthma, in animals: convulsions, paralysis (3)

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

Chemical Name: Pyrethins

III. HAZARDOUS CHARACTERISTICS

Ref

A. Combustibility Yes \_\_\_ No X \_\_\_ 6  
Toxic by-products Highly toxic fumes \_\_\_ 6  
are imminent \_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_ \_\_\_

C. Reactivity Hazard Data not available \_\_\_ 6

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. The Merck Index, 11th Edition, 1989.
2. The Condensed Chemical Dictionary, Hawley, 11th, Edition, 1987.
3. NIOSH Pocket Guide to Chemical Hazards, 1987
4. Threshold Limit Values and Biological Exposure Indices for 1988-1989, ACGIH
5. 29 CFR 1910.1000
6. Chemical Hazard Response Information System, US Coast Guard, 1985.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Diazinon

I. PHYSICAL/CHEMICAL PROPERTIES

	Refere
Chemical Formula <u>C<sub>12</sub>H<sub>21</sub>N<sub>2</sub>O<sub>3</sub>PS</u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1,2</u>
Vapor Pressure <u>not pertinent</u> mm Hg at 20°C	<u>3</u>
Melting Point _____ °F/°C Boiling Point <u>83-84</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>82-105 (solutions°C/°F only, pure liquid difficult to burn)</u>	<u>3</u>
Solubility - H <sub>2</sub> O _____	<u>1,2</u>
Other <u>miscible with alcohol, ether, petroleum ether, cyclohexane, benzene, and similar hydrocarbons, ketones</u>	
Physical Features: (odor, color, etc.) <u>colorless liquid with a faint ester-like odor (1,2)</u>	

II. TOXICOLOGICAL DATA

skin

Standards: 0.1 mg/m<sup>3</sup> (4) TLV      0.1 mg/m<sup>3</sup> (5) PEL    no data (3) IDL

Routes of Exposure: Ingestion, Inhalation, Skin absorbtion, Eye contact  
 Acute/Chronic Symptoms: Ingestion or prolonged inhalation of mist causes headache, giddiness, blurred vision, nervousness, weakness, cramps, diarr discomfort in the chest, sweating, tearing, salivation and other excessiv respiratory tract secretion, vomiting uncontrollable muscle twitches, convulsions, coma, loss of reflexes, and loss of sphincter control. Liqu irritates eyes and skin. (3)

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

Chemical Name: Diazinon

III. HAZARDOUS CHARACTERISTICS

Ref

A. Combustibility Yes X No \_\_\_\_\_ 3  
Toxic by-products Oxides of sulfur and of phosphorus 3  
are generated in fires

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_ 3  
not pertinent

C. Reactivity Hazard No reaction with common materials 3

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. The Merck Index, 11th Edition, 1989.
2. The Condensed Chemical Dictionary, Hawley, 11th, Edition, 1987.
3. Chemical Hazard Response Information System, US Coast Guard, 1985.
4. Threshold Limit Values and Biological Exposure Indices for 1988-1989, ACGIH
5. 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Lindane

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C6 H6 C16</u>	<u>1</u>
Natural Physical State at 25°C <u>solid</u>	<u>1</u>
Vapor Pressure <u>9.4 x 10<sup>-6</sup></u> mm Hg at 20°C	<u>1</u>
Melting Point <u>112.5</u> °F/°C Boiling Point <u>decomposes</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>N/A</u> °C/°F	<u>2</u>
Solubility - H <sub>2</sub> O <u>insoluble</u>	<u>1</u>
Other <u>soluble in acetone, benzene, ethanol,</u> <u>ether</u>	<u>1</u>

Physical Features: (odor, color, etc.) white crystalline substance with a lightly musty odor (3)

II. TOXICOLOGICAL DATA (suspect carcinogen)

standards: 0.5 mg/m<sup>3</sup> (4) TLV 0.5 mg/m<sup>3</sup> (5) PEL 1000 mg/m<sup>3</sup> (3) IDLH

Routes of Exposure: skin absorption, inhalation and ingestion (3)

Acute/Chronic Symptoms: Acute: dizziness, heartache, nausea, vomiting, diarrhea, tremors, convulsions, circulatory collapse; Chronic: sensitivity, EEG disturbances and possible liver damage, Suspect carcinogen. (3)

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

Chemical Name: Lindane

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard "None hazardous" 2

D. Corrosivity Hazard yes/no pH: \_\_\_\_\_

Neutralizing agent: \_\_\_\_\_

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

IV. REFERENCES

1. The Merck Index, 11th Edition, 1989.
2. NIOSH/OSHA Pocket Guide to Chemical Hazards, 1987.
3. Documentation of the TLV, 4th Edition, 1980.
4. Threshold Limit Values and Biological Exposure Indices for 1990-91, ACGIH
5. 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Copper

