399SERBSF10,625

399SERBSF10,625

Site Name (Subject):	STEWART-WARNER CORP/BASSICK-SACK
Site ID (Document ID):	NCD024895864
Document Name (DocType):	Correspondence (C)
Report Segment:	
Description:	General Correspondence, 1984 - 1995
Date of Document:	9/28/1995
Date Received:	10/2/1995
Box: *Enter SF and # with no spaces*	SF10,625
Access Level:	PUBLIC
Division:	WASTE MANAGEMENT
Section:	SUPERFUND
Program (Document Group):	SERB (SERB)
Document Category:	FACILITY

Print Report for Record | **Go to New Blank Record** | **Go to New Record - (default to last record values)** | **Delete Record**

POYNER & SPRUILL, L.L.P.
ATTORNEYS AT LAW

3600 Glenwood Avenue
Raleigh, North Carolina 27612
Mailing Address:
Post Office Box 10096
Raleigh, North Carolina 27605-0096
919/783-6400
Fax: 919/783-1075
Offices:
Raleigh/Rocky Mount/
Charlotte/Greenville

T. Richard Kane
Partner

Direct Dial: 919/783-1035

RECEIVED
OCT 02 1995
SUPERFUND SECTION

September 28, 1995

Mr. Grover Nicholson
NC Dept. of Environment, Health and
Natural Resources
P.O. Box 27687
Raleigh, NC 27611-7687

RE: *Ilco Unican Corporation v. Stewart-Warner Corporation*, 6:91-CV-00034

Dear Mr. Nicholson:

On behalf of our clients Ilco Unican Corporation, I am very pleased to report to you that the parties to the above case have reached a satisfactory agreement concerning financial responsi-bility for environmental contamination at the Winston-Salem facility purchased from Stewart-Warner Corporation in 1988 by Ilco Unican Corporation.

This agreement means that we have settled our case and that trial will be unnecessary. You will therefore not be required to obey any subpoena served upon you by Ilco Unican Corporation that would otherwise require you to appear and to testify in the case.

Again speaking on behalf of Ilco Unican, I would like to thank you for your forthright cooperation in the preparation of our case. We are aware of the personal sacrifices that witnesses are called upon to make in our civil justice system, and we deeply appreciate your efforts.

Thank you once again.

Yours truly,

POYNER & SPRUILL

By T Richard Kane/dgc

T. Richard Kane

cc: Mr. Aaron M. Fish
Peter M. Blaikie, Q.C.
Mr. Frank Belflower
Mr. Brian E. Wells

T. Richard Kane
Partner

Direct Dial: 919/783-1035

POYNER&SPRUILL, L.L.P.
ATTORNEYS AT LAW

3600 Glenwood Avenue
Raleigh, North Carolina 27612
Mailing Address:
Post Office Box 10096
Raleigh, North Carolina 27605-0096
919/783-6400
Fax: 919/783-1075
Offices:
Raleigh/Rocky Mount/
Charlotte/Greenville

September 25, 1995

Mr. Grover Nicholson
N.C. Department of Environment, Health & Natural Resources
401 Oberlin Road
Raleigh, NC 27605

RE: *Ilco Unican Corporation v. Stewart-Warner Corporation*, 6:91-CV-00034

Dear Mr. Nicholson:

As you will see from the attached subpoena, Ilco Unican has found it necessary to state a formal requirement for your presence at the trial of the above case.

The trial will begin on October 2 in the Federal Courthouse, 324 West Market Street, Greensboro, North Carolina. You will not need to be present when court begins at 9:30 on October 2, but you may need to be present at some later time in the trial, which we expect to last three weeks. **We will contact you concerning the exact date and time when you will need to be present.** We will make every effort to schedule your appearance as conveniently to you as possible, and even to avoid the need for you to testify in the case if we possibly can. At the present time, however, it appears that you will need to testify at some point in the trial, since you have important information that can help the Court reach the fairest possible result.

Our Judge is the Honorable N. Carlton Tilley, Jr. When you arrive at the Federal Courthouse you will be required to go through a metal detector. Please ask the U.S. Marshals who operate the metal detector how to find courtroom #2, or Judge Tilley's courtroom.

Our points of contact for witnesses are Ms. Delisa Ostgard and Ms. Kimball Mullins. Ms. Mullins will be working with Keith Johnson and me in Greensboro during the trial. Ms. Ostgard can be reached now and during the trial at 919/783-2869. You can expect to hear from one of these ladies in the very near future about the date and time you will need to be at the courthouse.

Thank you for your cooperation in this matter.

Sincerely yours,

T. Richard Kane

T. Richard Kane

/trk
Encl.

AO 88 (Rev. 11/91) Subpoena in a Civil Case

United States District Court

MIDDLE DISTRICT OF NORTH CAROLINA

ILCO UNICAN CORPORATION,
a North Carolina Corporation,

V.

STEWART-WARNER CORPORATION,
a Virginia Corporation, and
STEWART-WARNER BASSICK-SACK
CORPORATION, a Delaware Corporation.

SUBPOENA IN A CIVIL CASE

CASE NUMBER: 6:91-CV-00034

TO: Mr. Grover Nicholson
N.C. Dept. of Environment, Health & Natural Resources
401 Oberlin Road (27605)
P.O. Box 27687, Raleigh, NC 27611-7687

☒ YOU ARE COMMANDED to appear in the United States District Court at the place, date, and time specified below to testify in the above case.

PLACE OF TESTIMONY	COURTROOM
United States District Court Federal Building 324 West Market Street Greensboro, NC 27402	2
	DATE AND TIME October 2, 1995 9:30 a.m.

☐ YOU ARE COMMANDED to appear at the place, date, and time specified below to testify at the taking of a deposition in the above case.

PLACE OF DEPOSITION	DATE AND TIME

☐ YOU ARE COMMANDED to produce and permit inspection and copying of the following documents or objects at the place, date, and time specified below (list documents or objects):

PLACE	DATE AND TIME

☐ YOU ARE COMMANDED to permit inspection of the following premises at the date and time specified below.

PREMISES	DATE AND TIME

Any organization not a party to this suit that is subpoenaed for the taking of a deposition shall designate one or more officers, directors, or managing agents, or other persons who consent to testify on its behalf, and may set forth, for each person designated, the matters on which the person will testify. Federal Rules of Civil Procedure, 30(b)(6).

ISSUING OFFICER SIGNATURE AND TITLE (INDICATE IF ATTORNEY FOR PLAINTIFF OR DEFENDANT)	DATE
Attorney for Plaintiff	9/21/95
ISSUING OFFICER'S NAME, ADDRESS AND PHONE NUMBER T. Richard Kane (919) 783-1035	Poyner & Spruill, LLP 3600 Glenwood Avenue, P.O. Box 10096 Raleigh, NC 27605-0096

(See Rule 45, Federal Rules of Civil Procedure, Parts C & D on Reverse)

PROOF OF SERVICE

	DATE	PLACE
SERVED		

SERVED ON (PRINT NAME)	MANNER OF SERVICE
SERVED BY (PRINT NAME)	TITLE

DECLARATION OF SERVER

I declare under penalty of perjury under the laws of the United States of America that the foregoing information contained in the Proof of Service is true and correct.

Executed on _____
DATE

_____
SIGNATURE OF SERVER

_____
ADDRESS OF SERVER

_____

Rule 45, Federal Rules of Civil Procedure, Parts C & D:

(c) PROTECTION OF PERSONS SUBJECT TO SUBPOENAS.

(1) A party or an attorney responsible for the issuance and service of a subpoena shall take reasonable steps to avoid imposing undue burden or expense on a person subject to that subpoena. The court on behalf of which the subpoena was issued shall enforce this duty and impose upon the party or attorney in breach of this duty an appropriate sanction, which may include, but is not limited to, lost earnings and a reasonable attorney's fee.

(2)(A) A person commanded to produce and permit inspection and copying of designated books, papers, documents or tangible things, or inspection of premises need not appear in person at the place of production or inspection unless commanded to appear for deposition, hearing or trial.

(B) Subject to paragraph (d)(2) of this rule, a person commanded to produce and permit inspection and copying may, within 14 days after service of the subpoena or before the time specified for compliance if such time is less than 14 days after service, serve upon the party or attorney designated in the subpoena written objection to inspection or copying of any or all of the designated materials or of the premises. If objection is made, the party serving the subpoena shall not be entitled to inspect and copy the materials or inspect the premises except pursuant to an order of the court by which the subpoena was issued. If objection has been made, the party serving the subpoena may, upon notice to the person commanded to produce, move at any time for an order to compel the production. Such an order to compel production shall protect any person who is not a party or an officer of a party from significant expense resulting from the inspection and copying commanded.

(3)(A) On timely motion, the court by which a subpoena was issued shall quash or modify the subpoena if it

(i) fails to allow reasonable time for compliance;

(ii) requires a person who is not a party or an officer of a party to travel to a place more than 100 miles from the place where that person resides, is employed or regularly transacts business in person, except that, subject to the provisions of clause (c)(3)(B)(iii) of this rule, such a person may in order to attend trial be commanded to travel from any such place within the state in which the trial is held, or

(iii) requires disclosure of privileged or other protected matter and no exception or waiver applies, or

(iv) subjects a person to undue burden.

(B) If a subpoena

(i) requires disclosure of a trade secret or other confidential research, development, or commercial information, or

(ii) requires disclosure of an unretained expert's opinion or information not describing specific events or occurrences in dispute and resulting from the expert's study made not at the request of any party, or

(iii) requires a person who is not a party or an officer of a party to incur substantial expense to travel more than 100 miles to attend trial, the court may, to protect a person subject to or affected by the subpoena, quash or modify the subpoena or, if the party in whose behalf the subpoena is issued shows a substantial need for the testimony or material that cannot be otherwise met without undue hardship and assures that the person to whom the subpoena is addressed will be reasonably compensated, the court may order appearance or production only upon specified conditions.

(d) DUTIES IN RESPONDING TO SUBPOENA.

(1) A person responding to a subpoena to produce documents shall produce them as they are kept in the usual course of business or shall organize and label them to correspond with the categories in the demand.

(2) When information subject to a subpoena is withheld on a claim that it is privileged or subject to protection as trial preparation materials, the claim shall be made expressly and shall be supported by a description of the nature of the documents, communications, or things not produced that is sufficient to enable the demanding party to contest the claim.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

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

JUL 31 1995

SUBJECT: REMOVAL FROM EPA'S CERCLIS INVENTORY

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

TO: STEWART-WARNER CORP. BASSICK-SACK DIVISION (EPA ID: NCD024895864)

EPA has identified the Brownfields Initiative as one of the Agency's top priorities. Brownfields are abandoned, idled or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. EPA firmly believes that environmental cleanup is a building block in this process of economic revitalization, that restoring contaminated urban property can go hand in hand with bringing life and strength to a community through jobs, an enhanced tax base and a sense of optimism about the future. Toward this end EPA has recently announced a comprehensive strategy, including Pilot grants to municipalities, to stimulate such revitalization.

One action taken by EPA is to review the inventory of Superfund sites. These sites have been screened and determined to require no action under the Federal Superfund Program. This memorandum is to notify you that EPA has removed your facility from its 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

To NC

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

RECEIVED
OCT 03 1994
SUPERFUND SECTION

Site Name: Stewart-Warner site **EPA ID#:** NCD 024 895 864

Alias Site Names: _____

City: Winston-Salem **County or Parish:** Forsyth **State:** NC

Refer to Report Dated: March 29, 1994 **Report type:** SIP

Report developed by: Grover Nicholson, NCDEHNR

DECISION:

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

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

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

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

2b. Activity Type: | | PA | | ESI | | SI | | HRS evaluation

| | Other: _____

DISCUSSION/RATIONALE: Based on the lack of ground water, surface water, air and soil exposure threats, a disposition of no further action has been assigned.

Report Reviewed and Approved by: Cynthia K. Gurley Signature: Cynthia K. Gurley Date: 09/24/94

Site Decision Made by: Cynthia K. Gurley Signature: Cynthia K. Gurley Date: 09/24/94

EPA Form # 9100-3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

September 29, 1994

RECEIVED
OCT 03 1994
SUPERFUND SECTION

4WD-WPB

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

Dear Ms. DeRosa:

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

Site Inspections

Forbes Road Well Site	NFRAP
Spann Property	NFRAP

Site Inspection Prioritizations (SIPs)

Anilox Roll	NFRAP
Asheboro Municipal Landfill	NFRAP
Ashland Petroleum Company	NFRAP
BP Oil	NFRAP
Carochem	NFRAP
Cone Mills Corporation Plant	NFRAP
Croft Metals	NFRAP
Dayco Corporation	NFRAP
Eaton Corporation	NFRAP
Fasco Industries, Inc.	NFRAP
Gaston Co., Dyeing Machine Company	NFRAP
Gaston Co., Dyeing Machine Company (Stanley)	NFRAP
Greensboro City Landfill	NFRAP
Harrisburg Park Landfill	NFRAP
Henson Landfill	NFRAP
Highway 801 Barber	NFRAP
Holding Pond for Scrubber Waste	NFRAP
Honeywell Micro Switch Division	NFRAP
Kelly-Springfield Tire Company	Further Action
Lee County Landfill	NFRAP
Marantz Piano Company	NFRAP
Old Western NC Fairgrounds	NFRAP

Olin Corp. Ecusta Paper & Film Group	NFRAP
Pantasote, Inc.	NFRAP
REA Magnet Wire Company	Further Action
Rowe Corporation Property	NFRAP
S&S Metals Recycling Site	NFRAP
Scovill Inc.	NFRAP
Stewart-Warner Site	NFRAP
Superior Products Company	NFRAP
Texaco, Inc.	NFRAP
Torpedo Wire and Strip	NFRAP
Union County Landfill	Further Action
Uniroyal, Inc.	NFRAP

EXPANDED SITE INSPECTION

Davis Park Road TCE Site	Further Action

Enclosed please find the Remedial Site Assessment Decision Forms for each report generated by the North Carolina Superfund program and a copy of the actual report generated by the EPA Contractor.

If you have any questions concerning these site decisions, please call me at (404) 347-5059, Extension 6150.

Sincerely,

Cynthia K. Gurley

Cynthia K. Gurley
North Carolina, PO

Enclosures

POYNER & SPRUILL, L.L.P.
ATTORNEYS AT LAW

3600 Glenwood Avenue
Raleigh, North Carolina 27612
Mailing Address:
Post Office Box 10096
Raleigh, North Carolina 27605-0096
919/783-6400
Fax: 919/783-1075
Offices:
Raleigh/Rocky Mount/
Charlotte/Greenville

Keith H. Johnson

Direct Dial: 919/783-1013

RECEIVED
APR 8 - 1994
SUPERFUND SECTION

April 7, 1994

Charlotte V. Jasneck
Inactive Hazardous Sites Branch
Superfund Section
401 Oberlin Road
Raleigh, North Carolina 27605

Re: Ilco Unican Soil Cleanup Project in Winston-Salem, NC

Dear Charlotte:

I am writing to follow up on a request I made by telephone to Grover Nicholson yesterday morning on behalf of Ilco Unican Corporation ("Ilco") for a meeting with the appropriate personnel in your Section. Ilco is in the midst of a voluntary action to address elevated metals in soils on property of a plant it owns in Winston-Salem, North Carolina. The vast majority, if not all, of these elevated metals are present as the result of the prior property owner's waste dumping practices. In particular, several areas where electroplating wastes were once dumped by the prior owner are being addressed by Ilco.

You may recall that in conjunction with this project, your Section provided Ilco with guidance at our request concerning applicable clean up standards that Ilco should try to meet to alleviate the risks posed by the elevated metals to human health and the environment. That guidance has been greatly appreciated and has facilitated completion of this project.

Ilco wants to incur the costs necessary to address the risks posed by these elevated metals to human health and the environment. However, in completing this project, Ilco does not want to incur costs which are unnecessary to meet that objective. In making some final determinations about the proper scope of soils that need to be addressed, it would be helpful to discuss with you what your Branch would require on this specific site on several specific issues if this project was undertaken under the Inactive Waste Sites Program. If Ilco's efforts are consistent with what your Branch would require under that program, then I believe everyone involved would benefit, since there would be no further need for cleanup and oversight with respect to the elevated metals being addressed by Ilco.

I understand from Mr. Nicholson that I will probably not hear from you until next week in response to this request. I thought it would be helpful for you to hear directly from me regarding why we were requesting a meeting. I look forward to hearing from you next week at your convenience.

Yours truly,

Keith Johnson

Keith H. Johnson

cc: Mr. Grover Nicholson (via hand delivery)✓
Mr. Frank Belflower, Ilco Unican Corporation
Mr. Brian Wells, Ilco Unican Corporation
Mr. Bill Doucette, Geraghty & Miller (via facsimile)

ILCO UNICAN CORP.

March 2, 1994

RECEIVED
MAR 03 1994
SUPERFUND SECTION

Mr. Grover Nicholson
Environmental Engineer Superfund Section
Division of Solid Waste Management
North Carolina Department of Environment, Health, and Natural Resources
Post Office Box 27687
Raleigh, NC 27611-7687

RE: **Ilco Unican Corp. Facility**
Winston-Salem, North Carolina

Dear Mr. Nicholson:

We are in the process of installing a new state of the art plating line with a value of over 2 million dollars in our Winston-Salem facility. This line, with some other equipment investments, will allow us to add 60 new jobs.

In light of your section's on-going assessment of this facility, please find enclosed two (2) sets of soil sample results forwarded for your review.

We took the first eight (8) samples at different locations 0 to 6 inches beneath the plant floor where an old electroplating line had been. This is the area where the new plating line will be installed.

We intend to keep the six inch concrete floor in this area intact by raising the line and cutting shallow trenches in the concrete. The entire area of concrete floor will be sealed to ensure its integrity.

The other sample was taken from another area of the plant where a small sump was dug for a new die casting machine.

As you are probably aware, risk based soil clean-up levels for this facility have already been established through consultations with your division. I have been advised by our environmental consultants at Geraghty and Miller that these results do not indicate the presence of any contaminants which approach, much less exceed, those levels. Nevertheless, we felt it was important to bring these sample

400 Jeffreys Rd., (P.O. Box 2627) Rocky Mount, N.C. 27802-2627 Tel.: (919) 446-3321 Facsimile: (919) 446-4702

results to your attention, since, to our knowledge, they came from areas not previously tested.

As you can imagine, great expense would be involved if we later had to move this equipment, and our time schedule is very tight. Keeping that in mind, Brian Wells from our company will be contacting you in the next few days to discuss this project.

Before undertaking a project of this magnitude and expense, as much as possible, we want to be certain that your section does not plan to conduct any further soil assessment below the floor in this area. Also, I would like to be sure we have done everything expected of us regarding this area so that we would not have to remove this plating line and related equipment after installation.

Your help in this matter is appreciated.

Respectfully,

Frank Belflower
Vice President, Finance

JFB:dmh

Enclosure

RESEARCH & ANALYTICAL LABORATORIES, INC.
Analytical/Process Consultations

Date Sample Collected 3/3/93
Date Sample Received 3/3/93
Sample Number 161610
Sample Description Die Cast Soil Hole

Ilco Unican
2941 Indiana
Winston-Salem, NC 27105
Attn: Mr. Brian Wells
Job Number

TCLP-Volatiles	EPA HW Number	Characteristic Level (mg/l)	Results (mg/l)
Benzene	D018	0.50	<0.010
Carbon Tetrachloride	D019	0.50	<0.010
Chlorobenzene	D021	100.0	<0.010
Chloroform	D022	6.0	<0.100
1,2-Dichloroethane	D028	0.50	<0.010
1,1-Dichloroethylene	D029	0.70	<0.010
Methyl ethyl ketone	D035	200.0	<0.200
Tetrachloroethylene	D039	0.70	<0.010
Trichloroethylene	D040	0.50	<0.010
Vinyl Chloride	D043	0.20	<0.010

P. O. Box 473 • 106 Short Street • Kernersville, North Carolina 27284 • 919/996-2841

RESEARCH & ANALYTICAL LABORATORIES, INC.
Analytical/Process Consultations

Volatile Organic Analysis of Die Cast Soil Sample for Ilco Unican, 1 March 1993

VOLATILE ORGANICS

Parameter	Detection Limits(mg/kg)	Die Cast Soil(mg/kg)
Methylene Chloride	0.010	BDL
Trichlorofluoromethane	0.010	BDL
1,1-Dichloroethene	0.010	BDL
1,1-Dichloroethane	0.010	BDL
Chloroform	0.010	BDL
Carbon Tetrachloride	0.010	BDL
1,2-Dichloropropane	0.010	BDL
Trichloroethene	0.010	BDL
Dibromochloromethane	0.010	BDL
1,1,2-Trichloroethane	0.010	BDL
Tetrachloroethene	0.010	BDL
Chlorobenzene	0.010	BDL
Trans-1,2-Dichloroethene	0.010	BDL
1,2-Dichloroethane	0.010	BDL
1,1,1-Trichloroethane	0.010	BDL
Bromodichloromethane	0.010	BDL
Cis-1,3-Dichloropropene	0.010	BDL
Benzene	0.010	BDL
Trans-1,3-Dichloropropene	0.010	BDL
Bromoform	0.010	BDL
1,1,2,2-Tetrachloroethane	0.010	BDL
Toluene	0.010	0.010
Ethyl Benzene	0.010	BDL
Chloromethane	0.010	BDL
Bromomethane	0.010	BDL
Vinyl Chloride	0.010	BDL
Chloroethane	0.010	BDL
Acetone	0.100	BDL
Carbon Disulfide	0.010	BDL
Vinyl Acetate	0.010	BDL
2-Butanone	0.100	BDL
4-Methyl-2-Pentanone	0.010	BDL
2-Hexanone	0.010	BDL
Styrene	0.010	BDL
Total Xylenes	0.010	BDL
Sample Number		161325

mg/kg = milligrams per kilogram = parts per million

BDL = Below Detection Limits

RESEARCH & ANALYTICAL LABORATORIES, INC.
Analytical/Process Consultations
Phone (919) 996-2841

CHAIN OF CUSTODY RECORD

JOB NO.

PROJECT NAME: Alco-Unicar

SAMPLERS (SIGNATURE)

SAMPLE NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	2L G (BNA, Herb./Pest.)	240ml Vials (VOA)	250ml G (TOX)	250ml P (TOC)	1L PG (BOD, TSS, Unpreserved, etc)	1L G (Phenol, Oil & Grease)	1L PG (COD, N,P)	1L PG (Metals, Hardness)	1L PG (CYANIDE)	Sterile PG (Coliform)	REQUESTED ANALYSIS
16132	3-1-93				Soil Sample	1											VOA

RELINQUISHED BY	DATE/TIME	RECEIVED BY	REMARKS:
	3-3-93 8:30	[illegible]	
RELINQUISHED BY	DATE/TIME	RECEIVED BY	

Post Office Box 12846
Research Triangle Park, NC 27709
Phone 919-677-0090
Fax 919-677-0427

IEA
An Aquarion Company

February 10, 1994

Brian Wells
ILCO Unican Corporation
P.O. Box 2627
Rocky Mount, NC 27802-2627

IEA Project No.: 560062/9401472
IEA Reference No.: W9401427
Client Project I.D.: 1

Dear Mr. Wells,

Transmitted herewith are the results of analyses on eight samples submitted to our laboratory.

The sample(s) were received chilled and intact.

Analyses were performed according to approved methodologies and meet the requirements of the IEA Quality Assurance Program except where noted. Please see the enclosed reports for your results and a copy of the Chain of Custody documentation.

Please do not hesitate to call your Client Account Representative should you have any questions regarding this report.

Very truly yours,

IEA, Inc.

Linda F. Mitchell
Director, Technical Support Services

State Certification:

Georgia - #816	Tennessee - #00296	Alabama - #40210
New Jersey - #67719	Virginia - #00179	South Carolina - #99021
California - #1768	West Virginia - #9908C	North Carolina - #37720/#84
Massachusetts - NC039	Kentucky - #90049	Kansas - E-158/E-1189

IEA
An Aquarion Company

Project #: 560-062M
IEA Sample #: 9401472-01
Client Name: ILCO Unican Corp.
Client Proj. I.D.: 1
Sample I.D.: ELF 1

Matrix: Soil
Date Received: 01/27/94
Date Sampled: 01/26/94

Parameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
T-Arsenic	SW-846 7060	1.0 mg/kg	5.8 mg/kg	02/02/94	02/04/94	RM
T-Lead	SW-846 7421	0.30 mg/kg	11 mg/kg	02/02/94	02/04/94	RM
T-Chromium	SW-846 6010	1.0 mg/kg	260 mg/kg	02/02/94	02/02/94	FW
T-Copper	SW-846 6010	2.5 mg/kg	13 mg/kg	02/02/94	02/02/94	FW
T-Nickel	SW-846 6010	4.0 mg/kg	BQL	02/02/94	02/02/94	FW
T-Zinc	SW-846 6010	2.0 mg/kg	9.1 mg/kg	02/02/94	02/02/94	FW
T-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

FORM RESP2 Rev. 091892

IEA
An Aquarion Company

. Project #: 560-062M
EA Sample #: 9401472-03
lient Name: ILCO Unican Corp.
lient Proj. I.D.: 1
ample I.D.: ELF 3

Matrix: Soil
Date Received: 01/27/94
Date Sampled: 01/26/94

'arameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
:-Arsenic	SW-846 7060	1.0 mg/kg	4.7 mg/kg	02/02/94	02/04/94	RM
:-Lead	SW-846 7421	0.30 mg/kg	11 mg/kg	02/02/94	02/04/94	DK
:-Chromium	SW-846 6010	1.0 mg/kg	19 mg/kg	02/02/94	02/02/94	FW
:-Copper	SW-846 6010	2.5 mg/kg	200 mg/kg	02/02/94	02/02/94	FW
:-Nickel	SW-846 6010	4.0 mg/kg	16 mg/kg	02/02/94	02/02/94	FW
:-Zinc	SW-846 6010	2.0 mg/kg	20 mg/kg	02/02/94	02/02/94	FW
:-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

FORM RESP2 Rev. 091892

IEA
An Aquarion Company

Project #: 560-062M
EA Sample #: 9401472-02 Matrix: Soil
:lient Name: ILCO Unican Corp. Date Received: 01/27/94
:lient Proj. I.D.: 1 Date Sampled: 01/26/94
:ample I.D.: ELF 2

?arameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
T-Arsenic	SW-846 7060	1.0 mg/kg	5.2 mg/kg	02/02/94	02/04/94	RM
T-Lead	SW-846 7421	0.30 mg/kg	12 mg/kg	02/02/94	02/04/94	RM
T-Chromium	SW-846 6010	1.0 mg/kg	21 mg/kg	02/02/94	02/02/94	FW
T-Copper	SW-846 6010	2.5 mg/kg	10 mg/kg	02/02/94	02/02/94	FW
T-Nickel	SW-846 6010	4.0 mg/kg	5.1 mg/kg	02/02/94	02/02/94	FW
T-Zinc	SW-846 6010	2.0 mg/kg	15 mg/kg	02/02/94	02/02/94	FW
T-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

FORM RESP2 Rev. 091892

IEA
An Aquarion Company

Project #: 560-062M
EA Sample #: 9401472-04
lient Name: ILCO Unican Corp.
lient Proj. I.D.: 1
ample I.D.: ELF 4

Matrix: Soil
Date Received: 01/27/94
Date Sampled: 01/26/94

arameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
-Arsenic	SW-846 7060	1.0 mg/kg	4.1 mg/kg	02/02/94	02/04/94	RM
-Lead	SW-846 7421	0.30 mg/kg	12 mg/kg	02/02/94	02/04/94	DK
-Chromium	SW-846 6010	1.0 mg/kg	16 mg/kg	02/02/94	02/02/94	FW
-Copper	SW-846 6010	2.5 mg/kg	8.2 mg/kg	02/02/94	02/02/94	FW
-Nickel	SW-846 6010	4.0 mg/kg	660 mg/kg	02/02/94	02/02/94	FW
-Zinc	SW-846 6010	2.0 mg/kg	11 mg/kg	02/02/94	02/02/94	FW
-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

FORM RESP2 Rev. 091892

2009375

IEA
An Aquarion Company

Project #: 560-062M
IEA Sample #: 9401472-05
Client Name: ILCO Unican Corp.
Client Proj. I.D.: 1
Sample I.D.: ELF 5

Matrix: Soil
Date Received: 01/27/94
Date Sampled: 01/26/94

Parameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
T-Arsenic	SW-846 7060	1.0 mg/kg	2.9 mg/kg	02/02/94	02/04/94	RM
T-Lead	SW-846 7421	0.30 mg/kg	9.0 mg/kg	02/02/94	02/04/94	RM
T-Chromium	SW-846 6010	1.0 mg/kg	15 mg/kg	02/02/94	02/02/94	FW
T-Copper	SW-846 6010	2.5 mg/kg	6.6 mg/kg	02/02/94	02/02/94	FW
T-Nickel	SW-846 6010	4.0 mg/kg	380 mg/kg	02/02/94	02/02/94	FW
T-Zinc	SW-846 6010	2.0 mg/kg	13 mg/kg	02/02/94	02/02/94	FW
T-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

FORM RESP2 Rev. 091892

IEA
An Aquarion Company

Project #: 560-062M
IA Sample #: 9401472-06
Lient Name: ILCO Unican Corp.
Lient Proj. I.D.: 1
ample I.D.: ELF 6

Matrix: Soil
Date Received: 01/27/94
Date Sampled: 01/26/94

arameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
-Arsenic	SW-846 7060	1.0 mg/kg	4.4 mg/kg	02/02/94	02/04/94	RM
-Lead	SW-846 7421	0.30 mg/kg	12 mg/kg	02/02/94	02/04/94	RM
-Chromium	SW-846 6010	1.0 mg/kg	20 mg/kg	02/02/94	02/02/94	FW
-Copper	SW-846 6010	2.5 mg/kg	6.3 mg/kg	02/02/94	02/02/94	FW
-Nickel	SW-846 6010	4.0 mg/kg	110 mg/kg	02/02/94	02/02/94	FW
-Zinc	SW-846 6010	2.0 mg/kg	7.9 mg/kg	02/02/94	02/02/94	FW
-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

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IEA
An Aquarion Company

Project #: 560-062M
A Sample #: 9401472-07 Matrix: Soil
ient Name: ILCO Unican Corp. Date Received: 01/27/94
ient Proj. I.D.: 1 Date Sampled: 01/26/94
mple I.D.: ELF 7

rameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
-Arsenic	SW-846 7060	1.0 mg/kg	8.1 mg/kg	02/02/94	02/04/94	RM
-Lead	SW-846 7421	0.30 mg/kg	24 mg/kg	02/02/94	02/04/94	DK
-Chromium	SW-846 6010	1.0 mg/kg	26 mg/kg	02/02/94	02/02/94	FW
-Copper	SW-846 6010	2.5 mg/kg	13 mg/kg	02/02/94	02/02/94	FW
-Nickel	SW-846 6010	4.0 mg/kg	BQL	02/02/94	02/02/94	FW
-Zinc	SW-846 6010	2.0 mg/kg	25 mg/kg	02/02/94	02/02/94	FW
-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

omments:

ORM RESP2 Rev. 091892

IEA
An Aquarion Company

Project #: 560-062M
IEA Sample #: 9401472-08 Matrix: Soil
Client Name: ILCO Unican Corp. Date Received: 01/27/94
Client Proj. I.D.: 1 Date Sampled: 01/26/94
Sample I.D.: ELF 8

Parameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
T-Arsenic	SW-846 7060	1.0 mg/kg	5.7 mg/kg	02/02/94	02/04/94	RM
T-Lead	SW-846 7421	0.30 mg/kg	12 mg/kg	02/02/94	02/04/94	DK
T-Chromium	SW-846 6010	1.0 mg/kg	18 mg/kg	02/02/94	02/02/94	FW
T-Copper	SW-846 6010	2.5 mg/kg	55 mg/kg	02/02/94	02/02/94	FW
T-Nickel	SW-846 6010	4.0 mg/kg	BQL	02/02/94	02/02/94	FW
T-Zinc	SW-846 6010	2.0 mg/kg	18 mg/kg	02/02/94	02/02/94	FW
T-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

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IEA
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Project #: 560-062M
EA Sample #: 9401472
lient Name: ILCO Unican Corp.
lient Proj. I.D.:1
ample I.D.: QC Blank

Matrix: Solid
Date Received:N/A
Date Sampled: N/A

Parameter	Method	Quantitation Limits	Results	Date Prepared	Date Analyzed	Analyst
T-Arsenic	SW-846 7060	1.0 mg/kg	BQL	02/02/94	02/04/94	RM
T-Lead	SW-846 7421	0.30 mg/kg	BQL	02/02/94	02/04/94	RM
T-Chromium	SW-846 6010	1.0 mg/kg	BQL	02/02/94	02/02/94	FW
T-Copper	SW-846 6010	2.5 mg/kg	BQL	02/02/94	02/02/94	FW
T-Nickel	SW-846 6010	4.0 mg/kg	BQL	02/02/94	02/02/94	FW
T-Zinc	SW-846 6010	2.0 mg/kg	BQL	02/02/94	02/02/94	FW
T-Cyanide	EPA 335.2 M	1.0 mg/kg	BQL	02/01/94	02/04/94	SJ

Comments:

Corresponding Samples: 9401472-01 through 08

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IEA
An Aquarion Company

ABBREVIATIONS

A	=	Amenable
Alk	=	Alkalinity as CaCO3
Bcrb	=	Alkalinity as Bicarbonate
BOD	=	Biochemical Oxygen Demand
BQL	=	Below Quantitation Limit
c/100mL	=	Colonies per 100 mL of Sample
CEC	=	Cation Exchange Capacity
Chrom	=	Chromotropic
COD	=	Chemical Oxygen Demand
Crb	=	Alkalinity as Carbonate
D	=	Dissolved
DO	=	Dissolved Oxygen
DOC	=	Dissolved Organic Carbon
D/T	=	Distillation/Titration
E	=	Extractable
F	=	Free
Hex	=	Hexavalent
Hyd	=	Hydroxide
ISE	=	Ion Selective Electrode
mmpy	=	Millimeter per Year
MPN	=	Most Probable Number
N/A	=	Not Applicable
R	=	Reactivity
SA	=	Spike Added
SSR	=	Spike Sample Results
SR	=	Sample Results
Sp Cond	=	Specific Conductance
SM	=	Settleable Matter
SPC	=	Standard Plate Count
T	=	Total
TDS	=	Total Dissolved Solids
TKN	=	Total Kjeldahl Nitrogen
TMLSS	=	Total Mixed Liquor Suspended Solids
TOC	=	Total Organic Carbon
TON	=	Total Organic Nitrogen
TOX	=	Total Organic Halogens
TS	=	Total Solids
TSS	=	Total Suspended Solids
TVS	=	Total Volatile Solids
VSS	=	Volatile Suspended Solids
WAD	=	Weak and Dissociable

Stewart-Warner Bassick Sack
AKA Ilco-Unican Corp.
Site History

1. 1 January 1945: SWBS began operations on the site.

   REF: Part A App. dtd 28 Oct 1980 and Amended Part A App. dtd 14 Jan 1986.

2. 28 October 1980: SWBS became a TSD. The manufacturing process consisted of manufacturing furniture hardware which included brass foundry, zinc die-cast foundry, vibratory finishing, electroplating, oxidizing, buffing, lacquering, painting, and degreasing. The Part A Application lists the following types of wastes:

   a. spent halogenated and non-halogenated solvents (F001, F002, & F003),

   b. wastewater treatment sludges from electroplating (F006),

   c. spent cyanide plating baths, cyanide plating bath bottom residues, and spent stripping and cleaning cyanide bath solutions (F007, F008, & F009),

   d. copper cyanide (P029), soluble cyanide salts (P030), potassium cyanide (P098), sodium cyanide (P106), zinc cyanide (P121), and nitric oxide (P076) and,

   e. tetrachloroethene (U210).

   These wastes were to be stored in drums, treated in tanks, then stored in drums, tanks, and waste piles.

   REF: Part A App. dtd 28 Oct 1980.

3. 1982: SWBS had a cyanide spill that contaminated some soil on-site. The quantity and concentration of the spill are unknown. However, SWBS removed and transported off-site 37590 pounds of contaminated soil on 9 December 1982. The soil was taken to SCA Services in S. C. for disposal.

   REFS: Letter from L. O'Neill, SWBS, to T. Karnoski, NC SHWMB, dtd 15 November 1982; letter ~~from~~ to L. O'Neill, SWBS, ~~to~~ from K. Lawson, NC SHWMB, dtd 3 November 1982; and Hazardous Waste Manifest, Doc. # 17438, dtd 9 December 1982.

4. 16 February 1982: SWBS had a RCRA inspection by Steve Phibbs, District Sanitarian, NC Division of Health Services. The inspection report notes that waste streams include electroplating wastewater which is treated in an on-site treatment system. The solids are precipitated out of the wastewater and the treated water is discharged to the Winston-Salem wastewater treatment system. The dip tank sludges, which contain cyanide, chromium, copper, and zinc, are periodically scraped from the bottom of the dip tanks, put back into solution, and run through the on-site wastewater treatment system. Metal hydroxide sludges removed from the wastewater treatment system are filter pressed and placed into an outside waste pile which is covered with a tarpaulin.

   REF: RCRA Interim Status Inspection, Steve Phibbs, District Sanitarian, Division of Health Services, dtd 22 February 1982.

5. 15 September 1983: SWBS had a RCRA inspection on by Steve Phibbs. The report notes that SWBS is in violation of 265.253(B) in that "Bassick Sack electroplating sludge waste pile is not being properly protected from precipitation. The present cover needs repairing or a new cover must be provided."

   REF: RCRA Inspection, Steve Phibbs, District Sanitarian, NC Division of Health Services, dtd 16 September 1983.

6. 30 October 1984: SWBS informed the NC Solid and Hazardous Waste Management Branch of its intent to terminate interim status under RCRA. In the letter, SWBS describes the five different hazardous wastes generated at the facility. They are:

   a. degreasing sludge (F001) of which there was none on site.

   b. wastewater treatment sludge (F006), which was combined with,

   c. foundry baghouse dust (D008) , of which there was a combined total of 25000 pounds on-site scheduled to be disposed of by SCA in SC by 31 January 1985.

   d. paint waste (D001) of which there were four drums on site to be disposed of by SCA Services or Caldwell Systems by 31 January 1985.

   e. electroplating bath sludges containing cyanide (F008) of which there were 62 drums and two 300-gallon tanks on site. Disposal plans were not firm.

REF: Letter from M. Lipscomb, SWBS, to William Page, NC SHWMB, dtd 30 October 1984.

7. 9 August 1985: SWBS began preparations for shipping wastewater treatment sludge (F006) and foundry baghouse dust (D008) off-site. They also prepared to reclaim their spent solvent by distillation.

   REF: Letter from I. Blakley, SWBS, to K. Lawson, NC ShWMB, dtd 9 August 1985, with analytical data attached; letter from K. Lawson, NC SHWMB, to I. Blakley, SWBS, dtd 23 August 1985; and letter from I. Blakley, SWBS, to K. Lawson, NC SHWMB, dtd 21 October 1985.

8. 15 January 1986: SWBS submitted an Amended Part A Application that eliminated the waste pile storage and added the waste tank storage. This change is apparently the result of a clarification of the definition of a "tank" under RCRA. The change was approved by the NC RCRA section and by US EPA. The Amended Part A Application shows

   a. wastewater treatment sludges from electroplating (F006),

   b. toxicity characteristic by lead wastes (D008),

   c. ignitable wastes (D001), and

   d. spent halogenated degreasing solvents (F001)

   stored onsite in drums and tanks with ultimate disposal of the wastes at GSX Pinewood, S. C.

   REF: Amended Part A App. dtd 14 Jan 1986.

9. 3 March 1986: SWBS completed a RCRA closure of their waste storage and treatment areas. The closure was in accordance with their Closure Plan submitted to the State on 30 March 1984. In the Closure Plan, the waste is characterized as

   a. combined waste F006 & D008: F006 is wastewater treatment sludge from electroplating operations. D008 is baghouse dust from foundry operations,

   b. spent tetrachloroethane and sludges from degreasing operations, F001,

   c. combined waste F003 & F005: waste paint, lacquer, and thinner used in painting operations, which is flammable and contains xylene, acetone, ethyl acetate, N-butyl alcohol, "methanal" (probably methanol), "tolnene" (probably toluene), and "methyl ethyl isotone" (probably methyl ethyl

ketone), and

d. plating bath bottom sludges from electroplating operations, containing cyanides and heavy metals, F008.

REF: Letter from K. Lawson, NC SHWMB, to M. Lipscomb, SWBS,dtd 19 March 1986; letter from M. Lipscomb, SWBS, to W. Meyer, NC SHWMB, dtd 14 March 1986; letter from S. Derbyshire, ET, to I. Blakley, SWBS, dtd 4 March 1986; letter from K. Lawson, NC SHWMB, to L. O'Neill, SWBS, dtd 7 June 1984; and letter from L. O'Neill, SWBS, to K. Lawson, NC SHWMB, dtd 30 March 1984, with accompanying closure plan.

10. 7 April 1986: The State RCRA section deleted SWBS as a treater and storer of hazardous wastes and began the procedure to terminate their interim status and to deny them a Part B permit.

REF: Letter from K. Lawson, NC SHWMB, to I. Blakley, SWBS, dtd 7 April 1986 and associated documents.

11. 27 February 1987: SWBS spilled approximately 50 gallons of water containing approximately 3% cyanide onto the ground. The liquid contaminated an area of soil about 150 feet long adjoining the railroad siding. About 570 gallons of dirt and liquid were collected and treated in the on-site wastewater treatment plant.

REF: Record of Com. from W. Paige, NC SHWMB, to file dtd 17 March 1987; Record of Com. #1 from D. Holyfield, NC SHWMB, to file, dtd 17 March 1987; Record of Com. #2 from D. Holyfield, NC SHWMB, to file, dtd 17 March 1987; letter from I. Blakley, SWBS, to J. Rhodes, NC SHWMB, dtd 18 March 1987; letter from J. Rhodes, NC SHWMB, to M. Lipscomb, SWBS, dtd 21 May 1987; letter from I. Blakley, SWBS, to J. Rhodes, NC SHWMB, dtd 8 June 1987 with accompanying sampling and analysis plan; and letter from D. Holyfield, NC SHWMB, to I. Blakley, SWBS, dtd 26 June 1987.

12. 4 February 1988: SWBS was sold to Ilco-Unican Corp.

REF: NC 1987 Hazardous Waste Generator Only Annual (Part A) Report from SWBS (AKA Ilco-Unican Corp.), dtd 17 March 1988.

13. 17 March 1988: SWBS submitted the NC 1987 Hazardous Waste Generator Only Annual (Part A) Report which listed the following hazardous wastes as being generated at the site.

a. F006: wastewater sludge, 84200 lbs,

b. D008: lead bearing dust, 1300 lbs,

c. F001: waste lacquer, 823 lbs,

d. F006: plating wastes and soils, 6795 lbs, and

e. F005: flammable liquid, 4114 lbs.

REF: NC 1987 Hazardous Waste Generator Only Annual (Part A) Report from SWBS (AKA Ilco-Unican Corp.), dtd 17 March 1988.

14. 3 August 1987: SWBS submitted to the NC SWMB the "Comprehensive Site Report For The Assessment of Chemical Contamination At Spill Sites 1 and 2." Analyses of initial samples show:

Contaminant	Background in mg/l (as high as)	Concentration in mg/l (as high as)
Zinc (Total)	1600	38,000
Zinc (Extractable)	2.8	350
Copper (Total)	370	18,000
Copper (Extractable)	0.077	70
Nickel (Total)	74	2900
Nickel (Extractable)	<0.056	6.0
Chromium (Total)	100	180
Chromium (Extractable)	<0.017	0.34
Cyanide (total)	0.75	990

REF: "Comprehensive Site Report for the Assessment of Chemical Contamination at Spill Sites 1 and 2, Bassick-Sack Division, Winston-Salem , North Carolina"; Research and Analytical Laboratories, Inc., Kernersville, N.C.; July 1987.

15. 9 February 1988: SWBS began excavation of contaminated soil in areas 1A, 1B, 1C, 1D, 1E, and 3A to a depth of approximately 1.5 feet. Between 9 February 1988 and 22 February 1988, these excavated areas were backfilled with clean soil and additional areas 2A, 2B, 2C, 2D, 2E, and 3B were excavated to a depth of approximately 1.5 feet. These additional areas were later backfilled also, although more excavation was required in area 3B to reach soils with acceptable levels of cyanide. A final report of the remediation was submitted to the NC SHWMS on 28 March 1988.

REF: DeVore, Brad A.; Womble, Carlyle, Sandridge, and Rice; letter to R. Douglas Holyfield, NC SHWMS, dtd 9 February 1988.
Same; letter to Gary Babb, NC SHWMS, dtd 11 February 1988.
Same; letter to R. Douglas Holyfield, NC SHWMS, dtd 16 February 1988.
Same; letter to R. Douglas Holyfield, NC SHWMS, dtd 28 March 1988, with attached "Remedial Sampling and Analyses at

Chemical Spill Sites 1 and 2 for Stewart Warner Corporation/Bassick-Sack Division - January 28, 1988 - February 23, 1988."

Same; letter to R. Douglas Holyfield, NC SHWMS, dtd 19 February 1988.

20. 10 February 1988: SWBS excavated an area adjacent to the facility to a depth of approximately 3 feet and discovered about 10 drums, the contents of which were unknown. At that point, the digging was stopped, the excavation was stabilized, and samples were taken. On 17 February 1988, the sample analyses were finished and showed contamination of the drum contents and surrounding soil with:

Inorganics	<0.003 to 96.9 mg/l
Ethyl Benzene	1500 ug/l
Toluene	15,000 ug/l
Trichloroethene	790 ug/l
Total Xylenes	8600 ug/l

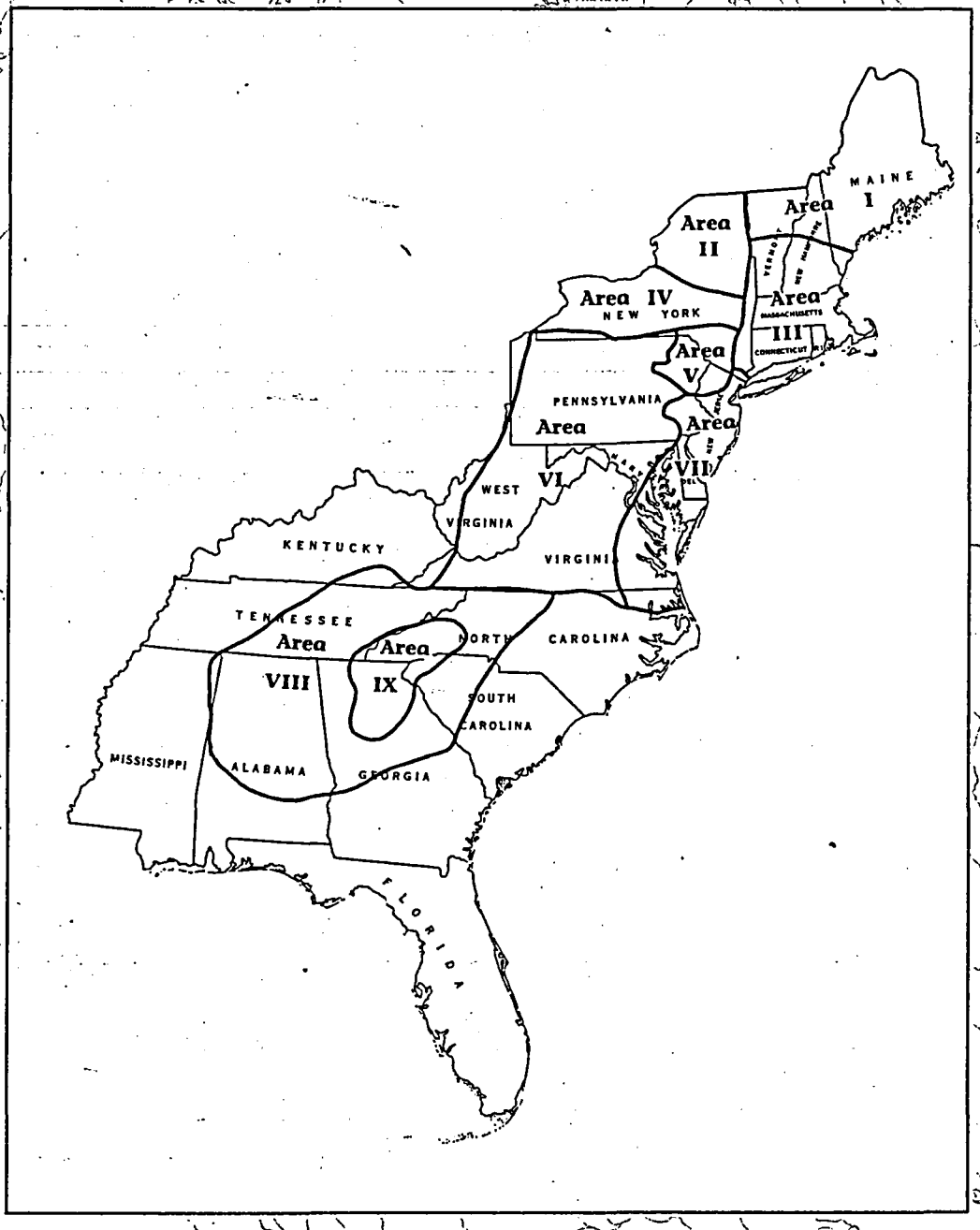
SWBS proposed to remove these wastes, transport them off-site to an approved facility for disposal, and backfill the excavation with clean soil.