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>CU</u>	<u>1</u>
Natural Physical State at 25°C <u>solid</u>	<u>1</u>
Vapor Pressure <u>N.A.</u> mm Hg at 20°C	<u>1</u>
Melting Point <u>1083</u> °F/°C Boiling Point <u>2595</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>?</u> °C/°F	<u>1</u>
Solubility - H <sub>2</sub> O <u>CuSO<sub>4</sub>:35%, CuCl: 0.006%</u>	<u>1</u>
Other <u>Dissolves readily in nitric and hot</u>	<u>2</u>
<u>sulfuric acids; in hydrochloric and dilute sulfuric acids</u>	
<u>slowly, but only when exposed to the atmosphere.</u>	
Physical Features: (odor, color, etc.) <u>Solid with a distinctive</u>	
<u>reddish color (2).</u>	

II. TOXICOLOGICAL DATA

Standards: 1 mg/m<sup>3</sup> (3) TLV    1 mg/m<sup>3</sup> (4) PEL    N.A. IDLH    1

Routes of Exposure: Inhalation, Ingestion, Skin Contact, Eye Contact

Acute/Chronic Symptoms: Irritation of mucous membranes and throat, nasal perforation, eye irritation, metal taste, dermatitis

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

Chemical Name: Copper

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes  No  as powder 2  
Toxic by-products \_\_\_\_\_  
\_\_\_\_\_

B. Flammability LEL \_\_\_\_\_ UEL \_\_\_\_\_

C. Reactivity Hazard incompatible with acetylene 1  
gas and magnesium metal.

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) Pocket Guide to Chemical Hazards, NIOSH, 1987
- (2) The Condensed Chemical Dictionary, Sax, 11th Edition, 1987.
- (3) Threshold Limit Values and Biological Exposure Indices for 1990-91, ACGIH.
- (4) 29 CFR 1910.1000, 1989.

Chemical Name: Stoddard Solvent

## I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C<sub>9</sub> H<sub>20</sub></u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1</u>
Vapor Pressure <u>~2</u> mm Hg at 20°C	<u>1</u>
Melting Point <u>?</u> °F/°C Boiling Point <u>302-329</u> °F/°C	<u>1</u>
Flash Point (open or closed cup) <u>102-140</u> °C/°F	<u>1</u>
Solubility - H <sub>2</sub> O <u>insoluble</u>	<u>1</u>
Other <u>miscible with alcohol, benzene, ether, chloroform, carbontetrachloride, carbon disulfide, and oils, except castor oil.</u>	<u>1</u>

Physical Features: (odor, color, etc.) colorless liquid with a kerosene like odor(1).

## II. TOXICOLOGICAL DATA

Standards: 100 ppm(3) TLV 100 ppm(4) PEL 5000 ppm(1) IDLHRoutes of Exposure: Inhalation, ingestion, skin and/or eye contact(1)Acute/Chronic Symptoms: irritation of eyes, nose, and throat, dizziness; skin problems(1)First Aid: Eyes: irrigate immediately; Skin: Wash with soap and water immediately; Inhalation: artificial respiration; Ingestion: get medical attention immediately.





State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

William L. Meyer  
Director

December 2, 1991

Mr. Thomas Stich  
Sanitarian Supervisor  
Environmental Health Division  
New Hanover County Health Department  
2029 South 17th Street  
Wilmington, NC 28401

RE: On-Site Reconnaissance  
Shepherd Chemical Works, Inc.  
NCD980801484

Dear Mr. Stich:

David Lilley of the NC Superfund Section spoke with Sharon Neuschafer of your office today to notify you that the NC Superfund Section's contractors will conduct an on-site reconnaissance of the subject site located in New Hanover County, North Carolina. The reconnaissance will be conducted on December 12, 1991 by Helene Kasser of Greenhorne and O'Mara, Inc.

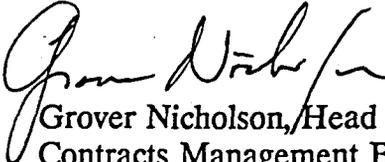
The purpose of the reconnaissance is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The investigation team will locate all nearby water supplies (surface and groundwater, community and private)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

This reconnaissance 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 reconnaissance team at the site. If so, please contact Bill Piske at (919) 782-9088 and he will coordinate a meeting. I am enclosing background data on the site for your information.

Mr. Stich  
12-2-91  
Page 2

If the reconnaissance 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,

  
Grover Nicholson, Head  
Contracts Management Branch  
Superfund Section

Enclosures

cc: Dexter Matthews  
Doug Holyfield  
Don Follmer  
Patricia Delaney  
Ann Rudd  
David Lilley  
File

Federal  
Trip Notification & Authorization

Prepared by: Harvey Allen

Today's Date: 11/27/91

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

Site Trip

Date of Trip: 12/12/91

If trip date changed or cancelled note below:

Trip Date Changed To: \_\_\_\_\_ Cancelled: \_\_\_\_\_

NCD#: 980 801 484  
City: Wilmington

Site Name: Shepherd Chemical Works, Inc.  
County: New Hanover

Reason for Trip: Phase II, SSI Reconnaissance

Name of Hotel (Overnight Trip): \_\_\_\_\_ Hotel Telephone Number: ( ) \_\_\_\_\_

Authorized by: David B. [Signature]

Industrial Hygienist

Project Team Leader: Harvey Allen (NCSS)

Assistants: Helene Kasser (G40)

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

(Please list appropriate County Health Department contact person to call to advise of trip)

Environmental Supervisor or Health Director to call: Thomas Stoch Title: Sanitarian Supervisor

(Note if Dr., M.P., etc.)