REF: DeVore, Brad A.; Womble, Carlyle, Sandridge, and Rice; letter to R. Douglas Holyfield, NC HWB, dtd 21 February 1988.

21. 21 February 1988 to 16 November 1988: SWBS excavated contaminated material, including drums, metal debris, crucibles and soil from Areas A, B, and C. SWBS conducted remedial and post-remedial sampling, and backfilled the pits with clean soil. On 16 November 1988, the NC HWB reviewed the final report and concluded that RCRA activities at the site were complete.

REF: DeVore, Brad A., Womble, Carlyle, Sandridge, and Rice; letter to R. Douglas Holyfield, NC HWB, dtd 21 February 1988, w/attachment.
Same; letter to R. Douglas Holyfield, NC HWB, dtd 1 March 1988.
Same; letter to G. Babb, NC HWB, dtd 6 July 1988.
Same; letter to G. Babb, NC HWB, dtd 14 July 1988.
Research and Analytical Laboratories, Inc; Kernersville, N.C.; "Final Report Concerning Chemical Spill Sites 1 and 2 and Areas A, B, and C. Stewart-Warner Corporation, Bassick-Sack Division, Winston-Salem, N.C.", August 1988.
DeVore, Brad A., Womble, Carlyle, Sandridge, and Rice; letter to R. Douglas Holyfield, NC HWB, dtd 5 September 1988.
Holyfield, R.D., NC HWB; letter to Brad A. DeVore, 16 November 1988.

MAP OF MEAN ANNUAL RUNOFF FOR THE NORTHEASTERN, SOUTHEASTERN, AND MID-ATLANTIC UNITED STATES, WATER YEARS 1951-80



Prepared in cooperation with the
U.S. Environmental Protection Agency

sions that the methods that used the area-weighted average of the drainage area or the centroid of the drainage area produced somewhat better correlations—that is, the interecept was closer to zero, the standard errors were small, and the correlation coefficients were larger. These methods have slightly greater power to predict actual runoff

Additional statistical investigation found no significant differences in reliability of the runoff estimates among the areas. No significant differences existed in the errors for stations with drainage areas of differing size.

USE OF MEAN ANNUAL RUNOFF MAP

Mean annual runoff for a site can be estimated from the runoff map by several methods. The simplest method of estimating the runoff is to locate the site on the runoff map and to identify the runoff contour nearest the site. This method, however, is less accurate than other methods. The most accurate method is to draw the drainage basin on the runoff map, and use the runoff contours to divide the basin into bands of differing runoff. The area of each of the bands within the drainage basin is then determined. The areas of the separate bands are then used to compute a weighted average runoff for the basin. For example, if 50 percent of the basin is in an area of 18 in/yr (inches per year) of runoff, 30 percent in an area of 20 in/yr of runoff and 20 percent in an area of 22 in/yr of runoff the mean annual runoff would be calculated as follows:

$$0.5 \times 18 + 0.3 \times 20 + 0.2 \times 22 = 19.4$$

Runoff estimated from the map is in inches per year, averaged over the entire drainage basin. Multiply this value by the drainage area, in square miles, and divide by 13.58 to convert to mean annual discharge, in cubic feet per second. In the above example, assume the drainage area of the site is 100 mi^2. The mean annual discharge, in cubic feet per second, would be:

$$19.4 \times 100/13.58 = 143$$

The runoff map was prepared to allow estimation of mean annual runoff at sites where no streamflow data are available. The map represents mean annual runoff for areas with natural land cover. Caution should be used in applying the map to estimate runoff for areas that are not natural land areas. The runoff map should not be used for areas, such as large urban areas, where the land cover has been altered in ways that would change the amount of runoff. The runoff map is not applicable for lakes or bays, for coastal wetlands affected by tides, for streams controlled by reservoirs large enough to influence the total annual streamflow, or for streams with substantial diversions.

Local features could cause the runoff at a particular site to differ substantially from the runoff indicated by the runoff map. The geology of the drainage basin might cause substantial amounts of water to enter or leave the basin as ground water. This could substantially increase or decrease the runoff. For example, a stream with a small drainage area that includes a large spring probably would have higher average streamflow than indicated by the runoff map.

Table 5.—Descriptive statistics of errors in estimated runoff at 93 test stations

Method	Mean absolute value	Mean	Standard error of mean	Standard deviation
		Error, in inches		
Area-weighted	2.0	-0.35	0.30	2.9
Centroid	2.2	-.71	.33	3.1
GIS	2.7	-1.74	.37	3.6
Nearest-inch	2.8	-1.77	.38	3.7
Nearest contour	2.8	-1.79	.39	3.8
		Percent error		
Area-weighted	9.0	-0.54	1.3	12.9
Centroid	9.8	-.71	1.4	13.5
GIS	12.0	-6.42	1.6	15.9
Nearest-inch	12.1	-6.20	1.6	15.6
Nearest-contour	12.2	-6.26	1.6	15.8

U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 83-211

DRAINAGE AREAS OF SELECTED SITES ON STREAMS IN NORTH CAROLINA

Prepared in cooperation with the

North Carolina Department of Natural

Resources and Community Development

STATION NUMBER	STATION NAME	DRAINAGE AREA (SQ MI)	SITE TYPE	LAT	LONG	QUAD NAME	COUNTY CODE
0211574800	MUDDY C NR ATWOOD	85.7	11	360425	802156	WINSTON-SALEM WEST	067
0211575000	MUDDY C NR LEWISVILLE	89.2	01	360310	802210	WINSTON-SALEM WEST	067
0211575930	SILAS C AT DAM NR ALSPAUGH	2.80	20	360742	801704	RURAL HALL	067
0211576605	SILAS C AT WINSTON SALEM	7.76	20	360552	801914	WINSTON-SALEM WEST	067
0211576800	SILAS C NR HANES	9.38	20	360453	802031	WINSTON-SALEM WEST	067
0211577011	SILAS C AT SR 1133 NR WINSTON SALEM	10.2	20	360416	802109	WINSTON-SALEM WEST	067
0211580000	SILAS C NR CLEMMONS	11.9	01	360244	802115	WINSTON-SALEM WEST	067
0211580900	LITTLE C AT SED AT FRONTIS	3.35	11	360414	801953	WINSTON-SALEM WEST	067
0211580400	LITTLE C BL SED AT ATWOOD	5.83	11	360301	802020	WINSTON-SALEM WEST	067
0211581000	LITTLE C NR CLEMMONS	6.74	03	360219	802046	WINSTON-SALEM WEST	067
0211582000	MUDDY C NR CLEMMONS	111.	11	360128	802116	WINSTON-SALEM WEST	067
0211583000	SMITH C NR KERNERSVILLE	2.00	02	360619	800613	KERNERSVILLE	067
0211583150	KERNERS MILL C AT SR 2649 NR KERNERSVILLE	3.00	20	360737	800649	BELEWS CREEK	067
0211583290	KERNERS MILL C AT SR 2657 NR GUTHRIE	8.63	20	360659	800849	WINSTON-SALEM EAST	067
0211583347	FISHERS B AT MTH NR GUTHRIE	2.74	20	360636	80916	WINSTON-SALEM EAST	067
0211583376	LOWERY MILL C AT US 158 NR WINSTON SALEM	2.76	20	360829	800940	WALKERTOWN	067
0211583380	MARTIN MILL C AT MTH NR WALKERTOWN	3.69	20	360730	800951	WALKERTOWN	067
0211583395	LOWERY MILL C AT MTH NR WINSTON SALEM	8.58	20	360653	801029	WINSTON-SALEM EAST	067
0211583400	SALEM C AT SALEM LAKE DAM	27.2	20	360545	801132	WINSTON-SALEM EAST	067
0211583690	BRUSHY F AT US 311 AT WINSTON SALEM	3.57	20	360649	801238	WINSTON-SALEM EAST	067
0211583930	FRAZIER C AT SR 2351 NR WALKERTOWN	2.39	20	360757	801112	WALKERTOWN	067
0211583940	BRUSHY F B AT US 311 NR WINSTON SALEM	1.83	20	360745	801209	WALKERTOWN	067
0211583975	FRAZIER C AT MTH AT WINSTON SALEM	6.65	20	360642	801236	WINSTON-SALEM EAST	067
0211584000	BRUSHY F AT WINSTON SALEM	11.9	02	360557	801304	WINSTON-SALEM EAST	067
0211584100	SALEM C BL BRUSHY C AT WINSTON SALEM	42.5	20	360514	801317	WINSTON-SALEM EAST	067
0211584300	TAR B AT WALNUT ST WINSTON SALEM	0.60	20	360502	801434	WINSTON-SALEM EAST	067
0211584500	PETERS C AT WINSTON SALEM	5.18	03	360503	801530	WINSTON-SALEM WEST	067
0211585000	SALEM C AT WINSTON SALEM	52.2	01	360406	801546	WINSTON-SALEM WEST	067
0211585075	SALEM C TRIB AT MTH NR WINSTON SALEM	3.78	20	360353	801602	WINSTON-SALEM WEST	067
0211585200	SALEM C NR FIVE POINT	58.5	20	360318	801709	WINSTON-SALEM WEST	067
0211585500	BURKE B AT SILAS C PARKWAY WINSTON SALEM	1.25	03	360410	801706	WINSTON-SALEM WEST	067
0211585575	SALEM C NR HOOTSTOWN	63.3	20	360253	801747	WINSTON-SALEM WEST	067
0211585600	SALEM C NR ATWOOD	65.6	01	360210	801835	WINSTON-SALEM WEST	067
0211585700	SALEM C NR WINSTON SALEM	67.3	20	360153	801851	WINSTON-SALEM WEST	067
0211585800	SALEM C NR MUDDY CREEK	70.6	11	360031	802007	WINSTON-SALEM WEST	067
0211586000	MUDDY C NR MUDDY CREEK	186.	01	360001	802025	WINSTON-SALEM WEST	067
0211586500	SWAIM C AT US 311 NR UNION CROSS	1.58	20	360326	800847	WINSTON-SALEM EAST	067
0211586600	S F MUDDY C NR EASTON VIEW	4.25	20	360241	801006	WINSTON-SALEM EAST	067
0211586800	S F MUDDY C NR UNION CROSS	6.67	02	360217	801046	WINSTON-SALEM EAST	067
0211586810	FIDDLERS C NR UNION CROSS	2.26	20	360449	800809	WINSTON-SALEM EAST	067
0211586850	FIDDLERS C AT US 311 NR UNION CROSS	4.32	20	360409	800948	WINSTON-SALEM EAST	067
0211586950	FIDDLERS C AT SR 2700 NR WINSTON SALEM	8.46	20	360309	801119	WINSTON-SALEM EAST	067
0211587000	FIDDLERS C NR WINSTON SALEM	9.74	02	360246	801148	WINSTON-SALEM EAST	067
0211587200	S F MUDDY C AT 2743 NR UNION RIDGE	21.0	20	360202	801255	WINSTON-SALEM EAST	067
0211587750	SOAKAS C AT SR 1706 NR ROSEMONT	3.03	20	360058	801246	WINSTON-SALEM EAST	057
0211587800	SOAKAS C NR ROSEMONT	4.62	02	360053	801406	WINSTON-SALEM EAST	067
0211588300	SOAKAS C AT MTH NR UNION RIDGE	5.30	20	360110	801450	WINSTON-SALEM EAST	067
0211588415	PERRYMAN B AT MTH NR WINSTON SALEM	1.37	20	360103	801506	WINSTON-SALEM WEST	057
0211589000	S F MUDDY C NR WINSTON SALEM	33.3	11	360038	801615	WINSTON-SALEM WEST	067
0211590000	S F MUDDY C NR CLEMMONS	42.9	01	360022	801807	WINSTON-SALEM WEST	067
0211594260	MILLER C NR ARCADIA	2.24	20	355909	801635	WELCOME	057
0211594300	MUDDY C TRIB NR ARCADIA	3.95	02	355917	801854	WELCOME	057
0211594655	FRYES C AT SR 1505 NR ENTERPRISE	4.01	20	355728	801521	WELCOME	057
0211594838	FRYES C AT SR 1515 NR ENTERPRISE	7.46	20	355743	801702	WELCOME	057
0211594833	FRYES C AT NC 150 NR ARCADIA	9.12	20	355812	801745	WELCOME	057
0211594900	FRYES C NR ARCADIA	10.7	02	355846	801922	WELCOME	057
0211595100	MUDDY C AT ARCADIA	247.	11	355836	802021	WELCOME	057
0211595225	MUDDY C TRIB NR ARCADIA	2.98	20	355750	802042	WELCOME	057
0211595310	MUDDY C TRIB AT MTH NR ARCADIA	1.70	20	355733	802053	WELCOME	057
0211595375	MUDDY C TRIB AT SR 1435 NR ARCADIA	1.21	20	355622	802102	WELCOME	057
0211595400	MUDDY C NR ARCADIA	259.	11	355624	802129	WELCOME	057
0211597600	YADKIN R NR ARCADIA	2227.	02	355519	802213	WELCOME	057
0211597750	PEOPLES C AT SR 1550 NR ADVANCE	1.97	20	355527	802249	ADVANCE	059
0211599710	REEDY C AT SR 1502 NR WELCOME	2.60	20	355552	801621	WELCOME	057
0211599740	REEDY C AT SR 1472 NR WELCOME	3.57	20	355515	801648	WELCOME	057
0211599810	REEDY C AT SR 1477 NR REEDY CREEK	7.65	20	355447	801754	WELCOME	057
0211599950	REEDY C TRIB AT SR 1468 NR CURRYTOWN	3.02	20	355428	801910	WELCOME	057
0211600000	REEDY C NR YADKIN COLLEGE	12.1	01	355445	801935	WELCOME	057
0211611500	HUFFMANS C AT SR 1481 NR ENTERPRISE	2.22	20	355609	801807	WELCOME	057
0211611550	HUFFMANS C AT SR 1446 AT REEDY CREEK	5.25	20	355459	801940	WELCOME	057
0211625100	REEDY C NR REEDY CREEK	21.2	11	355423	802130	WELCOME	057
0211649705	YADKIN R TRIB NR FORK CHURCH	1.83	20	355335	802355	ADVANCE	059
0211649725	CARTER C AT SR 1617 NR BIXBY	4.04	20	355453	802521	ADVANCE	059
0211649775	CARTER C AT NC 801 NR FORK CHURCH	8.18	20	355317	802456	ADVANCE	059
0211649795	YADKIN R TRIB AT FORK CHRUCH	1.83	20	355250	802501	ADVANCE	059
0211649810	DUNKERS C AT SR 1443 NR CURRYTOWN	1.60	20	355349	802103	WELCOME	057
0211649830	DYKERS C TRIB NR REEDS X RDS	2.25	20	355214	802143	LEXINGTON WEST	057
0211649850	DYKERS C AT MTH AT YADKIN COLLEGE	8.65	20	355133	802312	CHURCHLAND	057
0211650000	YADKIN R AT YADKIN COLLEGE	2280.	01	355124	802310	CHURCHLAND	057
0211650085	GOBBLE C AT MTH NR YADKIN COLLEGE	4.72	20	355036	802321	CHURCHLAND	057
0211657710	YADKIN R AT PETERSVILLE	2290.	20	354945	802549	CHURCHLAND	057
0211657745	HARTLEY C AB SANDY C NR PETERSVILLE	2.89	20	354940	802402	CHURCHLAND	057
0211657775	SANDY C BL HARTLEY C AT PETERSVILLE	1.47	20	354941	802401	CHURCHLAND	057
0211658100	MILL C AT MTH AT PETERSVILLE	7.12	20	354943	802546	CHURCHLAND	057
0211662550	YADKIN R AB DUTCHMAN C NR FORK	2300.	20	355013	802814	CHURCHLAND	059

SWBS ILCO

Est. of flow of Muddy Creek

Runoff (from map) = 13 in/yr

Drainage Area (near Salem Creek confluence)
186 mi^2

$$\frac{13 \frac{in}{yr} \times 186\ mi^2}{13.58} = 1\ ft^3/sec$$

$$2418 \frac{in \cdot mi^2}{YR} \times \frac{ft}{12\ in} \cdot \frac{(5280)^2\ ft^2}{mi^2} \cdot \frac{YR}{31536000} \quad 0.0737$$

178 ft^3/sec

Wetlands Calculation SWBS ICCO - UNICAN

1. National Wetlands Inventory Maps
   Winston-Salem East, N.C. (Draft)
   Winston-Salem West, N.C. (Draft)

2. U.S. Dept of Agriculture
   Soil Conservation Service
   Davidson County Soil Survey
   Advance Copy

From Davidson Co. border -
   1 - Muddy Creek - 2.6 miles - west bank
   2 - Muddy Creek - 1.7 miles - east bank

Inside Forsyth County -
   1 - Salem Creek - 2600 feet

All outside 4 mile boundary.

1 - 11300' to 12 miles 1100' to line
2 - 9800 to "
3 - 7800 to "

AREA CALCULATIONS:

SPILL SITE #1 $\quad 1\ in^2 = 12056\ ft^2$

$6.4'' \times 0.2'' = 1.28\ in^2 \rightarrow 15432\ ft^2$

$1.0'' \times 0.5'' = 0.50\ in^2 \rightarrow 6028\ ft^2$

$21460\ ft^2$

SPILL SITE #2 $\quad 1\ in^2 = 12056\ ft^2$

$8.0'' \times 0.15'' = 1.20\ in^2 \rightarrow 14467\ ft^2$

LAW OFFICES OF
PARKER, POE, ADAMS & BERNSTEIN
P.O. BOX 389
ONE EXCHANGE PLAZA
RALEIGH, NORTH CAROLINA 27602-0389
TELEPHONE 919-828-0564 FACSIMILE 919-834-4564

RECEIVED
OCT 25 1993
SUPERFUND SECTION

CHARLOTTE OFFICE
2600 CHARLOTTE PLAZA
CHARLOTTE, NORTH CAROLINA 28244

RESEARCH TRIANGLE PARK OFFICE
P.O. BOX 13039
RESEARCH TRIANGLE PARK, N.C. 27709

SOUTHPARK OFFICE
4201 CONGESS ST., SUITE 145
CHARLOTTE, NORTH CAROLINA 28209

SPARTANBURG OFFICE
101 WEST ST. JOHN ST., SUITE 203
SPARTANBURG, SOUTH CAROLINA 29306

JOHN J. BUTLER
PARTNER

FILE NUMBER

DIRECT DIAL

October 21, 1993

Mr. Grover Nicholson
North Carolina Department of Environment,
Health & Natural Resources
Superfund Branch
401 Oberlin Road
Raleigh, North Carolina 27605

RE: Ilco-Unican Site in Winston-Salem North Carolina

Dear Grover:

As we discussed today, I am enclosing information concerning the International Mineral and Chemical Corporation ("IMC") site located directly across the railroad tracks from the Ilco-Unican facility. This may be relevant to the state's recent discovery of detectable levels of chromium on the school property across from Ilco-Unican. In connection with that, I enclose for your information two pages from the deposition of Isaac Blakley who worked for a long time for Stewart-Warner and for Ilco-Unican at the Winston-Salem site. As you will see, Mr. Blakley testified that heavy emissions from the fertilizer company's stack would come into the Ilco-Unican facility and across the top of the plant as far as the residential neighborhoods behind the nearby school. Mr. Blakley testified that the emissions ruined the paint on his car and that International Chemical agreed to pay for repainting the car.

I also enclose some of the files on this facility which we obtained from the RCRA branch. These files indicate that IMC used K061 hazardous waste generated from the electric furnace production of steel as an additive to its fertilizers. IMC reported using over a million pounds of this hazardous waste as an additive in 1988 alone. While the RCRA documents indicate that K061 waste is a listed hazardous waste primarily because of its lead content, Appendix VII to 40 CFR part 261 states that this waste is listed as hazardous because of its hexavalent chromium and cadmium content as

well as its lead content. A copy of that Appendix from the Code of Federal Regulations is also enclosed for your information.

Please call me if you have any questions.

Sincerely,

Jay Butler

John J. Butler

JJB/ghd
Enclosures

[g:\jjb\sw\nichols2.ltr]

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA
WINSTON-SALEM DIVISION

CIVIL ACTION NO. 91-CV-00034

ILCO-UNICAN CORPORATION, A)
NORTH CAROLINA CORPORATION,)
)
PLAINTIFF,)
)
V.)
)
STEWART-WARNER CORPORATION, A)
VIRGINIA CORPORATION, AND)
STEWART-WARNER BASSICK-SACK)
CORPORATION, A DELAWARE)
CORPORATION,)
)
DEFENDANTS.)
- - - - - - - - - - - - - - - - -

DEPOSITION

OF

ISAAC D. BLAKLEY

VOLUME TWO

AT GREENSBORO, NORTH CAROLINA
FEBRUARY 20, 1992
9:40 A.M.

REPORTED BY: TRICIA ZUBLIONIS

COPY

Associated Reporting POST OFFICE BOX 17418 • RALEIGH, NORTH CAROLINA 27619 • TELEPHONE: 919 782-5526

MS. GIBBONS: OBJECTION.

A NO.

Q (BY MR. BUTLER) DID YOU MAINTAIN CORRESPONDENCE WITH STATE AND FEDERAL ENVIRONMENTAL AUTHORITIES THROUGHOUT THE TIME YOU WERE WITH STEWART-WARNER?

A YES.

Q DID YOU MAINTAIN REPORTS ON ENVIRONMENTAL CONDITIONS AND LAB ANALYSES?

A YES.

Q WAS ALL OF THAT DOCUMENTATION STILL IN YOUR FILE AT THE TIME YOU LEFT ILCO-UNICAN?

A YES.

Q DID YOU LEAVE THAT AT THE ILCO-UNICAN PLANT?

A YES.

Q DID YOU EVER OBSERVE ANY PROBLEM AT THE SITE CAUSED BY AIR EMISSIONS FROM THE NEARBY FERTILIZER PLANT?

A YES.

Q COULD YOU DESCRIBE WHAT THOSE PROBLEMS WERE?

A THE---I THINK THE NAME OF THE COMPANY IS INTERNATIONAL CHEMICAL COMPANY, WHICH IS ACROSS THE RAILROAD SIDING FROM WHERE ILCO-UNICAN WAS LOCATED. HEAVY EMISSIONS FROM THEIR STACKS WOULD COME ACROSS THE PLANT, COME INSIDE THE PLANT, COME ACROSS THE PLANT OVER THE TOP OF IT, AND EVEN GO INTO THE

1 RESIDENTIAL NEIGHBORHOODS; AND WE'D GET ANY NUMBER
2 OF COMPLAINTS FROM PEOPLE WITH AUTOMOBILES AND
3 NEIGHBORING PEOPLE THAT LIVED IN THE AREA. FORSYTH
4 COUNTY ENVIRONMENTAL AFFAIRS PEOPLE WOULD COME UP
5 AND SURVEY IT AND GO OVER AND TALK TO THEM. AND
6 INCIDENTALLY, IT RUINED THE PAINT ON MY CAR; AND I
7 HAD THEM TO PAINT IT; AND SEVERAL OTHER EMPLOYEES
8 ALSO DID THE SAME THING.
9 Q IT RUINED THE PAINT ON YOUR CAR?
10 A RUINED THE PAINT ON THE CAR, YES.
11 Q AND INTERNATIONAL CHEMICAL AGREED TO PAY TO REPAINT
12 YOUR CAR?
13 A YES, THEY DID.
14 Q APPROXIMATELY WHEN DID THAT OCCUR? DO YOU KNOW?
15 A APPROXIMATELY 1986, I THINK, IS WHEN MY CAR WAS
16 PAINTED. I MIGHT ADD, THERE WAS NO QUESTION ASKED
17 ABOUT THEM SPOILING THE PAINT. THEY JUST
18 AUTOMATICALLY SENT YOU TO A BODY SHOP AND TOLD YOU
19 TO GET A QUOTES, COME BACK AND THEY'D WRITE YOU A
20 CHECK FOR IT.
21 MR. BUTLER: IT SEEMS LIKE THEY HAD A
22 LOT OF EXPERIENCE WITH THAT. LET ME HAVE
23 THIS MARKED AS THE NEXT EXHIBIT.
24 (THEREUPON, THE DOCUMENT REFERRED TO ABOVE WAS
25

(Fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F N C D 0 0 3 4 6 4 3 6 9

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

NAME: PRESS HARD WHEN FILLING IN NAME & ADDRESS.

INTERNATIONAL MINERALS & CHEMICAL CORP.
J. W. Reeves - Plant Manager

STREET ADDRESS:

Glenn Avenue Extension

CITY, STATE, & ZIP CODE:

Winston-Salem, N.C. 27105

GENERAL INSTRUCTIONS

If a preprinted label has been provided, af it in the designated space. Review the infor ation carefully; if any of it is incorrect, cr through it and enter the correct data in t appropriate fill-in area below. Also, if any the preprinted data is absent *(the area to t left of the label space lists the informati that should appear)*, please provide it in t proper fill-in area(s) below. If the label complete and correct, you need not comple Items I, III, V, and VI *(except VI-B whi must be completed regardless)*. Complete items if no label has been provided. Refer the instructions for detailed item descri tions and for the legal authorizations unc which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplamental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

C 1 SKIP: INTERNATIONAL MINERALS & CHEMICAL CORP

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 REEVES J.W. PLANT MANAGER	919 725 0271

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 P.O. BOX 4145

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 WINSTON-SALEM	NC	27105

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 GLENN AVENUE EXTENSION

B. COUNTY NAME

FORSYTH

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 WINSTON-SALEM	NC	27105	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
2875 (specify) FERTILIZER MIXING	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: INTERNATIONAL MINERALS & CHEMICAL CORP

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC (other than federal or state)
O = OTHER (specify)

Answer: P (specify)

D. PHONE (area code & no.): A 919 725 0271

E. STREET OR P.O. BOX: P.O. BOX 4145

F. CITY OR TOWN: WINSTON-SALEM

G. STATE: NC

H. ZIP CODE: 27105

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): N	D. PSD (Air Emissions from Proposed Sources): P
B. UIC (Underground Injection of Fluids): U	E. OTHER (specify): 9 (specify) SEE ATTACHED SHEET #1 FOR PERMIT NUMBERS
C. RCRA (Hazardous Wastes): R	E. OTHER (specify): 9 (specify) 3 PERMITS

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Granular fertilizer is produced by further reacting normal superphosphate, triple super phosphate and/or phosphoric acid, all produced from phosphate rock with various nitrogenous and potassic materials in a TVA-type granulation unit (SIC Code 2875). The fertilizer produced is stored until needed by customers. See Sheet #2 for additional details.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
J.D. Speir, Division Vice President	J.D. Speir	November 17, 198

COMMENTS FOR OFFICIAL USE ONLY

FORM 1 - GENERAL, SECTION X. Existing Environmental Permits

EPA Form 35101 (6-80)

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
WINSTON-SALEM, N.C. 27105
EPA IDENTIFICATION NUMBER: NCD003464369

Permits Issued by Forsyth County, North Carolina. All Permits for Air Pollution Control.

#101-1

Operating Permit Dryer/Cooler Granulation Unit

#101-2

Operating Permit Rotary Ammoniator

#00145-0001-P

Operating Permit Shipping Mill Scrubber

CONTINUE ON REVERS

FORM 1 - GENERAL, SECTION XII. Nature of Business

Additional Information - EPA Form 35101 (6-80)

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
WINSTON-SALEM, NORTH CAROLINA 27105
EPA IDENTIFICATION NUMBER: NCD003464369

FERTILIZER MIXING SIC CODE 2875

Granular fertilizer (-6 + 20 mesh) is manufactured by further processing superphosphate (normal or triple) and/or phosphoric acid, made from phosphate rock, with various nitrogenous and potassic materials in a TVA rotary drum ammoniation process. Minor elements, mainly boron, manganese and zinc, as the oxides or sulfate, are added.

The process involves both chemical and physical reactions of phosphatic and nitrogenous materials. The mixture is agglomerated into granules which are dried, cooled and sized. The process has a rated capacity of 30 tons per hour.

The fertilizer produced is stored until needed and then shipped to various customers - either in bulk or in bags.

...se in the unshaded areas only ...
...are spaced for elite type, i.e., 12 characters/inch).

...orm Approved OMB No. 158-S0004

RCRA

EPA

U... ENVIRONMENTAL PROTECTION AGENCY
HAZA...OUS WASTE PERMIT APPLICATIO...
Consolidated Permits Program
(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F	N	C	D	0	0	3	4	6	4	3	6	9

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility o revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility' EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

[ ] 2. NEW FACILITY *(Complete item below.)*

C	YR.	MO.	DAY
8	6 5	0 3	2 0

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

YR.	MO.	DAY

FOR NEW FACILITI PROVIDE THE DAT (yr., mo., & day) OPE TION BEGAN OR IS EXPECTED TO BEG

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES — CODES AND DESIGN CAPACITIES

A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided fc entering codes. If more lines are needed, enter the code*(s)* in the space provided. If a process will be used that is not included in the list of codes below, th describe the process *(including its design capacity)* in the space provided on the form *(Item III-C).*

B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.
1. AMOUNT — Enter the amount.
2. UNIT OF MEASURE — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT MEASU COD
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	C
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below):* A facility has two storage tanks, one tank can hold 200 gallons and t other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C	DUP	T/A	C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	2. UNIT OF MEASURE (enter code)	FO OFFIC US ONI
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	100	T*		7		*See SECTION III - Attachment A		
2	S 0 2	100	T		8				
3	T 0 4	*			9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "004"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

The material is stored at the location until it is added to fertilizer in a TVA-type granulation unit to meet the zinc requirements of various crops. See Attachment A for details.

The material shown in S01 is received at the location in 50 pound multi-wall paper bags with a suitable inter-liner. Normally it is shipped on pallets. It is stored in an enclosed warehouse which has a concrete floor until needed. The warehouse has a capacity of 300 tons.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If yo handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number*(s)* from 40 CFR, Subpart C that describes the characteri tics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annu basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste*(s)* that will be handle which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriat codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking int account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item II to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process code contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that posses that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in th extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.
2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described b more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annua quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line ente "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounc per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two waste are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimate 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				*included with above*

FORM 3 - RCRA - HAZARDOUS WASTE PERMIT APPLICATION

SECTION III - Processes

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
WINSTON-SALEM, NORTH CAROLINA 27105
EPA IDENTIFICATION NUMBER: NCD003464369

It is absolutely essential that an adequate amount of zinc be applied to the soil wherever corn, soybeans, or many other crops are to be grown.

Fertilizer, especially produced for the production of corn, usually contains 1% zinc (Zn). For other crops, the amount is lower usually in the 0.10% to 0.50% range.

A common source of the required zinc is zinc oxide recovered as a by-product from the electric furnace process for the recovery of steel values from scrap metal, mainly junked automobiles and discarded galvanized metal products.

We produce various fertilizers containing zinc which is obtained from a by-product - zinc oxide.

Our supplier has informed us that he is listing this material as "Hazardous Waste K061" --- emission control dust/sludge from the electric furnace production of steel and that when subjected to EPA toxicity test procedures it fails the characteristic of EPA toxicity for lead ---- EPA hazardous waste D008.

Samples of this material classified as hazardous waste K061 contains 2.5 to 3.5% lead expressed as the oxide. The zinc value is 25 to 35% zinc oxide. The other main constituent is iron oxide.

Analysis of zinc produced as a primary product shows 1.5 to 2.5% lead expressed as the oxide. The zinc value is 50 to 55% zinc oxide. The other main constituents is silica.

This product would also fail the EPA toxicity test for lead. We fail to see why the sludge product (K061) would be more hazardous to handle than the primary product.

This material is received at this location in 50 pound multi-wall paper bags with suitable inner liners or in bulk in an enclosed pneumatic unloading tank truck.

The material in bags is stored in an enclosed warehouse with a concrete floor.

ATTACHMENT B

FORM 3 - RCRA HAZARDOUS WASTE PERMIT APPLICATION
SECTION III - Processes

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
WINSTON-SALEM, NORTH CAROLINA 27105
EPA IDENTIFICATION NUMBER: NCD003464369

This material (K061) is added to our fertilizer formulations as needed to meet the zinc guarantees. For example, 85 pounds per ton is added if 1.1% elemental zinc is desired. This material is then processed through a TVA-type granulation unit and incorporated as an integral part of each fertilizer granule.

The normal fertilizer application rate is 600 pounds per acre. This means that 25.52 pounds of material K061 will be applied per acre.

Our fertilizer containing this and other minor elements have been subjected to the following animal tests:

1. Oral Toxicity
2. Dermal Toxicity
3. Skin Irritation
4. Eye Irritation
5. Corrosion Tests
6. Sensitization Tests
7. Fish Toxicity

All tests have been negative. We have applied for an exemption, to the regulations on this item (see letter attached), on the basis that this is a legitimate means of recycling this product and that there are no undue risks attached to the transportation or storage of this product. Zinc Oxide is not a hazardous material under DOT 49 CFR Parts 171-179. However, as of this date, our request for an exemption has not been granted.

To comply with RCRA regulation, we are submitting this application. If and when an exemption is granted, we will submit a request that this application be cancelled.

DESCRIPTION OF HAZARDOUS WAS[illegible] *(continued)*

USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PA[illegible] 3.

EPA I.D. NO. *(enter from page 1)*

F N C D 0 0 3 4 6 4 3 6 9 T/A C 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
36 07 49	80 14 20

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
J. D. Speir, Division Vice President	J. D. Speir	November 17, 1980

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
J. D. Speir, Division Vice President	J. D. Speir	November 17, 1980

CONTINUE ON PAGE 5

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W N C D 0 0 3 4 6 4 3 6 9 — T/A: 1	W DUP — T/A: 2 — DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	K061	250	T	S01 S02 T04	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES

ENTERED FEB 22 1989 DATA PROCESSING

FEB 16 1989

N. C. 1988 HAZARDOUS WASTE OFF-SITE TSD FACILITY

ANNUAL PART C [X] PART D [ ] REPORT *

Four Digit Standard Industrial Classification (SIC) No. For Operation In Your Plant That Generated the Waste 2875 3312 * See Comments Section

I. Installation EPA ID Number: NCD003464369

II. Name of Installation: IMC Fertilizer Inc. - Rainbow Division

III. Location of Installation: 3105 Glenn Avenue P.O. Box 4145
(Street or Route Number)

Winston-Salem (City or Town) Forsyth (County) North Carolina (State) 27115-4145 (Zip Code)

IV. Installation Contact: John W. Reeves (Name) (919) 725-0271 (Area Code) (Phone Number)

V. Waste Identification:

	A. EPA Waste No	B. Description of Waste/Chemical Name	C. Amount of Waste by Handling Method: 1. Handling Method Code	2. Quantity Stored**, Treated, Disposed, or Recovered By Source of Waste: (a) From In-State (LBS)	(b) From Out-of-State (LBS)	3. EPA ID No./ of Generator that shipped Waste to Your Facility	Shipped to Off-Site Treatment, Disposal, or Recovery Facility: 4. Handling Method Code	5. Quantity (LBS)	6. Facility EPA ID./ Recovery Facility Name
1	K061	Zinc Oxide -	R01	0	879,380	GAD003336477	~~n/a~~	~~n/a~~	~~n/a~~
2		From emission	control						
3		dust containing	lead						
4									
5	K061	Zinc Oxide	S01	0	121,880	GAD003336477	~~n/a~~	~~n/a~~	~~n/a~~
6		From emission	control						
7		dust containing	lead						
8									
9									
10									
11									
12									

(If more space is needed check ____ and complete Attachment 1)

VI. Comments: * The waste (K061) is not generated by a division of our company. It is generated from the electric furnace production of steel by Atlantic Steel Company, Atlanta, GA, and their SIC Code is shown. The SIC Code for IMC Fertilizer's Winston-Salem plant is 2875.

** Note VII: The use of K061 is a resource recovery operation. The K061 waste material is used as a substitute for Zinc Oxide as an essential plant food element in fertilizers. The more we use, the less K061 has to be disposed of as a waste material. The amount in storage will be used in the above manner at a later date.

DHS 3038 Revised 1-89)
Hazardous Waste Branch

over

IMC FERTILIZER, INC.

FEB 1989

February 14, 1989

Mr. Jerry Rhodes, Head
Hazardous Waste Branch
N. C. Department of Human Resources
P. O. Box 2091
Raleigh, NC 27602-2091

RE: NCD003464369 - IMC FERTILIZER INC, RAINBOW DIV.-
WINSTON-SALEM ANNUAL REPORT (1988)

Dear Mr. Rhodes:

Attached is Form DHS 3038 (Revised 1-89) for Off-Site TSD Facilities. We also received Form DHS 3036 which does not apply to our facility at Winston-Salem, NC as our facility is listed as a generator as a protective notifier only. As required by law, the 1988 Waste Minimization Report is attached showing no generation, therefore, no minimization activity.

If you have questions concerning plant operations, contact John Reeves, Plant Manager at Winston-Salem. If you have questions concerning the attached forms please contact me at the address below.

Sincerely,

James W. Smith

James W. Smith, Manager
Safety, Environmental, and
Quality Control

ATTACHMENTS

CC: J. W. Reeves
HWAR-C88.WIE

IMC Fertilizer, Inc., Rainbow Division, P.O. Box 607, 1611 Oak Avenue, Americus, Georgia 31709, (912) 924-6101

GENERAL INFORMATION

FACILITY NAME: International Mineral and Chemical I.M.C. CONTACT: John Reeves

DIRECTIONS TO FACILITY: (Attach map if possible)

Hwy 52 North from Winston-Salem to Patterson ave. to Glenn Ave. follow Glenn Ave. - I.M.C. on right

SPECIAL ACCESS REQUIREMENTS: Contact: John Reeves (919) 725-0271

EMERGENCY INFORMATION

AMBULANCE: Forsyth County TELEPHONE: 727-2222
HOSPITAL: Forsyth Memorial TELEPHONE: 766-5000
POLICE: Winston-Salem City Police TELEPHONE: 911
FIRE DEPARTMENT: Winston-Salem Fire Dept. TELEPHONE: 911
SITE FIRE EVACUATION SIGNALS:

INFORMATION SOURCES

PART B: yes STATE: — CONTINGENCY PLAN: yes
ESD: — RFA: No CLOSURE PLAN: yes
SWMU QUESTIONNAIRE: No PART A: yes OTHER: —

PERMITS

HAZARDOUS WASTE: yes STATUS: Pending - may change
WATER: No AIR: yes - Environmental Affairs Dept OTHER:

SUMMARY OF REGULATED UNITS AND SWMUS: (Indicate number of units)

LANDFILLS: No INCINERATORS: No STORAGE AREAS: yes
WASTE PILES: No OTHER TREATMENT: No OTHER: — yes
SURFACE IMPROVEMENTS: No TANK FARMS: No SWMUS: —

FACILITY PROCESS DESCRIPTION:

Fertilizer Manufacturing - use of a zinc dust for zinc initiator in the fertilizer. Contains lead that extracts greater than the E.P. toxicity limit of 5.0 ppm, therefore the zinc dust is transported to I.M.C. by the generator.

PREVIOUS RELEASES/ACCIDENTS OR COMPLAINTS: (Corrected? YES/NO)

AIR Fall out From Stack — yes

SOIL Two spills - Nitrogen compounds — yes

SURFACE WATER No

INDUSTRIAL ACCIDENTS No

COMPLAINTS No

HEALTH AND SAFETY HAZARDS
Briefly indicate hazard type. Attach additional pages if necessary.

EXPLOSION/OXYGEN DEFICIENCY HAZARDS: NONE (Circle if applicable)

RADIATION HAZARDS: NONE (Circle if applicable)

TOXIC HAZARDS: NONE (Circle if applicable)

Briefly summarize chemicals handled on site: Add attachment if necessary.
Indicate if these exist in a controlled state. Refer to Part A Application if list is extensive.

UNUSUAL PHYSICAL HAZARDS: NONE (Circle if applicable)

UNUSUAL BIOLOGICAL HAZARDS: NONE (Circle if applicable)

CHECK IF PROBLEM EXPECTED: NOISE No HEAT STRESS No COLD STRESS No

OVERALL HAZARD RATING: (CIRCLE ONE)

VERY HIGH (LEVEL A) (ASSISTANCE NECESSARY)	HIGH (LEVEL B) (ASSISTANCE NECESSARY)	MEDIUM (LEVEL C) (MONITORING REQUIRED)	LOW (LEVEL D)

PERSONAL PROTECTIVE EQUIPMENT

(List equipment needed in addition to safety glasses, hard hat, and steel toed boots)

	Check if Needed		Needed throughout entire facility? (If no, list area(s) or task(s) where needed.)
HEAD AND EYE:			
FACE SHIELD	✓		
GOGGLES	✓		
NOISE PROTECTION	✓		
OTHER	✓	Hard Hat	
RESPIRATORY:		TYPE	
APR	✓		
APR CARTRIDGE	✓		
ESCAPE MASK	✓	Scott Air Packs	
OTHER	—		
CLOTHING:			
TYVEK COVERALL	—		
SARANEX COVERALL	—		
COTTON COVERALL	—		
SPLASH SUIT	✓		
OVERBOOTS	—		
RAIN GEAR	✓		
OTHER	—		
MISCELLANEOUS:			

LEVEL A OR B NEEDED?		Contractor or ESD?	Areas/tasks where needed
LEVEL A	No		
LEVEL B	No		

AIR MONITORING TYPE		Conducted by:	Areas/tasks where needed
TOXIC	No	FACILITY	
EXPLOSIVE/OXYGEN	No	ESD	
RADIATION	No	CONTRACTOR	
NONE		OTHER	

DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
SOLID WASTE MANAGEMENT DIVISION
P.O. BOX 27687 RALEIGH, NORTH CAROLINA 27611-7687
401 OBERLIN ROAD

DOCKET #

INSPECTION AND EVALUATION REPORT

EPA ID:# NCD063464369 FACILITY NAME: I.M.C. Inc.

ADDRESS: 3105 Glenn Ave. Box 4729 CITY: Winston-Salem, N.C

NEW: ✓ UPDATE: ____ DATE OF INITIAL EVALUATION: 5/21/90 STAFF ID: C

RESPONSIBLE AGENCY S S = STATE ____E = EPA ____X = OVERSITE ____O OTH

TYPE OF EVALUATION* COVERED BY THIS REPORT: ENTER ONE

1= COMPLIANCE EVAL. INSP. (CEI)
2= SAMPLING INSPECTION
3= RECORD REVIEW
4= COMP. GWM EVAL. (CME)
5= COMPLIANCE SCHED. (FOLLOW UP)
6= CITIZEN COMPLAINT
7= PART B CALL -
8= WITHDRAWAL CA
9= CLOSED FACILI
10= GENERAL
11- CASE DEVELOPM
80= INFORMAL MEET

DATE OF EVALUATION COVERED BY THIS REPORT: 5/21/90

CLASS OF VIOLATION — VIOLATIONS/RELEASES

CLASS	GWM	(C)/CP	FIN	PT.B	CMPL. SCH	MNFST	LB	OT	WM
I		0							
II		0							
	ACCEPTABLE CODES								
	X S Z O H	X S Z O H	X S Z O I* B* H	X S Z O H	X S Z O C B H	X S Z O H	X S Z O H	X S Z O	

KEY
X = VIOLATIONS 0 = NO VIOLATION Z = PENDING
B = VIOL. & SPECIALITY; S = SAME VIOL./SPEC.

SPECIALTIES
I = NO INSURANCE ONLY; C = CA SCHED. VIOL.
H = HPV VIOLATIONS PRESENT; * CLASS I ONLY

ENFORCEMENT ACTIONS: (AREA OF VIOL./RISE.=GW, CP, PR, PB, CS, MA, OT, LB, O

CLASS	AREA OF VIOL.	TYPE CODE	DATE ACTION TAKEN	COMPLIANCE DATES SCHED.	ACTUAL	PENALTY ASSES.	COLL.

CODES FOR TYPES OF ENFORCEMENT ACTIONS:
03 = WARNING LETTER/NOV
04 = ADMIN. COMPLAINT
05 = FINAL ADMIN. ORDER
10 = INFORMAL
11 = FILED CIVIL ACTION
12 = FILED CRIMINAL ACTI
13 = CIVIL REFERRAL TO A
90 = HEARING

COMMENTS: * Closure Inspection of K061 Storage Area

[inspect.rje]

RCRA INSPECTION REPORT

1) **Facility Information**

I.M.C. Inc.
Box 4429
3105 Glenn Ave.
Winston-Salem, N.C. 27105
NCD003416369

2) **Facility Contact**

John Reeves

3) **Survey Participants**

John Reeves, Steve Publisi

4) **Date of Inspection**

May 20, 1990

5) **Purpose of Survey**

Closure Inspection of the TSDF status (storage only) in accordance with 40 CFR Part 265, General Facility Standards and the approved facility closure plan.

6) **Facility Description**

I.M.C. Inc. formulates fertilizer and has been listed as a storage facility due to the use of furnace dust used in the fertilizer formulation. This material contained extractable lead concentrations greater than 5 ppm. Consequently, regulating the transporting and storage of the furnace dust as a hazardous waste. I.M.C. applied and was granted an approved closure plan by the North Carolina Hazardous Waste Section (over)

7) **Waste Minimization**

N/A

6) by the Permitting Branch on March 6, 1990.
An onsite closure plan activity and certification was conducted on April 11, 1990. The "hazardous waste dust" was being transported to I.M.C. under waste code number K061, emission control dust/sludge from the primary production of steel in electric furnaces.