Telephone Number: (919) 251-3250

Notes: Health Department Official Contacted: Sharon Neuschater  
Back Up Letter Required: Yes  No

Notified Ms. Neuschater for Thomas Stoch  
on 12-2-91 (OBL)

Note: Signed original to Data Manager



State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

William L. Meyer  
Director

November 27, 1991

Mr. B. R. Morrison, Jr.  
Shepherd Chemical Works, Inc.  
P. O. Box 473  
Wilmington, North Carolina 28402

RE: Screening Site Investigation  
Shepherd Chemical Works, Inc  
Wilmington, New Hanover County, North Carolina  
NCD 980 801 484

Dear Mr. Morrison:

This letter is confirming our conversation on November 25, 1991 concerning the above referenced subject.

As discussed, Grover Nicholson and/or myself will accompany our contractor, Greenhorne & O'Mara, Inc., for an onsite interview with yourself and whomever you deem appropriate to discuss present and past activities at the site. Additionally, an onsite reconnaissance of the site will be performed.

The site visit is scheduled for 9:00 a.m. on December 12, 1991.

If you have any questions, please contact Grover Nicholson or me at 919-733-2801.

Sincerely,

A handwritten signature in cursive script that reads "Harvey H. Allen".

Harvey H. Allen, PE  
Environmental Engineer



State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

William L. Meyer  
Director

1 November 1991

Mr. B. R. Morrison, Jr.  
Shepherd Chemical Works, Inc.  
P. O. Box 473  
Wilmington, N.C. 28402

RE: **Shepherd Chemical Works, Inc.**  
**NCD 980 801 484**

Dear Mr. Morrison:

The purpose of this letter is to notify you that the subject site has been included on a list of sites for which Superfund site screening investigations will be conducted during the next six (6) months.

The North Carolina Superfund Section, pursuant to the authority and requirements of G.S. 130A-310.22 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Public Law 99-499, is responsible for conducting site screening investigations at sites reported to the United States Environmental Protection Agency (EPA) as posing a potential hazard to public health and the environment through the release, or threat of release of hazardous substances to the environment. The purpose of the investigations is to determine whether the sites contain hazardous substances which have or might contaminate the soil, surface water, groundwater or air and thus pose a hazard to public safety or the environment. These investigations are not emergency situations, but are normal steps in the evaluation of all such sites reported to EPA.

The subject site is one which the EPA has requested that the Superfund Section investigate. To assist in conducting these investigations, the Superfund Section has hired a private contractor to perform a portion of these investigations under State

supervision. Before any investigative activities are actually conducted at the site, you will be notified of the date of the inspection and specific activities to be conducted. These activities may include:

- 1) inspecting, sketching and photographing the premises;
- 2) collecting of surface and subsurface soil samples;
- 3) collecting sediment samples;
- 4) air monitoring;
- 5) collecting groundwater and surface water samples;
- 6) hand augering boreholes and emplacing temporary monitoring wells;
- 7) conducting geophysical surveys; and
- 8) transporting equipment onto and about the site as necessary to accomplish the above activities, including trucks and sampling equipment.

If you have any questions regarding this notice, please contact Grover Nicholson or me at (919) 733-2801.

Sincerely,

*Lee Crosby*  
Lee Crosby, Chief  
Superfund Section

LC/gj



FILE COPY

State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

William L. Meyer  
Director

July 22, 1991

Ms. Cathy Amoroso  
NC CERCLA Project Manager  
EPA Region IV Waste Division  
345 Courtland Street, NE  
Atlanta, GA 30365

RE: Shepard Chemical Works, Inc.  
NCD 980 801 484  
Copy Request

Dear Ms. Amoroso:

Enclosed please find a copy of the Preliminary Assessment for the subject site as per your request. If you have any questions, please contact me at (919) 733-2801.

Sincerely,

A handwritten signature in cursive script, appearing to read "Pat DeRosa".

Pat DeRosa, Head  
CERCLA Branch  
NC Superfund Section

cc: File

PD/kc/039

Attachments







FILE COPY

State of North Carolina  
Department of Environment, Health, and Natural Resources  
Division of Solid Waste Management  
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

January 28, 1991

William L. Meyer  
Director

Ms. Kelly Cain  
NC Project Officer  
EPA Region IV Waste Division  
345 Courtland Street, NE  
Atlanta, GA 30365

Dear Ms. Cain:

Subject: Proposed Change to Wastelan Preremedial Report 20

Please review the following proposed change to the Wastelan Preremedial Report 20 Information:

SITE NAME: Shepard Chemical Works, Inc.  
EPA ID# : NCD 980 801 484

PROPOSED CHANGE(S): <sup>Shepherd</sup> ~~Shepard~~ Chemical Works, Inc.

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

Sincerely,

A handwritten signature in cursive script that reads "Pat DeRosa".

Pat DeRosa, Head  
NC CERCLA Branch  
Superfund Section

cc: Pat Bowden  
Pat DeRosa  
File

PD/kc/pat.033