Past storage activity indicates the storage of K061 in an enclosed warehouse and is not in contact with water or rain. A prescribed predetermined amount of K061 furnace dust is added to the fertilizer formulation to provide the required amount of zinc oxide necessary for plant growth.

I.M.C. is an on-going manufacturing process, has no intention of closing the Winston-Salem facility. The furnace dust (K061) use was discontinued in July, 1989 and persons are now using another product that is considered non-hazardous.

I.M.C. notified that the closure plan on the storage area would be implemented and this information was public noticed in the Winston-Salem Journal on January 16, 19 This comment period ended on March 2, 1990 with no ~~written~~ comments received.

The current closure cost estimate covered by the closure plan is $26,190.80. The estimate of actual closure of the storage facility was estimated at $2,978.00. I.M.C. followed the approved closure plan and in particular I.M.C. followed the closure procedures shown on page 9 and page 10 of the approved closure plan. These pages delineate the exact procedures followed by I.M.C. to accomplish the state closure of the storage area.

continued

~~Post~~ Closure sampling results indicate that I.M.C. met the approved concentrations of lead, chromium and cadmium in order to meet closure limits.

Certification of closure was submitted to the Raleigh office on May 2, 1990 by Engineering Technologies, P.A. of Winston-Salem, N.C. and signed by R Edward Hedgecock P.E. Seal # 8513. Mr. Hedgecock is a Professional Engineer registered in the State of North Carolina and is not an employee of I.M.C Fertilizer, Inc.

Closure of K061 storage area appears to be complete in accordance with the approved closure plan.

8) Site Deficiencies

None

9) Recommendations

None

10) Signed

Steve Phillips
Inspector/Reviewer

5/20/90
Date

Facility Contact

5-21-90

Approved Closure Plan

TABLE II

ESTIMATE OF CLOSURE COST
FOR
IMC FERTILIZER, INC

LOCATION: WINSTON - SALEM, NC

EPA I.D. #NCD003464369

LABOR COST:
Clean, using hand broom and scraper, 500 sq.ft. of smooth floor in storage area and place sweepings in containers...(5 Man Hours).

Re-sweep the same 500 sq.ft. of floor to insure complete removal and place sweepings in containers....(5 Man Hours).

Transport floor sweepings to recycle hopper and feed into process (1 Man Hour).

Detailed inspection of storage area by supervisor. Final sweeping of area. Collection of samples for EP Toxicity Test.(5 Man Hours). (This operation observed by registered engineer)

Sweep, using hand broom, 200 sq.ft. of smooth floor around recycle hopper and feed sweepings through recycle hopper....(2 Man Hours).

Clean outside of recycle hopper and feeder belt....(3 Man Hours).

Re-sweep, using hand broom, 200 sq. ft. of smooth floor around recycle hopper and feed sweepings through recycle hopper. (3 Man Hours).

Clean inside of recycle hopper as necessary....(1 Man Hour).

Detailed inspection of equipment by Supervisior....(1 Man Hour).

Feed fertilizer material thru recycle hopper for "sand blasting" effect cleaning...(4 Man Hours).

Final inspection by Supervisor and collection of required samples...(2 Man Hours).
(Operation observed by professional engineer)

Cleaning of Clean Up and Protective Equipment....(4 Man Hours).

TOTAL MAN HOURS REQUIRED ..... (36 Man Hours).

NOTE: FRONT END LOADERS AND FORK TRUCKS ARE OWNED BY LOCATION AND WOULD BE AVAILABLE FOR USE. RENTAL EQUIPMENT WOULD NOT BE NEEDED.

TABLE III

ESTIMATE OF CLOSURE COST
FOR
IMC FERTILIZER, INC

LOCATION: WINSTON - SALEM, NC

EPA I.D. #NCD003464369

36 MAN HOURS (LABOR) @ $13.00 PER HOUR.....	468.00
OPERATING COST OF ANY MOBILE EQUIPMENT	100.00
SUPPLIES TO CLEAN UP PROTECTIVE EQUIPMENT	10.00
FEE CHARGED BY REGISTERED ENGINEER TO CERTIFY COMPLIANCE WITH CLOSURE PLAN	2,200.00
ANALYSIS COSTS	500.00
TOTAL COST	**$2,778.00**

Note: Labor rate includes fringe benefits.

TABLE 3—SAMPLING AND ANALYSIS METHODS CONTAINED IN SW-846 [a]—Continued

Title	Third Edition		Second Edition	
	Section No.	Method No.	Section No.	Method No.
Stack-Gas Effluent Characterization Strategy	13.4			
Additional Effluent Characterization Strategy	13.5			
Selection of Specific Sampling and Analysis Methods	13.6			
References	13.7			

[a]The Third Edition of SW-846 and its Revision I are available from the Government Printing Office, Superintendent of Documents, Washington, DC 20402, (202) 738-3238, document number 955-001-00000-1.

[b]This method may be used in conjunction with or in addition to the methods found in the Second Edition of SW-846 as amended by Updates I and II.

When Method 9066 is used it must be preceded by the manual distillation specified in procedure 7.1 of Method 9065. Just prior to distillation in Method 9065, adjust the sulfuric acid-preserved sample to pH 4 with 1+9 NaOH. After the manual distillation is completed, the autoanalyzer manifold is simplified by connecting the re-sample line directly to the sampler.

[48 FR 15257, Apr. 8, 1983, as amended at 50 FR 2000, Jan. 14, 1985; 50 FR 42942, Oct. 23, 1985; 51 FR 5330, Feb. 13, 1986; 51 FR 6541, Feb. 25, 1986; 51 FR 37729, Oct. 24, 1986; 54 FR 41407, Oct. 6, 1989; 54 FR 40267, Sept. 29, 1989; 55 FR 8950, Mar. 9, 1990; 55 FR 18505, May 2, 1990; 55 FR 50483, Dec. 6, 1990]

APPENDIX IV—[RESERVED FOR RADIOACTIVE WASTE TEST METHODS]

APPENDIX V—[RESERVED FOR INFECTIOUS WASTE TREATMENT SPECIFICATIONS]

APPENDIX VI—[RESERVED FOR ETIOLOGIC AGENTS]

APPENDIX VII—BASIS FOR LISTING HAZARDOUS WASTE

EPA hazardous waste No.	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trichfluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).
F020	Tetra- and pentachlorodibenzo-*p*-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-*p*-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022	Tetra-, penta-, and hexachlorodibenzo-*p*-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra-, and pentachlorodibenzo-*p*-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1-2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorbenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.

50-147 O—91——4

EPA hazardous waste No.	Hazardous constituents for which listed
F025	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-*p*-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-*p*-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-*p*-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.
F035	Arsenic, chromium, lead.
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F038	Benzene, benzo(a)pyrene chrysene, lead, chromium.
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under 40 CFR 268.43(a), Table CCW.
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.
K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014	Acetonitrile, acrylamide.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.
K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphorothioic acid esters.
K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K039	Phosphorodithioic and phosphorothioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.
K045	N.A.
K046	Lead.
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, napthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.

Federal

Trip Notification & Authorization

Prepared by: Grover Nicholson

Today's Date: 13 Aug 93

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

Site Trip

Date of Trip: 17 Aug 93

If trip date changed or cancelled note below:

Trip Date Changed To: _____ Cancelled: ___

NCD#: 024 895 864 Site Name: Stewart Warner Basich-Sach

City: Winstm-Salem County: Forsyth

Reason for Trip: SIP Sampling of offsite soils.

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

Authorized by: David B. Kelly
Industrial Hygienist

Project Team Leader: Grover Nicholson

Assistants: Harry Zima, _____, _____

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

Preliminary Assessment Form (First page only)
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: Fred Overstreet Title: Director, Div. of Env. Health

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

Telephone Number: (919) 727-2760

Notes: Health Department Official Contacted: Mr. Overstreet's voice mail

Back Up Letter Required: Yes / No ___

Left a message for Mr. Overstreet on 8-13-93 (DBL)

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 | Jonathan B. Howes, Secretary
Telephone 919-733-2801

August 13, 1993

Mr. Fred Overstreet
Director, Division of Environmental Health
Forsyth County Health Department
Post Office Box 686
Winston-Salem, NC 27102-0686

RE: Site Inspection Prioritization
Stewart Warner Bassick-Sack
NCD 024 895 864

Dear Mr. Overstreet:

David Lilley of the NC Superfund Section left a message on your voice mail today to notify you that the NC Superfund Section will conduct a site inspection prioritization of the subject site located in Forsyth County, NC. The inspection will be conducted on August 17, 1993 by Grover Nicholson of the NC Superfund Section.

The purpose of the inspection is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The inspection team will take samples around the site to determine if a hazardous condition exists.

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 Grover Nicholson at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-4984 Fax # 919-733-0513

An Equal Opportunity Affirmative Action Employer

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
NC Superfund Section

Enclosures

cc: Dexter Matthews
Doug Holyfield
Debbie Crane
Angie Coppola
David Lilley
File

Federal

Trip Notification & Authorization

Prepared by: Grover Nicholson Today's Date: 18 Aug 93

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

Site Trip

Date of Trip: 17 Aug 93

If trip date changed or cancelled note below:

Trip Date Changed To: _____ Cancelled: ____

NCD#: 024 895 864 Site Name: Stewart Warner Bassick-Sash

City: Winston-Salem County: Forsyth

Reason for Trip: SIP Sampling of offsite soils.

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

Authorized by: [signature]
Industrial Hygienist

Project Team Leader: Grover Nicholson

Assistants: Harry Zeiss ; _____ , _____

Attach To Notification Form: 1 copy each: Submit to the Industrial Hygienist

- Preliminary Assessment Form (First page only)
- 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: Fred Overstreet Title: Director, Div. of Env Health

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

Telephone Number: (919) 727-2760

Notes: Health Department Official Contacted: Mr. Overstreet's voice mail

Back Up Letter Required: Yes ✓ No ____

Left a message for Mr. Overstreet on 8-13-93 (DBL)

Note: Signed original to Data Manager

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024895864

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Stewart Warner Corp. Bassick-Sack Division	2941 Indiana Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Winston-Salem	NC	27105	Forsyth	34	05

09 COORDINATES LATITUDE	LONGITUDE
36° 07' 43"._	080° 14' 14"._

10 DIRECTIONS TO SITE (Starting from nearest public road)

Going north on US 52 from the center of Winston-Salem, exit onto 25th street going west. Turn immediately north on Berty Street and then left onto Indiana Avenue. The site is on the NE side of Indiana Avenue.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Stewart Warner Corporation	1826 Diversey Parkway

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Chicago	Ill.	60614	(312) 883-6000

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Bassick-Sack Division (SWC)	2941 Indiana Avenue

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Winston-Salem	NC	27105	(919) 725-1331

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

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

☒ A. RCRA 3001 DATE RECEIVED: 10/28/80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☐ YES DATE __/__/__ (MONTH DAY YEAR)
☒ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1945 (BEGINNING YEAR) | present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

This facility manufactures metal furniture hardware. Wastes generated are spent solvents, and spent electroplating baths and sludges. The electroplating baths and sludges contain cyanide.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The facility has, at least twice, spilled cyanide-laden liquids onto the ground. In addition, there is some uncertainty concerning the methods of disposal of electroplating sludges in past years.

V. PRIORITY ASSESSMENT

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

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

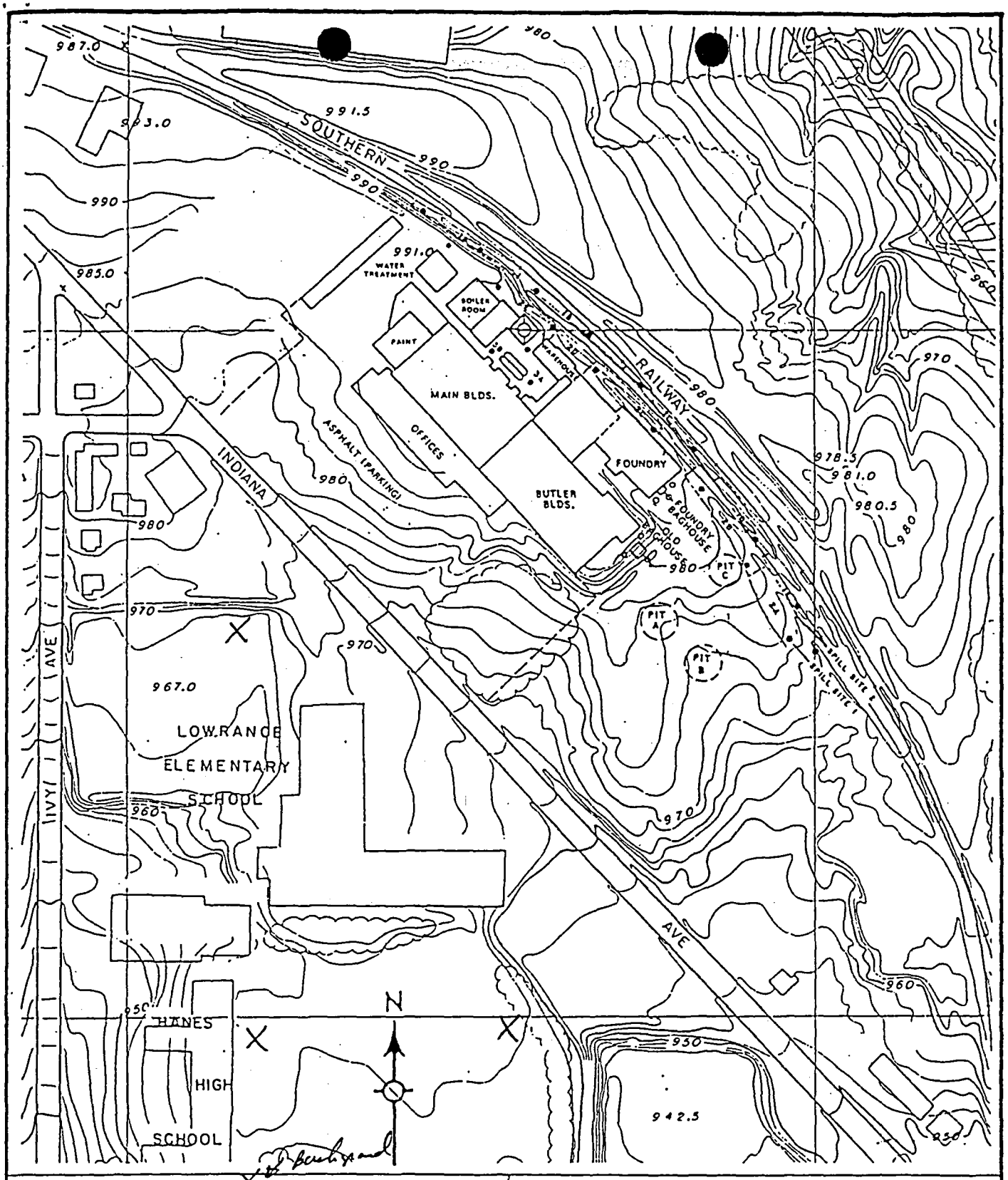
VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Dough Holyfield	NC S&HWM Branch RCRA Compliance	919) 733-2178

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Grover Nicholson	NC DHR	CERCLA UNIT NC S&HWM Branch	919) 733-2801	11-24-87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

Currently, the facility is conducting a clean-up of a March 1987 cyanide spill. NC RCRA is overseeing this clean-up since the company is a generator of hazardous wastes.



SPILL LOCATIONS 1, 2, & 3

EXCAVATION PITS A, B, & C

● Confirmation Soil Sample Locations (1.5-2.0 ft)

O Baghouse Soil Sample Locations (0.05 & 1.5-2.0 ft)

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.

9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770

(301) 982-2800

ANNAPOLIS MD • ATLANTA GA • AURORA CO • BALTIMORE MD • CULPEPER VA • DULUTH GA

EXPORT PA • FAIRFAX VA • MANASSAS VA • RALEIGH NC • ROCKVILLE MD • TAMPA FL

STEWART-WARNER CORP., BASSICK-SACK DIVISION

X = APPROX. SAMPLE LOCATION

SITE LAYOUT MAP

0 200 Feet

FIGURE 2

REF:

POYNER&SPRUILL
ATTORNEYS AT LAW

3600 Glenwood Avenue
Raleigh, North Carolina 27612
Mailing Address:
Post Office Box 10096
Raleigh, North Carolina 27605-0096
919/783-6400
Fax: 919/783-1075
Offices:
Raleigh/Rocky Mount/
Charlotte/Greenville

Keith H. Johnson
Direct Dial: 919/783-1013

October 5, 1992

RECEIVED
OCT 0 5 1992
NC DIVISION OF SOLID WASTE MANAGEMENT

BY HAND DELIVERY

Mr. William L. Meyer
Solid Waste Management
P. O. Box 2091
Raleigh, North Carolina 27602

RE: Ilco-Unican Winston-Salem Facility

Dear Bill:

At our meeting last week concerning contaminated soils in the southern side yard of the above-referenced property, you requested information about how those soils became contaminated. The enclosed documents are forwarded in response to that request.

Specifically enclosed are the following:

1. An RAL Final Report Concerning Assessment of Chemical Contamination Outside Spill Sites 1 and 2 produced for Bassick-Sack before the sale to Ilco. Spill sites 1 and 2 refer to the contaminated areas disclosed to Ilco before the sale, so the purpose of this report was assessment of the rest of the property. RAL concludes in that report that contamination exists outside those two spill sites due to: (i) "the unfortunate practice of dumping chemical waste in years past when . . . enforcement policies were non-existent", (ii) an inadequate air exhaust and ventilation system causing chemical emissions, and (iii) failure to adequately implement a waste management and spill prevention program.

2. Deposition testimony from two former Bassick-Sack employees concerning past waste dumping practices in the southern side yard. Those former employees are: Edwin Smith, former waste treatment operator, and R.A. Anderson, former safety inspector for the Bassick-Sack Division of Stewart-Warner. A 1981 internal audit done by Anderson that references the existence of one last waste pile is also enclosed; and

3. Deposition testimony from Royce Boles, a former Bassick-Sack employee, concerning the inadequate exhaust system for the heavy buffing department, the source of roof runoff contamination.

In addition, I will send to you under separate cover in the near future an affidavit from Charles Stewart, Bassick-Sack's former plant superintendant. Mr. Stewart's affidavit will likewise refer to wastes dumping practices which occurred before Ilco purchased the plant from Bassick-Sack, specifically of electroplating sludges, zinc from the die cast department, and sludges from a degreasing unit used in buffing operations.

If you have any questions or need any further information of this nature, please contact me.

Yours truly,

Keith H. Johnson

Keith H. Johnson

cc: Brian Wells
H. Glenn Dunn, Esq.

KHJ:msb
Enclosures

MJ1660-00081\LETTERS
MEYER.LTR

FINAL REPORT
CONCERNING THE CONTINUED
ASSESSMENT OF CHEMICAL CONTAMINATION
OUTSIDE SPILL SITES 1 and 2

STEWART WARNER CORPORATION
BASSICK-SACK DIVISION
WINSTON-SALEM, NORTH CAROLINA

Prepared for:

Stewart Warner Corporation
Bassick-Sack Division
Winston-Salem, North Carolina

Prepared by:

Research & Analytical Laboratories, Inc.
106 Short Street
Kernersville, North Carolina 27284
919/996-2841

September 25, 1987

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1.0 EXECUTIVE SUMMARY

The information contained in this document is the Final Report concerning the assessment of chemcial contamination outside spill sites 1 and 2 at Stewart Warner Corporation's Bassick-Sack Division located in Winston-Salem, North Carolina. This report was submitted to Bassick-Sack on September 25, 1987 by Research & Analytical Laboratories, Inc., a wholly owned subsidiary of Russell & Axon, Engineers-Planners-Architects, Inc. The specific details relating to site plan development, methodologies, criteria, and formulation of remedial clean-up activities, etc. are referenced in the RAL July 1987 report entitled Comprehensive Site Report For The Assessment of Chemical Contamination at Spill Sites 1 and 2. Also, as referenced in previous progress reports, "the information contained is this report is considered highly confidential since Federal and State laws regulating source contaminants outside known spill sites are unclear and subject to misinterpretation."

Based upon current criteria to include but not limited to extractable chromium (0.05 mg/l), nickel (0.35 mg/l), and cyanide (0.2 mg/l extractable or 40mg/kg total) the following quadrants would be considered to exceed maximum concentrations for one or more of these parameters at the 9 - 12 inch depth interval:

1) Quadrant 6 A-D (zinc, copper, nickel, lead)
2) Quadrant 11 A-D (zinc, copper, nickel, lead)
3) Quadrant 16 A-D (zinc, copper, nickel, lead)
4) Quadrant 17 A-D (zinc, copper, nickel, lead)
5) Quadrant 18 A-E (zinc, copper, nickel, lead)
6) Quadrant 19 A-D (zinc, copper, nickel)
7) Quadrant 20 A-D (zinc, copper, nickel)
8) Quadrant 21 A-D (nickel)
9) Quadrant 7 A-D (zinc)
10) Quadrant 12 A-D (zinc, copper, nickel)
11) Quadrant 8 A-D (zinc, copper)
12) Quadrant 9 A-D (zinc, copper)
13) Quadrant 10 A-B (zinc, copper)
14) Quadrant 22 A-E (zinc, copper, nickel)
15) Quadrant 23 A-D (zinc, copper, nickel)
16) Quadrant 24 A-B (zinc, copper, nickel)
17) Dirt Pile (zinc, copper, nickel, lead)

Zinc and copper were included since these parameters may be considered should the North Carolina Division of Environmental Management elect to address these parameters in addition to chromium, nickel, and cyanide. Maximum contaminant level for lead in potable water is 0.05 mg/l. This limit was exceeded as indicated above for five (5) of the quadrants (ie: 1 - 5) and the dirt pile. Since this facility is listed as a hazardous waste generator, the contamination of heavy metals reported outside spill sites could be regulated under RCRA with enforceable clean-up requirements by Federal and State environmental agencies(ie: Appendix B - Title III Fact Sheet - EPA).

The criteria which demonstrates a waste material to be hazardous or non-hazardous (ie: RCRA Analysis - EP Toxicity metals [As, Ba, Cd, Cr, Pb, Hg, Se, and Ag], Ignitability, Reactivity, and Corrosivity) shows that only lead would be considered hazardous in Quadrant 6, Section A-D, 0-3 inch depth interval. The reason for this is that the RCRA Limit is 100 times the maximum contaminant potable water limit for only those metals listed above under RCRA. Chromium and lead are the only two heavy metals listed under the RCRA criteria that could be considered significant with respect to metals waste generated by Bassick-Sack. Removal of soils in Quadrant 6, Section A-D at the 0-3 inch depth could show the remainder of soils outside chemical spill sites to be non-hazardous under the RCRA definition.

In addition to chemical contamination of the land area outside spill sites, RAL was given authorization by Stewart Warner Corporation to assess potential environmental contaminant sources with respect to Bassick-Sack's ventilation and air exhaust systems. With the assistance of Underwood Air Systems, Inc. RAL generally found well designed systems, but with some notable exceptions. Specifically, the heavy buffing exhaust systems were inadequate and in violation of the EPA standard (ie: Forsyth County Air Quailty Code). Large deposits of zinc dust were observed on the roof in the immediate vicinity of these exhaust stacks. A detailed report of preliminary findings and analytical test results are described in Section 5.0 of this report. Dust samples collected from roof area suggest that several inadequate air exhaust systems utilized by Bassick-Sack may be the cause of long term particulate emissions contamination of soils, possible storm water run-off contamination, and increased leachate metals concentration.

2.0 CONCLUSION

The results of this study, including both chemical spill sites and unpaved land area outside spill sites, show the presence of chemical waste contamination believed to originate from Bassick-Sack's industrial process. The cost of clean-up inside the chemical spill sites based upon DHR's criteria is estimated to be between $300,000.00 to $400,000.00. Clean-up cost outside spill area if the same criteria is used could easily exceed $700,000.00. It is RAL's professional opinion that the major cause of the chronic source of chemical waste contamination and reoccurring spills are due to the following:

1) Inadequate air exhaust and ventilation system causing chemical waste emissions as evidenced by dust samples collected and observations made during inspection.
2) Failure to adequately implement a hazardous waste management and spill prevention program.
3) The unfortunate practice of dumping chemical waste in years past when Federal and State environmental enforcement policies were non-existent.

It is also important to realize that due to the exposure that Bassick-Sack has received as a result of being included on the State's CERCLA List as well as these recent chemical spills, it is of paramount importance to expedite existing clean-up, eliminate source of chronic chemical waste contamination, and implement hazardous waste management program.

Due to the uncertainty of the minimum threshold limit concentrations with respect to toxic chemical exposure and the fate of these chemicals within the environment, EPA will in every site specific case consider the following factors:

1) Is the substance known to cause cancer or serious reproductive or neurological disorders, genetic mutations, or other chronic health effects?
2) Can the substance cause significant adverse acute health effects outside the facility as a result of continuous or frequently reocurring releases?
3) Can the substance cause an adverse effect on the environment because of its toxicity, persistence, or tendency to bioaccumulate?

The answer to each one of the above questions could be answered yes with respect to one or more of the chemical waste contaminants evaluated in this study.

3.0 RECOMMENDATION

The following recommendations are based upon the need to reduce and if possible eliminate the risk of environmental enforcement and subsequent liabilities associated with exposure to potentially hazardous waste chemical contaminants evaluated in this study. A significant consideration was made to current and proposed environmental laws regulating Stewart Warner's manufacturing facility.

1) The removal and disposal of contaminated soils within Chemical Spill Sites 1 and 2 as outlined in RAL's July 1987 Comprehensive Site Report for the Assessment of Chemical Contamination at Spill Sites 1 and 2 should be completed by December 1, 1987.

2) The source of the chemical contamination (ie: air emission and ventilation systems) should be eliminated and/or comply with existing and future environmental regulations. A plan of action including RAL's recommendations in Section 5.0 of this report should be implemented by December 1, 1987. Stack testing should be included in this plan of action to determine the actual air emissions loading to the atmosphere of chemical waste contaminants.

3) A minimum of six (6) inches of soil outside chemical spill sites is recommended for removal, disposal, and backfill for quadrants 6, 11, 16, 17, and 18 or approximately 763 yd^3 of soil at an estimated cost of $125,000.00. A complete clean-up of all contaminated land area outside chemical spill sites 1 and 2 down to the one (1) foot depth would cost an estimated $725,000.00.

4) A plan of action is recommended for the implementation of a functional hazardous waste management and spill prevention plan. This should include a thorough examination of wastewater treatment operations and personnel as well as the movement, storage, and transport of all hazardous waste chemicals. Training and accountability is the key to the success of this program with significant reduction in liability risks and cost.

4.0 RESULTS

Tables 1 - 8 represent chemical contaminate data for land area outside chemical spill sites 1 and 2 including "dirt pile" and remedial sampling (ie: Quadrant 26, 50 ft. north of Quadrant 2, Section A) to verify the lateral extent of chemical spills. The data should be compared with existing clean-up criteria (Appendix A) as well as the RCRA definition for a hazardous waste (ie: 100 times drinking water standards). It is important to note that the lateral extent of chemical contamination from spill sites has been verified as shown by Quadrant 26 data.

TABLE 1 - Extractable Zinc Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Extractable	7/16/87	43	5.3	---	---
6	A-D	Extractable	7/21/87	1000	240	150	57
11	A-D	Extractable	7/23/87	130	72	85	120
16	A-D	Extractable	7/24/87	1500	63	130	380
17	A-D	Extractable	7/24/87	1600	180	470	330
18	A-E	Extractable	8/10/87	1000	460	180	150
19	A-D	Extractable	8/12/87	390	13	40	13
20	A-D	Extractable	8/16/87	13	77	14	21
21	A-D	Extractable	8/18/87	48	64	20	1.5
7	A-D	Extractable	8/19/87	61	42	6.1	15
12	A-D	Extractable	8/27/87	330	16	23	18
8 A-D, 9 A-D, 10 A-B		Extractable	8/28/87	73	59	31	31
13 A-D, 14 A-D, 15 A-B		Extractable	8/28/87	1.6	3.9	---	---
22 A-E, 23 A-D, 24 A-B		Extractable	8/28/87	16	24	13	9.1
Dirt Pile		Extractable	8/18/87	2800	N/A		
26	50' N. of 2A	Extractable	9/11/87	3.4	0.97	0.59	0.42

TABLE 2 - Extractable Copper Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter

Quadrant	Section	Type	Date	Depth Interval(inches) 0-3	3-6	6-9	9-12
5	E	Extractable	7/16/87	0.62	0.14	---	---
6	A-D	Extractable	7/21/87	24	2.9	2.9	5.4
11	A-D	Extractable	7/23/87	47	13	13	34
16	A-D	Extractable	7/24/87	69	8.4	15	18
17	A-D	Extractable	7/24/87	31	3.8	5.5	17
18	A-E	Extractable	8/10/87	62	100	100	180
19	A-D	Extractable	8/12/87	9.6	0.64	1.6	1.6
20	A-D	Extractable	8/16/87	1.1	1.5	0.59	3.8
21	A-D	Extractable	8/18/87	6.4	3.0	0.16	0.05
7	A-D	Extractable	8/19/87	1.6	1.6	0.34	0.43
12	A-D	Extractable	8/27/87	21	2.5	2.5	5.7
8 A-D, 9 A-D, 10 A-B		Extractable	8/28/87	1.5	2.0	0.77	2.1
13 A-D, 14 A-D, 15 A-B		Extractable	8/28/87	0.69	0.19	---	---
22 A-E, 23 A-D, 24 A-B		Extractable	8/28/87	5.0	1.9	2.5	1.5
Dirt Pile		Extractable	8/18/87	1.6	N/A		
26	50" N. of 2A	Extractable	9/11/87	0.13	0.12	0.02	0.02

TABLE 3 - Extractable Nickel Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Extractable	7/16/87	0.25	0.056	---	---
6	A-D	Extractable	7/21/87	1.3	0.58	0.70	1.4
11	A-D	Extractable	7/23/87	4.7	2.5	2.6	6.2
16	A-D	Extractable	7/24/87	4.5	0.39	1.3	1.3
17	A-D	Extractable	7/24/87	5.1	0.72	0.98	1.8
18	A-E	Extractable	8/10/87	2.7	1.4	0.86	0.89
19	A-D	Extractable	8/12/87	1.9	0.39	0.62	0.49
20	A-D	Extractable	8/16/87	0.61	0.68	0.38	0.54
21	A-D	Extractable	8/18/87	2.5	1.5	0.59	0.54
7	A-D	Extractable	8/19/87	0.69	0.47	0.14	0.16
12	A-D	Extractable	8/27/87	4.4	0.92	0.84	0.73
8 A-D, 9 A-D, 10 A-B		Extractable	8/28/87	0.51	0.39	0.32	0.30
13 A-D, 14 A-D, 15 A-B		Extractable	8/28/87	0.079	0.11	---	---
22 A-E, 23 A-D, 24 A-B		Extractable	8/28/87	3.1	12	2.7	1.4
Dirt Pile		Extractable	8/18/87	6.8	N/A		
26	50' N. of 2A	Extractable	9/11/87	0.29	0.17	0.03	0.11

TABLE 4 - Extractable Chromium Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Extractable	7/16/87	<0.019	<0.017	---	---
6	A-D	Extractable	7/21/87	<0.019	<0.017	<0.02	<0.02
11	A-D	Extractable	7/23/87	0.037	<0.017	<0.02	<0.02
16	A-D	Extractable	7/24/87	0.037	<0.017	<0.02	<0.02
17	A-D	Extractable	7/24/87	0.019	<0.017	<0.02	<0.02
18	A-E	Extractable	8/10/87	<0.019	<0.033	<0.02	<0.02
19	A-D	Extractable	8/12/87	<0.019	<0.017	<0.02	<0.02
20	A-D	Extractable	8/16/87	<0.017	<0.017	<0.02	<0.02
21	A-D	Extractable	8/18/87	<0.017	<0.017	<0.02	<0.02
7	A-D	Extractable	8/19/87	<0.017	<0.017	<0.02	<0.02
12	A-D	Extractable	8/27/87	0.018	<0.017	<0.02	<0.02
8 A-D, 9 A-D, 10 A-B		Extractable	8/28/87	<0.017	<0.017	<0.02	<0.02
13 A-D, 14 A-D, 15 A-B		Extractable	8/28/87	<0.017	<0.017	---	---
22 A-E, 23 A-D, 24 A-B		Extractable	8/28/87	<0.017	<0.017	<0.02	<0.02
Dirt Pile		Extractable	8/18/87	<0.017	N/A		
26	50' N. of 2A	Extractable	9/11/87	<0.02	<0.02	<0.02	<0.02

TABLE 5 - Extractable Lead Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Extractable	7/16/87	<0.05	<0.05	---	---
6	A-D	Extractable	7/21/87	8.2	0.5	0.21	0.088
11	A-D	Extractable	7/23/87	0.74	0.1	0.11	0.42
16	A-D	Extractable	7/24/87	3.1	0.2	0.21	0.84
17	A-D	Extractable	7/24/87	1.4	0.1	0.11	0.32
18	A-E	Extractable	8/10/87	3.6	3.1	2.3	4.9
19	A-D	Extractable	8/12/87	0.11	<0.05	<0.05	<0.05
20	A-D	Extractable	8/16/87	<0.05	<0.05	<0.05	<0.05
21	A-D	Extractable	8/18/87	<0.05	<0.05	<0.05	<0.05
7	A-D	Extractable	8/19/87	<0.05	<0.05	<0.05	<0.05
12	A-D	Extractable	8/27/87	0.4	<0.05	<0.05	<0.05
8 A-D, 9 A-D, 10 A-B		Extractable	8/28/87	<0.05	0.088	<0.05	<0.05
13 A-D, 14 A-D 15 A-B		Extractable	8/28/87	<0.05	<0.05	---	---
22 A-E, 23 A-D, 24 A-B		Extractable	8/28/87	<0.05	<0.05	<0.05	<0.05
Dirt Pile		Extractable	8/18/87	1.1	N/A		
26	50' N. of 2A	Extractable	9/11/87	<0.05	<0.05	<0.05	<0.05

TABLE 6 - Total Cyanide Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter (Dry Weight)

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Total	7/16/87	2.1	0.70	---	---
6	A	Total	7/21/87	3.8	3.8	2.2	2.4
6	B	Total	7/21/87	4.7	3.3	2.2	0.71
6	C	Total	7/21/87	28	11	31	20
6	D	Total	7/21/87	0.75	1.4	0.53	0.16
11	A	Total	7/23/87	1.5	2.4	2.0	0.74
11	B	Total	7/23/87	2.5	5.9	6.9	9.8
11	C	Total	7/23/87	20	27	6.9	7.7
11	D	Total	7/23/87	26	2.8	0.38	2.0
16	A	Total	7/24/87	3.2	0.40	0.79	0.36
16	B	Total	7/24/87	2.5	0.98	1.7	0.76
16	C	Total	7/24/87	4.9	0.34	1.1	1.2
16	D	Total	7/24/87	1.5	0.77	0.51	0.39
17	A	Total	7/24/87	6.3	0.54	0.38	<0.15
17	B	Total	7/24/87	13	1.3	1.1	3.2
17	C	Total	8/08/87	57	8.2	4.7	0.51
17	D	Total	8/08/87	16	1.5	6.3	3.2
18	A	Total	8/10/87	0.38	0.77	0.38	0.37
18	B	Total	8/10/87	5.0	0.53	0.17	<0.14
18	C	Total	8/10/87	1.1	0.52	0.96	0.51
18	D	Total	8/10/87	3.9	1.5	2.0	1.5
18	E	Total	8/10/87	17	5.3	3.4	0.52
19	A	Total	8/12/87	7.0	4.5	0.51	0.16
19	B	Total	8/12/87	7.7	27	5.3	4.0

TABLE 6 - Total Cyanide Results from Core Samples Collected Outside Chemical Spill Sites in Milligrams per Liter (Dry Weight) (Continued)

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
19	C	Total	8/12/87	7.8	2.5	8.4	1.1
19	D	Total	8/12/87	6.7	2.7	1.9	4.4
20	A	Total	8/16/87	2.3	0.62	<0.13	0.54
20	B	Total	8/16/87	3.6	8.4	3.9	3.8
20	C	Total	8/18/87	4.8	1.5	0.37	0.26
20	D	Total	8/18/87	4.4	0.52	3.3	1.2
21	A	Total	8/18/87	6.0	1.5	2.4	<0.15
21	B	Total	8/18/87	1.4	0.36	<0.13	<0.13
21	C	Total	8/18/87	5.6	12	2.0	<0.14
21	D	Total	8/18/87	3.1	15	<0.13	<0.15
7	A	Total	8/19/87	10	11	0.53	<0.14
7	B	Total	8/19/87	29	12	1.1	<0.15
7	C	Total	8/19/87	9.2	4.9	1.4	<0.14
7	D	Total	8/19/87	3.2	3.4	1.9	0.79
12	A	Total	8/19/87	3.7	2.2	4.3	2.4
12	B	Total	8/19/87	3.6	1.1	2.0	<0.13
12	C	Total	8/27/87	120	18	0.54	0.27
12	D	Total	8/27/87	7.8	3.5	19	0.15
8 A,D 9 A,D 10 A		Total	8/28/87	9.7	2.8	4.6	1.3
8 B,C 9 B,C 10 B		Total	8/28/87	0.52	<0.12	<0.13	0.16
13 A,D 14 A,D 15 A		Total	8/28/87	0.90	<0.13	---	---
13 B,C 14 B,C 15 B		Total	8/28/87	<0.14	2.7	---	---
22 A,D 23 A,D 24 A		Total	8/28/87	12	21	24	4.3
22 B,C,E 23 B,C 24 B		Total	8/28/87	12	1.4	0.77	2.7
Dirt Pile		Total	8/18/87	18	N/A		
26	50' N. of 2A	Total	9/11/87	1.9	0.18	0.17	0.18

TABLE 7 - Total pH Results from Core Samples Collected Outside Chemical Spill Sites in Standard Units

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Total	7/16/87	6.4	6.6	---	---
6	A	Total	7/21/87	6.9	6.9	6.4	6.6
6	D	Total	7/21/87	6.5	6.8	6.4	6.3
6	C	Total	7/21/87	6.9	7.3	6.7	6.7
6	D	Total	7/21/87	6.3	6.0	5.4	5.6
11	A	Total	7/23/87	6.5	6.0	6.6	7.1
11	B	Total	7/23/87	5.9	5.7	6.0	7.2
11	C	Total	7/23/87	6.7	6.3	6.5	7.0
11	D	Total	7/23/87	6.8	6.8	7.2	7.2
16	A	Total	7/24/87	6.8	6.9	6.8	6.8
16	B	Total	7/24/87	7.7	8.4	7.0	7.6
16	C	Total	7/24/87	7.5	7.8	7.5	7.7
16	D	Total	7/24/87	7.0	6.6	6.4	5.7
17	A	Total	7/24/87	6.3	5.9	5.4	5.2
17	B	Total	7/24/87	7.2	7.1	7.0	6.3
17	C	Total	8/08/87	7.1	5.8	5.8	6.0
17	D	Total	8/08/87	7.1	6.5	6.4	5.4
18	A	Total	8/10/87	7.9	7.9	7.9	7.8
18	B	Total	8/10/87	7.6	7.3	7.5	7.3
18	C	Total	8/10/87	6.8	6.0	5.6	5.3
18	D	Total	8/10/87	7.8	7.8	7.9	7.3
18	E	Total	8/10/87	7.9	7.8	8.1	7.9
19	A	Total	8/12/87	6.8	6.6	6.4	5.7
[illegible]	B	Total	8/12/87	6.8	6.6	7.1	7.2

TABLE 7 - Total pH Results from Core Samples Collected Outside Chemical Spill Sites in Standard Units

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
19	C	Total	8/12/87	6.3	6.6	7.1	6.7
19	D	Total	8/12/87	7.7	6.2	6.4	5.0
20	A	Total	8/16/87	6.2	6.2	6.0	5.5
20	B	Total	8/16/87	7.0	6.0	6.2	5.9
20	C	Total	8/18/87	5.6	5.3	5.4	4.9
20	D	Total	8/18/87	6.6	6.1	6.3	6.9
21	A	Total	8/18/87	6.5	5.6	5.6	4.8
21	B	Total	8/18/87	4.8	5.0	5.2	4.8
21	C	Total	8/18/87	5.7	5.2	5.2	4.9
21	D	Total	8/18/87	5.0	5.1	5.2	4.9
7	A	Total	8/19/87	6.1	6.2	6.2	6.3
7	B	Total	8/19/87	6.8	6.6	6.3	5.4
7	C	Total	8/19/87	6.0	5.9	6.1	5.7
7	D	Total	8/19/87	5.7	5.7	6.4	5.9
12	A	Total	8/19/87	6.6	6.9	7.4	7.2
12	B	Total	8/19/87	6.8	6.9	7.6	7.2
12	C	Total	8/27/87	7.0	7.1	7.6	7.3
12	D	Total	8/27/87	7.0	7.1	6.9	6.4
8 A,D 9 A,D 10 A		Total	8/28/87	7.3	7.9	7.7	7.4
8 B,C 9 B,C 10 B		Total	8/28/87	4.6	5.2	5.5	4.9
13 A,D 14 A,D 15 A		Total	8/28/87	4.9	4.8	---	---
13 B,C 14 B,C 15 B		Total	8/28/87	5.7	5.8	--	---
22 A,D 23 A,D 24 A		Total	8/28/87	5.3	5.5	5.6	5.3
22 B,C,E 23 B,C 24 B		Total	8/28/87	5.3	5.2	5.7	5.3
Dirt Pile		Total	8/18/87	6.6	N/A		
26 50' N. of 2A		Total	9/11/87	6.2	6.0	6.0	6.0

TABLE 8 - Total Solids Results from Core Samples Collected Outside Chemical Spill Sites Percent (%)

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
5	E	Total	7/16/87	86	94	---	---
6	A	Total	7/21/87	92	90	89	89
6	B	Total	7/21/87	91	92	90	90
6	C	Total	7/21/87	91	87	85	84
6	D	Total	7/21/87	93	91	88	88
11	A	Total	7/23/87	93	91	88	89
11	B	Total	7/23/87	91	89	88	87
11	C	Total	7/23/87	91	86	91	94
11	D	Total	7/23/87	91	90	91	89
16	A	Total	7/24/87	86	83	86	90
16	B	Total	7/24/87	93	91	89	89
16	C	Total	7/24/87	94	95	89	90
16	D	Total	7/24/87	88	87	89	89
17	A	Total	7/24/87	92	88	85	82
17	B	Total	7/24/87	93	91	91	92
17	C	Total	8/08/87	89	88	88	85
17	D	Total	8/08/87	88	89	92	89
18	A	Total	8/10/87	90	86	91	93
18	B	Total	8/10/87	90	93	88	87
18	C	Total	8/10/87	89	92	87	86
18	D	Total	8/10/87	90	88	87	90
18	E	Total	8/10/87	90	79	85	89
19	A	Total	8/12/87	91	93	94	90
19	B	Total	8/12/87	89	99	94	92

TABLE 8 - Total Solids Results from Core Samples Collected Outside Chemical Spill Sites in Percent (%) Continued)

Quadrant	Section	Type	Date	Depth Interval (inches) 0-3	3-6	6-9	9-12
19	C	Total	8/12/87	88	90	91	89
19	D	Total	8/12/87	91	98	91	93
20	A	Total	8/16/87	87	95	93	90
20	B	Total	8/16/87	81	88	91	91
20	C	Total	8/18/87	91	89	89	92
20	D	Total	8/18/87	91	91	92	92
21	A	Total	8/18/87	92	94	85	82
21	B	Total	8/18/87	97	91	90	91
21	C	Total	8/18/87	93	91	88	90
21	D	Total	8/18/87	93	89	84	81
7	A	Total	8/19/87	92	90	91	89
7	B	Total	8/19/87	84	82	83	84
7	C	Total	8/19/87	91	86	87	85
7	D	Total	8/19/87	93	90	87	87
12	A	Total	8/19/87	91	90	90	91
12	B	Total	8/27/87	93	94	90	90
12	C	Total	8/27/87	86	90	91	88
12	D	Total	8/27/87	92	92	92	91
8 A,D 9 A,D 10 A		Total	8/28/87	93	92	92	90
8 B,C 9 B,C 10 B		Total	8/28/87	95	93	91	87
13 A,D 14 A,D 15 A		Total	8/28/87	94	93	---	---
13 B,C 14 B,C 15 B		Total	8/28/87	90	95	---	---
22 A,D 23 A,D 24 A		Total	8/28/87	91	86	86	87
22 B,C,E 23 B,C 24 B		Total	8/28/87	92	91	90	92
Dirt Pile		Total	8/18/87	91	N/A		
26 50' N. of 2A		Total	9/11/87	83	83	82	82

5.0 Environmental Assessment of Air Emissions and Ventilation Systems

On September 21, 1987 personnel from Research & Analytical Laboratories, Inc. and Underwood Air Systems, Inc. inspected all the air exhaust and ventilation systems at Bassick-Sack. Samples were collected from roof area near stacks and results are shown in Sections B, G, J, and K. Figure 1 identifies a schematic of roof area where samples were collected and location of possible contaminant sources.

Generally, these systems were considered to be well designed, but with some notable exceptions. Figure 1 identifies each location source by capital letter (ie: A. B. etc.) and are described in the following manner:

A. Lacquer Painting Area

The standard water-wash spray booths were found to have better than average face velocities utilizing standard EPA exempt solvents. These solvents will not be exempt in the future when air toxic legislation is enacted.

B. Light Buffing Dust Collector

The large low-medium efficiency Kirk and Blum cyclone appears to be well selected for the dust application, but over-filling of the hopper section has caused a serious by-pass of dust which has collected on the roof. A sample from the stack was collected for analysis showing the following contaminant concentrations:

Parameter	mg/l
Copper	32,000
Nickel	130
Zinc	17,000
Chromium	10
Lead	44
Cyanide	34

These concentrations are considered high and verify potential source of contamination with respect to land area studied. This system appears to be in compliance with present EPA air contaminant standards (ie: Forsyth County Air Quality Code), but recirculation is possible for future savings.

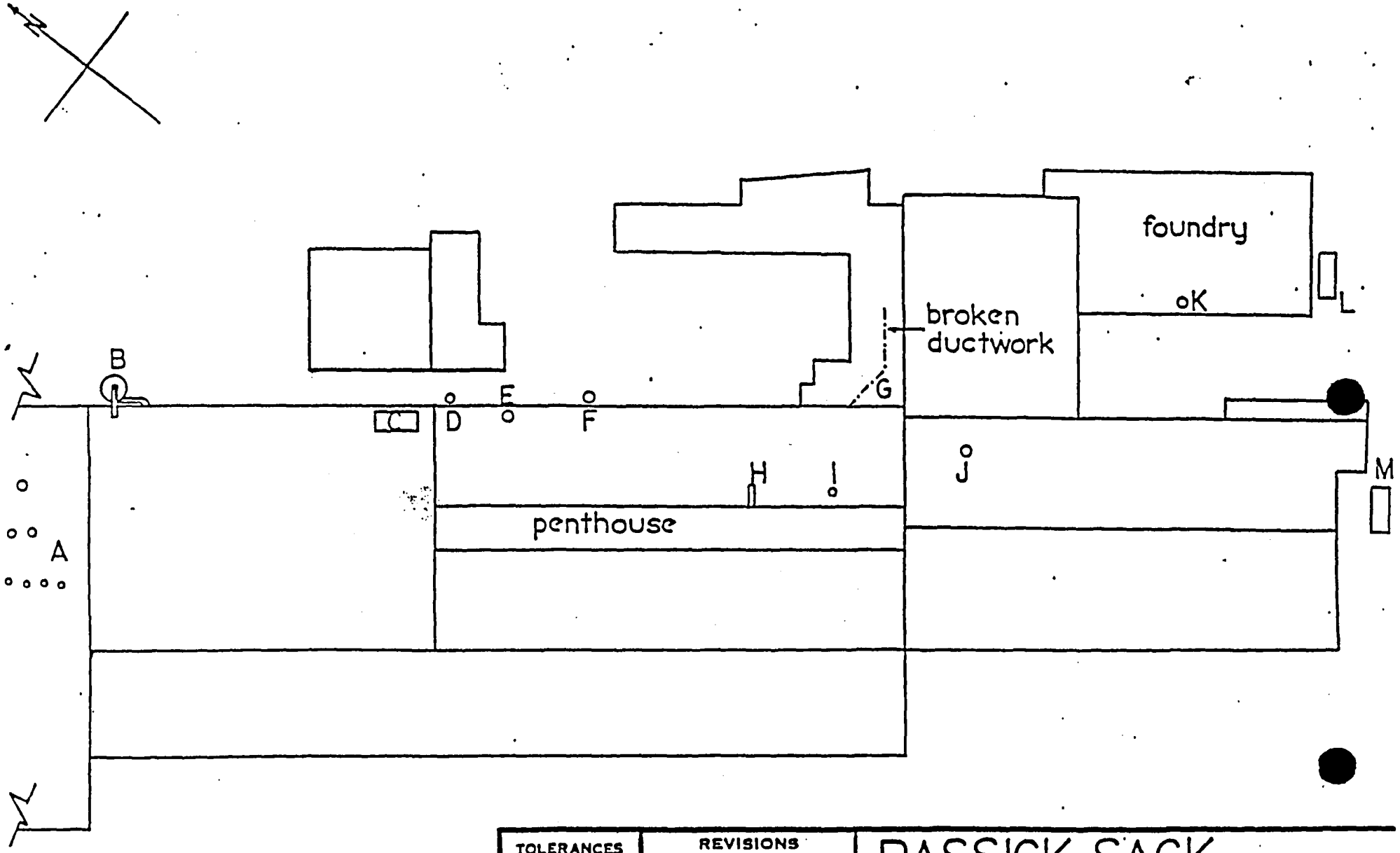


FIGURE 1. SCHEMATIC OF ROOF AREA
BASSICK-SACK DIVISION PLANT
WINSTON-SALEM, N.C.

TOLERANCES (EXCEPT AS NOTED)	REVISIONS			BASSICK SACK		
	NO.	DATE	BY	RESEARCH & ANALYTICAL LABORATORIES, INC.		
DECIMAL ±	1					
	2					
FRACTIONAL ±	3			DRAWN BY	SCALE none	MATERIAL
	4			CHK'D	DATE 9-21-87	DRAWING NO. 121A
ANGULAR ±	5			TRACED	APP'D	

C. Large Tri-Mer Mist Scrubber from Sulfuric Acid, Oakite and Cyanide Rinse Tanks

The PVC scrubber/fan conbination seems to work well in removing toxic contaminants on the interior of the plant. The scrubber is presently not functioning but could be made functional with a minimum of expense. The fan is somewhat out of balance (ie: possibly starting to corrode) and has caused a stress fracture in the PVC scam between the scrubber and fan (repairable). The advent of air toxics regulations will require the capture of cyanide and sulfuric acid fumes.

D. Copper Rack Line

E. Alkaline-Acid Cleaning

F. Cyanide Barrel Brass Plating

All three (3) presently deal with unregulated pollutants much as identified in Section C. All three (3) will be future regulated. It is recommended that in-house testing of C, D, E, and F be performed to determine the need for future air quality control.

G,H. Heavy Buffing

These systems were found to be the poorest at the facility. These systems are definitely in violation of the EPA standard (ie: Forsyth County Air Quality Code) and were depositing large quantities of zinc dust on the roof. A sample from the roof was collected for total analysis showing the following contaminant concentrations:

Parameter	mg/l
Copper	38,000
Nickel	500
Zinc	242,000
Chromium	8.3
Lead	1,600
Cyanide	1.1

These concentrations are considered high (ie: except for chromium and cyanide) and verify potential source of contamination with respect to land area studied.

Employee dust exposure levels are suspect. It is strongly recommended that the system be totally redesigned with recirculation of air to the plant. The system would cost approximately $25,000.00 - $30,000.00. Stack H showed no sign of zinc dust fallout at the stack which implies that there may be a severe dust build-up in the ductwork due to low duct velocities. The main ductlines may fall under the

weight of dust at some point. Zinc oxide dust can cause pneumoconiosis and worker liability should be considered.

I. Perchloroethylene Degreaser Stack

This emission is currently unregulated. It is recommended that a non-carcinogenic degreaser such as 1,1,1 trichloroethane or other substitute solvent be used. Future regulations will most probably regulate these emissions, as well.

J. Zinc Remelt

A water soluble lubricating release oil contaminates all zinc scrap. When the pot is charged, oil smoke is released with steam, producing a white/blue smoke. This smoke is most probably in violation of the visible emissions section of the Air Quality Code. It may be inconsequential because of its small size and its difficulty for observation by agency people. It is expected that significant zinc oxide and dross impurities may be present, as well. A sample collected from the roof near this stack, resulting from the discharge of dye lubricants, showed the following contaminant concentrations:

Parameter	mg/l
Copper	44,000
Nickel	670
Zinc	215,000
Chromium	25
Lead	1,100
Cyanide	24
Oil & Grease	148,000

These concentrations are considered high and verify potential source of contamination with respect to land area studied.

K. Foundry Brass Grinder

This air should be filtered at an estimated cost between $500.00 - $1,000.00. A sample from the stack was collected for analysis showing the following contaminant concentrations:

Parameter	mg/l
Copper	538,000
Nickel	4,300
Zinc	155,000
Chromium	12
Lead	21,000
Cyanide	0.35

These concentrations with the exception of cyanide are considered high and verify potential source of contamination with respect to land area studied.

L. Present Foundry Dust Collection System

This system appears to be well designed, operated, and maintained. The system, however, was not in operation during our inspection.

M. Old BagHouse

This system is non-functional and should be removed. It constitutes hazardous waste in and of itself.

In summary, the potential atmospheric emissions problems are small in comparison to contaminate source stormwater run-off and land area soil contamination. It is expected that the stormwater run-off from roofs will probably be regulated in the coming years. The significant roof deposits of brass and zinc will most likely show-up in stormwater run-off. A decision to use closed-loop systems with no potential for atmospheric emission grinding operations will save energy in the winter and will have a 1-3 year payback in most cases. For cyanide, alkaline, and acid emissions, scrubbing with a unit similar to that on the roof should bring 95+% efficiencies (ie: enough to meet future standards). Recirculation is not recommended for these systems.

APPENDIX A

Proposed Residual Contamination Levels

AUG 31 1987

RECEIVED
AUG 27 1987
BASSICK-SACK DIVISION
WINSTON-SALEM, N. C.

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

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

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

August 26, 1987

Mr. Jim Stanley, General Manager
Stewart Warner Corp., Bassick-Sack Division
2941 Indiana Avenue
Winston-Salem, NC 27105

RE: Proposed Residual Contamination Levels

Dear Mr. Stanley:

As described during our meeting 8-21-87, this office has received the proposal and offers the following comments:

In response to the justifications for using ten times (10x) the Interim Primary Drinking Water Standards, it would be inappropriate to concur with these levels prior to initiating a comprehensive cleanup effort. This office has and will continue to use the Interim Primary and Secondary Drinking Water Standards as a guideline for cleanup levels. Any residual levels in excess of these standards could subject the site to enforcement by the Division of Environmental Management, Groundwater Section. The levels for each are: chromium, .05 ppm., nickel, .35 ppm., and cyanide, .20 ppm. In addition, Bassick-Sack may use a 40 mg/kg level for total cyanides during cleanup as a working method, but extractable levels per section must be submitted as an indication of residual levels. (free cyanides at 10 ppm at a pH of 5 may also be used as previously permitted).

As requested by Mr. Devore's letter of 8-21-87, this office will address cyanide, chromium, and nickel concentrations. This however, does not preclude enforcement activities by the Division of Environmental Management should they choose to address copper or zinc.

As discussed during the meeting, efforts to complete remedial activities should be initiated within the proposed schedule as soon as possible. Split sampling should be arranged through Mr. Steve Phibbs at (919) 761-2390 5 days in advance of sampling. Please call me at (919) 733-2178 should you have any questions regarding this review.

Sincerely,

Gary D. Bell for

R. Douglas Holyfield, Field Operations Supervisor
Solid & Hazardous Waste Management Branch

cc: Steve Phibbs

APPENDIX B

Title 111 Fact Sheet

Emergency Planning and Community Right-To-Know

TITLE III FACT SHEET

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW

EPA

U.S. Environmental Protection Agency

INTRODUCTION

On October 17, 1986, the "Superfund Amendments and Reauthorization Act of 1986" (SARA) was enacted into law. One part of the new SARA provisions is Title III: the Emergency Planning and Community Right-to-Know Act of 1986. Title III establishes requirements for Federal, State, and local governments and industry regarding emergency planning and 'community right-to-know' reporting on hazardous and toxic chemicals. This legislation builds upon EPA's Chemical Emergency Preparedness Program (CEPP) and numerous State and local programs aimed at helping communities to better meet their responsibilities in regard to potential chemical emergencies. The community right-to-know provisions of Title III will help to increase the public's knowledge and access to information on the presence of hazardous chemicals in their communities and releases of these chemicals into the environment.

Title III has four major sections: emergency planning (§301 - §303), emergency notification (§304), community right-to-know reporting requirements (§311, 312), and toxic chemical release reporting – emissions inventory (§313).

§301-303: Emergency Planning:

The emergency planning sections are designed to develop State and local governments' emergency response and preparedness capabilities through better coordination and planning, especially within the local community.

Title III requires that the Governor of each State designate a State emergency response commission by April 17, 1987. If a State commission is not designated, the Governor will operate as the commission until the Governor makes such designation. While existing State organizations can be designated as the State emergency response commission, the commission can have broad-based representation. Public agencies and departments concerned with issues relating to the environment, natural resources, emergency services, public health, occupational safety, and transportation all have important roles in Title III activities. Various public and private sector groups and associations with interest and expertise in Title III issues also can be included in the State commission.

The State commission must designate local emergency planning districts by July 17, 1987, and appoint local emergency planning committees within one month after a district is designated. The State commission is responsible for supervising and coordinating the activities of the local emergency planning committees, for establishing procedures for receiving and processing public requests for information collected under other sections of Title III, and for reviewing local emergency plans.

This local emergency planning committee must include elected State and local officials, police, fire, civil defense, public health professionals, environmental, hospital, and transportation officials as well as representatives of facilities subject to the emergency planning requirements, community groups, and the media. No later than September 17, 1987, facilities subject to the emergency planning requirements must designate a representative to participate in the planning process. The local committee must establish rules, give public notice of its activities and establish procedures for handling public requests for information.

The local committee's primary responsibility will be to develop an emergency response plan by October 17, 1988. In developing this plan, the local committee will evaluate available resources for preparing for and responding to a potential chemical accident. The plan must include:

- Identification of facilities and extremely hazardous substances transportation routes
- Emergency response procedures, on-site and off-site
- Designation of a community coordinator and facility coordinator(s) to implement the plan
- Emergency notification procedures
- Methods for determining the occurrence of a release and the probable affected area and population

Key Dates to Remember

November 17, 1986	EPA published List of Extremely Hazardous Substances and Planning Threshold Quantities in Federal Register (§302, 303, 304)
November 17, 1986	EPA initiates comprehensive review of emergency systems (§305(b))
January 27, 1987	Format for Emergency Inventory Forms and reporting requirements published in Federal Register (§311, 312)
March 17, 1987	National Response Team publishes guidance for preparation and implementation of emergency plans (§303(f))
April 17, 1987	State governors appoint State emergency response commissions (§301(a))
May 17, 1987	Facilities subject to Section 302 planning requirements notify State emergency response commission (§302(c))
	Interim report on emergency system review due to Congress (§305(b))
June 1, 1987	EPA publishes toxic chemical release (i.e., emissions inventory) form (§313(g))
July 17, 1987	State emergency response commission designates emergency planning districts (§301(b))
August 17, 1987 (or 30 days after designation of districts, whichever is sooner)	State emergency response commission appoints members of local emergency planning committees (§301(c))
September 17, 1987 (or 30 days after committee is formed, whichever is earlier)	Facility notifies local planning committee of selection of a facility representative (§303(d)(1))
October 17, 1987	MSDS or list of MSDS chemicals submitted to State commission, local committee and local fire department (§311(d))
March 1, 1988 (and annually thereafter)	Facilities submit their emergency inventory forms to State commission, local committee and local fire department (§312(a)(2))
April 17, 1988	Final Report on emergency systems study due to Congress (§305(b))

(Continued on page 5)

- Description of community and industry emergency equipment and facilities and the identity of persons responsible for them
- Evacuation plans
- Description and schedules of a training program for emergency response personnel
- Methods and schedules for exercising emergency response plans.

In order to assist the local committees in preparing and reviewing plans, Congress required the National Response Team (NRT), composed of 14 Federal agencies with emergency response responsibilities, to publish guidance on emergency response planning. This guidance, the Hazardous Materials Emergency Planning Guide, will be published by the NRT and incorporates emergency planning aspects of the CEPP Interim Guidance. It also replaces the Federal Emergency Management Agency's Planning Guide and Checklist for Hazardous Materials Contingency Plans (popularly know as FEMA-10). See Federal Register dated 12/2/86.

The emergency response plan must be reviewed by the State commission as well as annually by the local committee. The Regional Response Teams, composed of the Federal Regional officials and State representatives, may review the plans and provide assistance to the local committees upon request.

Those planning activities of the local committees and facilities should be focused on, but not limited to, the 402 extremely hazardous substances published in the November 17, 1986, Federal Register. The list included the threshold planning quantities for each substance. EPA can revise the list and threshold planning quantities based on the toxicity, reactivity, volatility, dispersability, combustability, or flammability of a substance.

Any facility that produces, uses, or stores any of the listed chemicals in

a quantity greater than its threshold planning quantity is subject to the emergency planning requirements. In addition, the State commission or the Governor can designate additional facilities, after public comment, to be subject to these requirements. By May 17, 1987, covered facilities must notify the State commission that they are subject to these requirements. If a facility begins to produce, use, or store any of the extremely hazardous substances in threshold quantity amounts, it must notify the State commission within 60 days.

Each State commission must notify EPA of all facilities subject to the emergency planning requirements, including facilities designated by the State commission or the Governor.

§304: Emergency Notification

Facilities must immediately notify the local emergency planning committee and the State emergency response commission if there is a release of a listed hazardous substance that exceeds the reportable quantity for that substance. Substances subject to this requirement are substances on the list of 402 extremely hazardous substances as published in Federal Register on 11/17/86 and substances subject to the emergency notification requirements under CERCLA Section 103(a).

The initial notification can be by telephone, radio, or in person. Emergency notification requirements involving transportation incidents can be satisfied by dialing 911, or in the absence of a 911 emergency number, calling the operator.

This emergency notification needs to include:

- The chemical name
- An indication of whether the substance is extremely hazardous
- An estimate of the quantity released into the environment
- The time and duration of the release
- The medium into which the release occurred
- Any known or anticipated acute or chronic health risks associated with the emergency, and where appropriate, advice regarding medical attention necessary for exposed individuals
- Proper precautions, such as evacuation
- Name and telephone number of contact person.

Section 304 also requires the follow-up written emergency notice after the release. The follow-up notice or notices shall:

- Update information included in the initial notice, and
- Provide information on:
  - Actual response actions taken
  - Any known or anticipated data or chronic health risks associated with the release
  - Advice regarding medical attention necessary for exposed individuals.

Until State commissions and local committees are formed, releases should be reported to appropriate State and local officials.

§311-312: Community Right-to-Know Reporting Requirements

There are two "community right-to-know" reporting requirements which apply primarily to manufacturers and importers. Section 311 requires that facilities which must prepare or have available material safety data sheets (MSDS) under the Occupational Safety and Health Administration (OSHA) regulations to submit either copies of its MSDS or a list of MSDS chemicals to:

- The local emergency planning committee
- The State emergency response commission
- The local fire department.

If the facility owner or operator chooses to submit a list of MSDS chemicals, the list must include the chemical name or common name of each substance and any hazardous component as provided on the MSDS. This list must be organized in categories of health and physical hazards as set forth in OSHA regulations unless modified by EPA.

If a list is submitted, the facility must submit the MSDS for any chemical on the list upon the request of the local planning committee. Under Section 311, EPA may establish threshold quantities for hazardous chemicals below which no facility must report.

The initial submission of the MSDSs or list is required no later than October 17, 1987, or 3 months after the facility is required to prepare or have available an MSDS under OSHA regulations. A revised MSDS must be provided to update MSDS which were originally submitted if significant new information regarding a chemical is discovered.

The reporting requirement of Section 312 involves submission of an emergency and hazardous chemical inventory form to the local emergency planning committee, the State emergency response commission and the local fire department. The hazardous chemicals covered by Section 312 are the same for which facilities are required to submit MSDS or the list for Section 311.

Under Section 312, EPA may also establish threshold quantities for hazardous chemicals below which no facility must be subject to this requirement.

The inventory form incorporates a two-tier approach. Under Tier I,

ilities must submit the following regate information for each applie OSHA category of health and sical hazard:

n estimate (in ranges) of the aximum amount of chemicals or each category present at the acility at any time during the preding calendar year

An estimate (in ranges) of the verage daily amount of chemids in each category

he general location of hazardous hemicals in each category.

on request of a local committee, e commission or local fire artment, the facility must proe the following Tier II informa for each substance subject to request:

he chemical name or the comon name as indicated on the ISDS

An estimate (in ranges) of the aximum amount of the chemical resent at any time during the preeding calendar year

brief description of the manner f storage of the chemical

he location of the chemical at the icility

n indication of whether the wner elects to withold location formation from disclosure to e public.

public may also request Tier II rmation from the State commis and the local committee. The rmation submitted by facilities er Sections 311 and 312 t generally be made available to public by local and State governts during normal working rs.

A published a uniform format the inventory forms on January 1987. Tier I information shall be submitted on or before March 1, 1988, and annually thereafter on March 1.

§313: Toxic Chemical Release Reporting

Section 313 of Title III requires EPA to establish an inventory of toxic chemical emissions from certain facilities. Facilities subject to this reporting requirement are required to complete a toxic chemical release form for specified chemicals. The form must be submitted to EPA and those State officials designated by the Governor, on or before July 1, 1988, and annually thereafter on July 1, reflecting releases during each preceding calendar year.

The purpose of this reporting requirement is to inform government officials and the public about releases of toxic chemicals in the environment. It will also assist in research and the development of regulations, guidelines, and standards.

The reporting requirement applies to owners and operators of facilities that have 10 or more full-time employees, that are in Standard Industries Classification Codes 20 through 39 (i.e., manufacturing facilities) and that manufactured, processed or otherwise used a listed toxic chemical in excess of specified threshold quantities.

Facilities using listed toxic chemicals in quantities over 10,000 pounds in a calendar year are required to submit toxic chemical release forms by July 1 of the following year. Facilities manufacturing or processing any of these chemicals in excess of 75,000 pounds in 1987 must report by July 1, 1988. Facilities manufacturing or processing in excess of 50,000 pounds in 1988 must report by July 1, 1989; thereafter, facilities manufacturing or processing more than 25,000 pounds in a year are required to submit the form. EPA can revise these threshold quantities and covered SIC categories.

The list of toxic chemicals subject to reporting consists initially of chemicals listed for similar reporting purposes by the States of New Jersey and Maryland. There are over 300 chemicals and categories on these lists. EPA can modify this combined list. In adding a chemical to the combined Maryland and New Jersey lists, EPA must consider the following factors:

- Is the substance known to cause cancer or serious reproductive or neurological disorders, genetic mutations, or other chronic health effects?
- Can the substance cause significant adverse acute health effects outside the facility as a result of continuous or frequently recurring releases?
- Can the substance cause an adverse effect on the environment because of its toxicity, persistence, or tendency to bioaccumulate?

Chemicals can be deleted if there is insufficient evidence to establish any of these factors. State governors may petition the Administrator to add or delete a chemical from the list for any of the above reasons. Any person may petition for the first two reasons.

Through early consultation with States or EPA Regions, petitioners can avoid duplicating previous petitions and be assisted in locating sources of data already collected on the problem of concern to support their petitions. EPA will conduct information searches on chemicals contained in a petition, focusing on the effects the petitioners believes warrant addition or deletion.

EPA is required to publish a format for the Toxic Chemical Release form by June 1, 1987. The following information must be included:

- The name, location and type of business
- Whether the chemical is manufactured, processed, or otherwise used and the general categories of use of the chemical
- An estimate (in ranges) of the maximum amounts of the toxic chemical present at the facility at any time during the preceding year
- Waste treatment/disposal methods and efficiency of methods for each wastestream
- Quantity of the chemical entering each environmental medium annually
- A certification by a senior official that the report is complete and accurate.

EPA must establish and maintain a national toxic chemical inventory based on the data submitted. This information must be computer accessible on a national database.

In addition to the requirements for the emissions inventory in Section 313, EPA will arrange for a mass balance study to be carried out by the National Academy of Sciences using information collected from States that conduct a mass balance-oriented annual quantity toxic chemical release program. Mass balance is the accounting of the total quantity of substances brought into a facility versus the amount that is shipped out. The difference is an indication of the amount released into the environment. A report of this study must be submitted by EPA to Congress no later than October 17, 1991.

The purpose of this study is to assess the value of obtaining mass balance information to determine the accuracy of information on toxic chemical releases. Also, the study will assess the value of using the information for determining the waste reduction efficiency and for evaluating toxic chemical management practices at categories of facilities. In addition, the study must determine the implications of mass balance information collected on a national scale including for use as part of a national annual quantity toxic chemical release program.

Other Title III Provisions

Section 322 of Title III addresses trade secrets and applies to emergency planning, community right-to-know, and toxic chemical release reporting. Any person may withold the specific chemical identify of a hazardous chemical for specific reasons. Even if the chemical identity is withheld, the generic class or category of the chemical must be provided. The withholder must show each of the following:

- The information has not been disclosed to any other person other than a member of the local planning committee, a government official, an employee of such person or someone bound by a confidentiality agreement, that measures have been taken to protect the confidentiality, and that the withholder intends to continue to take such measures
- The information is not required to be disclosed to the public under any other Federal or State law
- The information is likely to cause substantial harm to the competitive position of the person
- The chemical identity is not readily discoverable through reverse engineering.

However, even if chemical identity information can be legally withheld from the public, Section 323 provides for disclosure under certain circumstances to health professionals who need the information for diagnostic purposes or from local health officials who need the information for assessment activities. In these cases, the person receiving the information must be willing to sign a confidentiality agreement with the facility.

Information claimed as trade secret and substantiation for that claim must be submitted to EPA. This includes information that otherwise would be submitted only to State or local officials, such as the emergency and hazardous material inventory (§312). People may challenge trade secret claims by petitioning EPA, which must then review the claim and rule on its validity.

EPA must publish regulations governing trade secret claims. The regulations will cover the process for submission of claims, petitions for disclosure and a review process for these petitions.

Secton 305 of Title III authorizes the Federal Emergency Management Agency to provide $5 million

Key Dates to Remember

(Continued from page 2)

July 1, 1988 (and annually thereafter)	Covered facilities submit initial toxic chemical forms to EPA and designated State officials (§313(a))
October 17, 1988	Local emergency planning committees complete preparation of an emergency plan (§303(a))
June 30, 1991	Comptroller general report to Congress on toxic chemical release information collection, use and availability (§313(k))
October 17, 1991	EPA report to Congress on Mass Balance Study (§313(1))

Summary for Chemical Lists for Title III

LIST	Section	Purpose
List of Extremely Hazardous Substances (FR 11/17/86) [402 substances]	§302: Emergency Planning §304: Emergency Notification	• Facilities with more than established planning quantities of these substances must notify the State commission • Initial Focus for preparation of emergency plans by local emergency planning committees • Certain releases of these substances trigger Section 304 notification to State commission and local committees
Substances requiring notification under Section 103(a) of CERCLA [717 substances]	§304: Emergency Notification	• Certain releases of these substances trigger Section notification to State commission and local committees as well as Section 103(a) requirement for National Response Center notification
Hazardous Chemicals considered physical or health hazards under OSHA's Hazard Communication Standard [This is a performance standard, there is no specific list of chemicals]	§304: Emergency Notification §311: Material Safety Data Sheets §312: Emergency Inventory	• Identifies facilities subject to emergency notification requirements • MSDS or list of MSDS chemicals provided by covered facilities to State commission, local committee, and local fire department • Covered facilities provide site-specific information on chemicals to State commission, local committees and local fire departments
Toxic Chemicals identified as of concern by States of New Jersey and Maryland [329 chemicals/chemical categories]	§313: Toxic Chemical Release Reporting	• These chemicals are reported on an emissions inventory to inform government officials and the public about releases of toxic chemicals in the environment.

for each of fiscal years 1987, 1988, 1989, and 1990 for training grants to support State and local governments. These training grants are designed to improve emergency planning, preparedness, mitigation, response, and recovery capabilities. Such programs must provide special emphasis to hazardous chemical emergencies. The training grants may not exceed 80 percent of the cost of any such programs. The remaining 20 percent must come from non-Federal sources.

Under Section 305, EPA is required to review emergency systems for monitoring, detecting, and preventing releases of extremely hazardous substances at representative facilities that produce, use, or store these substances. EPA will report interim findings to Congress no later than May 17, 1987 and issue a final report of findings and recommendations to Congress by April 17, 1988.

The report must include EPA's findings regarding each of the following:

- Status of current technological capabilities to (1) monitor, detect, and prevent significant releases of extremely hazardous substances; (2) determine the magnitude and direction of the hazard posed by each release; (3) identify specific substances; (4) provide data on specific chemical composition of such releases; and (5) determine relative concentration of the constituent substances.
- Status of public emergency alert devices or systems for effective public warning of accidental releases of extremely hazardous substances into any media.
- The technical and economic feasibility of establishing, maintaining, and operating alert systems for detecting releases.

The report must also include EPA's recommendations for:

- Initiatives to support development of new or improved technologies or systems that would assist the timely monitoring, detection, and prevention of releases of extremely hazardous substances.
- Improving devices or systems for effectively alerting the public in the event of an accidental release.

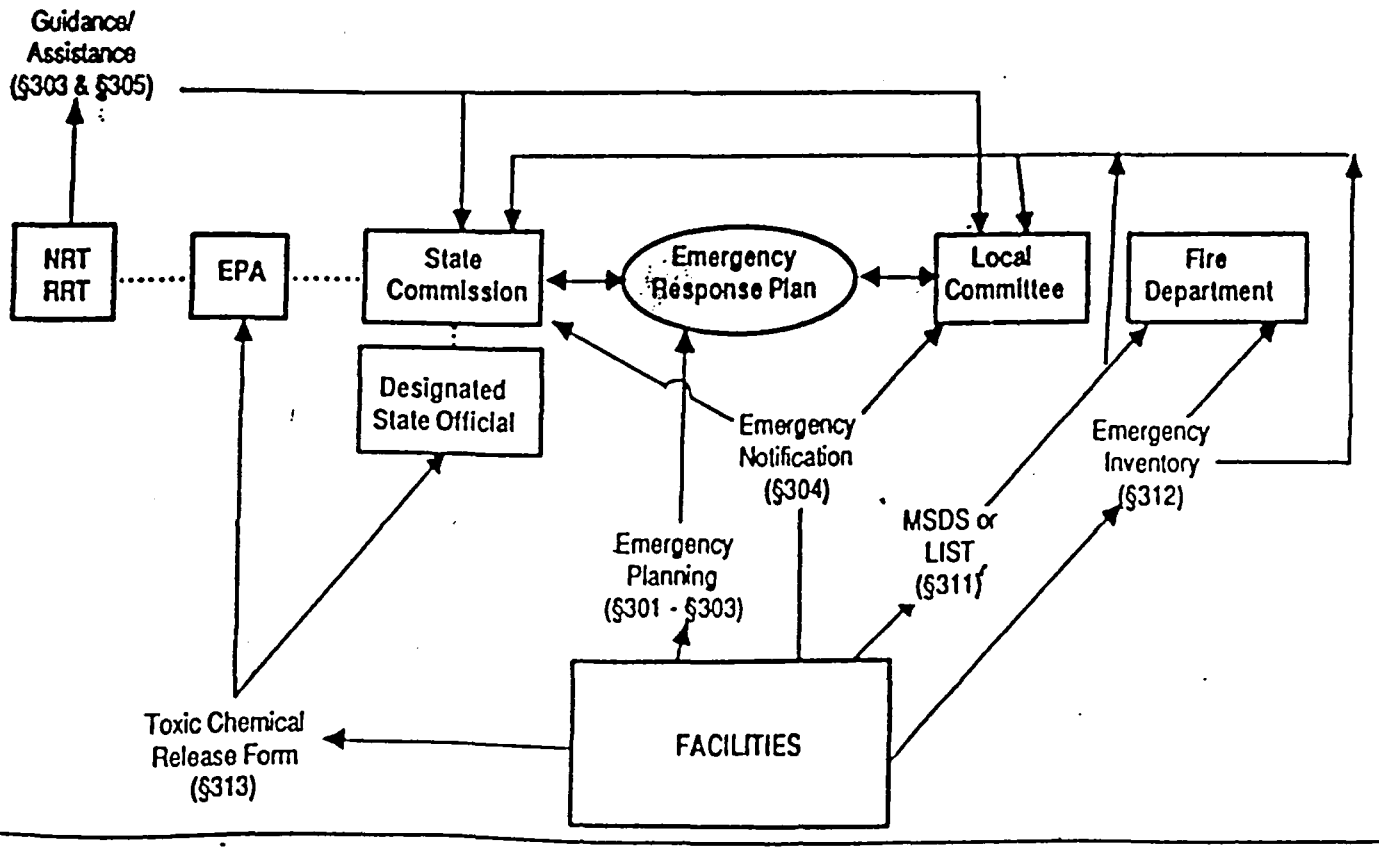
For more information on Title III and EPA's Chemical Emergency Preparedness Program, contact the CEPP Hotline:

1-800-535-0202
(in Washington, D.C. (202) 479-2449)

Hours: 8:30 am - 4:30 pm (EST), Monday - Friday

This is NOT an emergency number

Title III – Major Information Flow Requirements



• U.S. GOVERNMENT PRINTING OFFICE 1987 - 718-872 - 1302/1280

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 | Jonathan B. Howes, Secretary
Telephone 919-733-2801

August 13, 1993

Mr. Fred Overstreet
Director, Division of Environmental Health
Forsyth County Health Department
Post Office Box 686
Winston-Salem, NC 27102-0686

RE: Site Inspection Prioritization
Stewart Warner Bassick-Sack
NCD 024 895 864

Dear Mr. Overstreet:

David Lilley of the NC Superfund Section left a message on your voice mail today to notify you that the NC Superfund Section will conduct a site inspection prioritization of the subject site located in Forsyth County, NC. The inspection will be conducted on August 17, 1993 by Grover Nicholson of the NC Superfund Section.

The purpose of the inspection is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The inspection team will take samples around the site to determine if a hazardous condition exists.

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 Grover Nicholson at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

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

Sincerely,

Pat DeRosa, Head
CERCLA Branch
NC Superfund Section

Enclosures

cc: Dexter Matthews
Doug Holyfield
Debbie Crane
Angie Coppola
David Lilley
File

Federal

Trip Notification & Authorization

Prepared by: Grover Nicholson Today's Date: 13 Aug 93

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

Site Trip

Date of Trip: 17 Aug 93

If trip date changed or cancelled note below:

Trip Date Changed To: _____ Cancelled: ____

NCD#: 024 895 864 Site Name: Stewart Warner Bassick-Sach

City: Winston-Salem County: Forsyth

Reason for Trip: SIA Sampling of offsite soils.

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

Authorized by: David B. Kelly
Industrial Hygienist

Project Team Leader: Glenn Nicholson

Assistants: Harry Zinn ; _____ , _____

Attach To Notification Form: 1 copy each:
Submit to the Industrial Hygienist

- Preliminary Assessment Form (First page only)
- 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: Fred Overstreet Title: Director, Div. of Env. Health
(Note if Dr., M.P., etc.)

Telephone Number: (919) 727 2760

Notes: Health Department Official Contacted: Mr. Overstreet's voice mail

Back Up Letter Required: Yes ✓ No ____

Left a message for Mr. Overstreet on 8-13-93 (DBL)

Note: Signed original to Data Manager

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024895864

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Stewart Warner Corp. Bassick-Sack Division	2941 Indiana Avenue				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Winston-Salem	NC	27105	Forsyth	34	05
09 COORDINATES LATITUDE	LONGITUDE				
36° 07' 43"._	080° 14' 14"._				

10 DIRECTIONS TO SITE (Starting from nearest public road)

Going north on US 52 from the center of Winston-Salem, exit onto 25th street going west. Turn immediately north on Berty Street and then left onto Indiana Avenue. The site is on the NE side of Indiana Avenue.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Stewart Warner Corporation	1826 Diversey Parkway		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Chicago	Ill.	60614	(312) 883-6000
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Bassick-Sack Division (SWC)	2941 Indiana Avenue		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Winston-Salem	NC	27105	(919) 725-1331

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

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

☒ A. RCRA 3001 DATE RECEIVED: 10/28/80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☐ YES DATE __/__/__ (MONTH DAY YEAR)
☒ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1945 (BEGINNING YEAR) | present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

This facility manufactures metal furniture hardware. Wastes generated are spent solvents, and spent electroplating baths and sludges. The electroplating baths and sludges contain cyanide.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The facility has, at least twice, spilled cyanide-laden liquids onto the ground. In addition, there is some uncertainty concerning the methods of disposal of electroplating sludges in past years.

V. PRIORITY ASSESSMENT

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

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

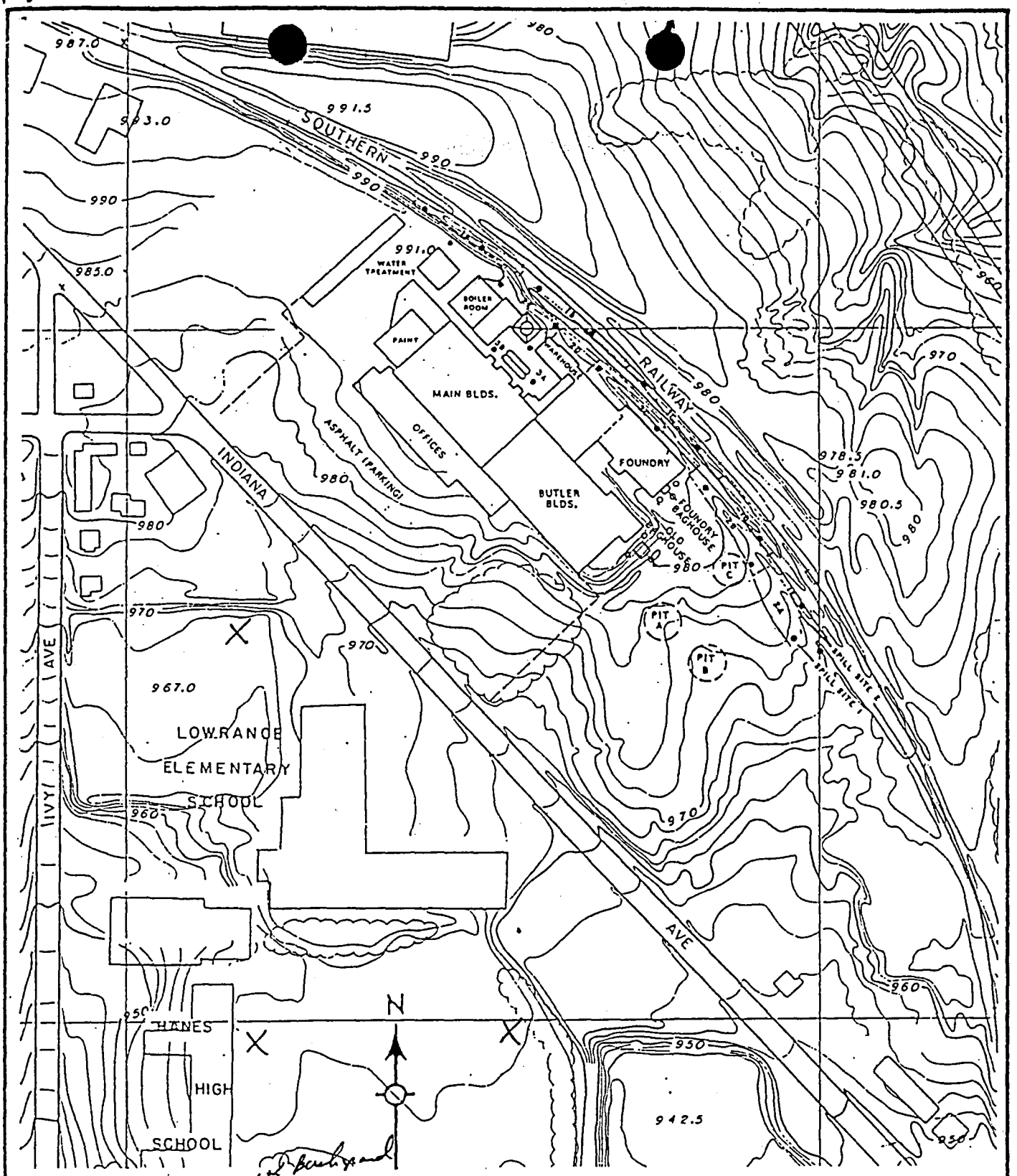
VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Dough Holyfield	NC S&HWM Branch RCRA Compliance	919) 733-2178

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Grover Nicholson	NC DHR	CERCLA UNIT NC S&HWM Branch	919) 733-2801	11-24-87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

Currently, the facility is conducting a clean-up of a March 1987 cyanide spill. NC RCRA is overseeing this clean-up since the company is a generator of hazardous wastes.



SPILL LOCATIONS 1, 2, & 3

EXCAVATION PITS A, B, & C

● Confirmation Soil Sample Locations (1.5-2.0 ft)

O Baghouse Soil Sample Locations (0.05 & 1.5-2.0 ft)

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.

9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770

(301) 982-2800

ANNAPOLIS MD • ATLANTA GA • AURORA CO • BALTIMORE MD • CULPEPER VA • DULUTH GA

EXPORT PA • FAIRFAX VA • MANASSAS VA • RALEIGH NC • ROCKVILLE MD • TAMPA FL

STEWART-WARNER CORP.,
BASSICK-SACK DIVISION

X = APPROX. SAMPLE LOCATION

SITE LAYOUT MAP

0 200. Feet

FIGURE 2

REF:

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Stewart-Warner Bassick-Sack ID # NCD 024 895 864

Location 0.5 mile NW of the intersection of Indiana Ave. and the Memorial Expressway, Winston-Salem, Forsyth County, NC

Proposed Date of Investigation March 3, 1993

Date of Briefing March 2, 1993

Date of Debriefing March 4, 1993

Nature of Visit (check one): On-Site Reconnaissance (PA) ____

On-Site Reconnaissance (SIP) X

Site Investigation ____

Health Department Official Contacted Fred Overstreet's voice mail

Date of Contact February 23, 1993

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

	Personnel	Responsibilities	Signature
Team 1	Grover Nicholson	team leader, recon	Grover Nicholson
Team 1	Doug ~~Rumford~~ Moore	reconnaissance	Douglas Moore
Team 1	Harry Zinn	reconnaissance	Harry Zinn

Plan Preparation:

Prepared By: David Lilley, Industrial Hygienist Dave Lilley

Reviewed By: Jack Butler, Environmental Engineer Jack Butler

B. SITE/WASTE CHARACTERISTICS

Waste Type(s) X Liquid X Solid ____ Sludge ____ Gas ____ Vapor

Characteristics X Corrosive X Ignitable ____ Radioactive

X Volatile X 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
Zinc	Odor Threshold (OT) = no data	10 mg/m^3
Lead	OT = no data	0.05 mg/m^3
Cyanide	OT = no data	5 mg/m^3
Nitric acid	OT = 0.3 - 1 ppm	2 ppm
Tetrachloroethene	OT = 4.68 - 50 ppm	25 ppm
Chromium	OT = no data	0.05 mg/m^3
Xylene	OT = 0.05 - 200 ppm	100 ppm
Toluene	OT = 0.17 - 40 ppm	100 ppm
Methanol	OT = 1.5 ppm	200 ppm
n-butyl alcohol	OT = 0.119 - 15 ppm	50 ppm
Methyl Ethyl Ketone	OT = 0.25 - 50 ppm	200 ppm
Acetone	OT = 100 ppm	750 ppm

ID # NCD 024 895 864

Facility Description: Size 9.8 acres Buildings yes

Disposal Methods Being Investigated Spills

Unusual Features on Site (dike integrity, power lines, terrain, etc.):
There is a 4,500 gallon above-ground cyanide storage tank on-site.

History of the Site: Manufacturing processes on-site include foundry work, vibratory finishing, electroplating, oxidizing, buffing, lacquering, painting, and degreasing. The electroplating sludge and waste from the wastewater treatment plant is sent to World Resource, Inc. for recycling.

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

ID # NCD 024 895 864

Surveillance Equipment:

_____	HNU	_____	Detector Tubes and Pumps
_____	OVA	_____	02 Meter
_____	Explosimeter	_____	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

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

ID # NCD 024 895 864

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

Hospital (Address and Phone Number)

Forsyth Memorial Hospital, 3333 Silas Creek Parkway, Winston -Salem, NC

(919) 760-5000 - can handle chemically contaminated patients

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Turn left onto Indiana Ave. and follow it to Route 8/52 and turn right. From 8/52, get on 40 West and stay on 40 West to the Silas Creek Parkway exit and turn left. The hospital is about 6 miles from the site.

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

EQUIPMENT CHECKLIST

	Air purifying respirator	X	First Aid Kit
	Cartridges for respirator	X	3 gal. Deionized H20
	Eye Wash Unit	X	Rainsuit
	HNU		Gloves (PE/PVC/nitrile/cloth)
	OVA	X	Boots/Boot Covers
	Explosimeter		Coveralls (tyvek/saranex)
	Radiation Monitor		Eye Protection (goggles/shield)
X	Decontamination Materials	X	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.211

TO BE COMPLETED BY PROJECT MANAGER

PROJECT MANAGER: Grover Nicholson PROJECT: Stewart-Warner BSack
INVESTIGATION DATE: March 3, 1993
RECONNAISSANCE X SAMPLING VISIT _____

Materials Used (Please insert a number in the blank)

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

Respirator Worn By

Approximate Time in Respirator

Air Monitoring Data (Include Calibration Reading)

HNU:

OVA:

Explosimter:

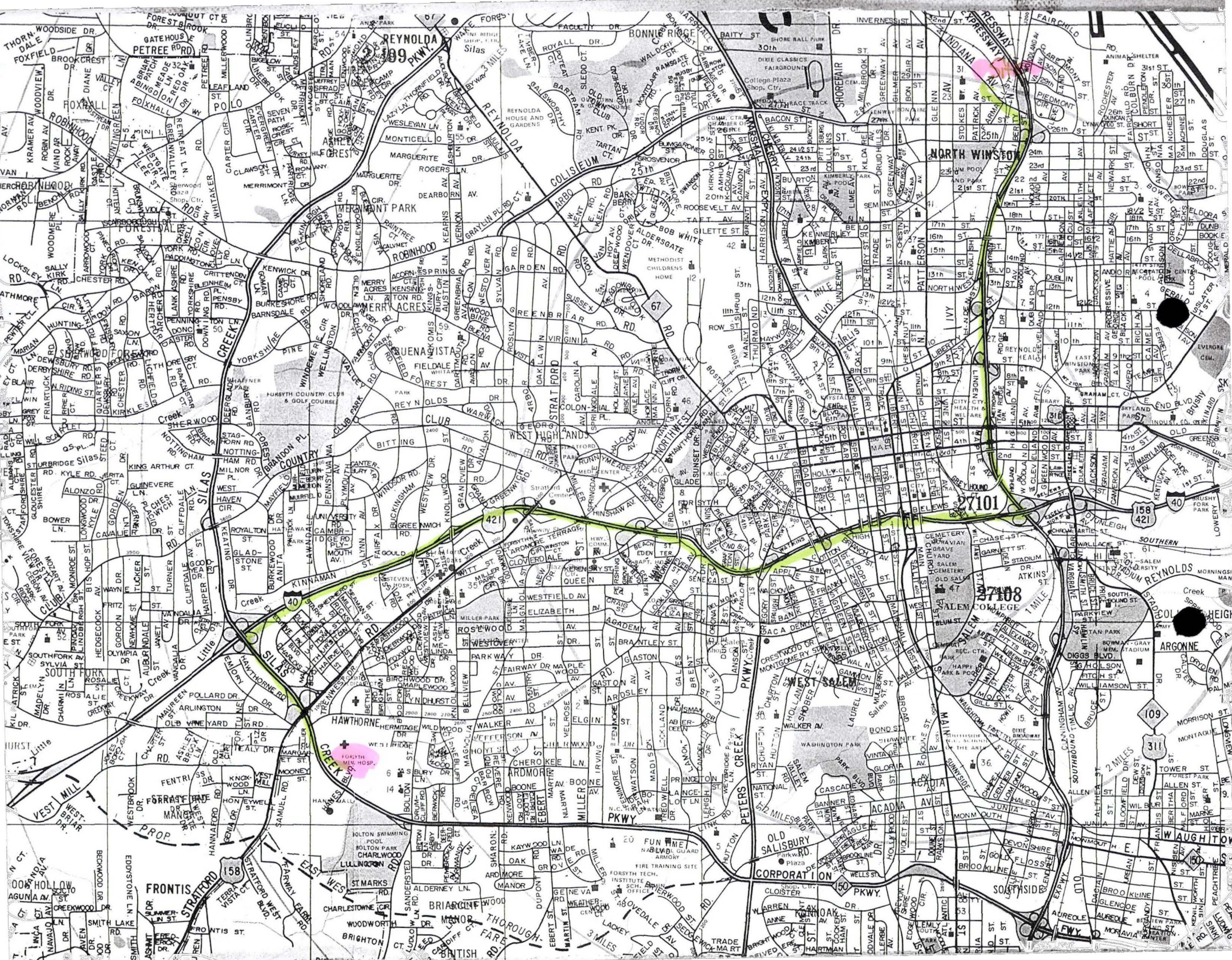
Radiation Meter:

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

Visitors Present

Organization Represented

Signature


REYNOLDA
PKWY
REYNOLDA HOUSE AND GARDENS
OLD TOWN CLUB
COLISEUM
DIXIE CLASSICS FAIRGROUND
NORTH WINSTON
INDIANA
EXPRESSWAY
MERRIMONT PARK
ROBINHOOD
MERRY ACRES
BUENA VISTA
FORSYTH COUNTRY CLUB & GOLF COURSE
COUNTRY CLUB
WEST HIGHLANDS
METHODIST CHILDRENS HOME
SILAS CREEK
KINNAMAN
STRATFORD
HAWTHORNE
FORSYTH MEM. HOSP.
ARDMORE
WEST SALEM
SALEM COLLEGE
OLD SALEM
27101
27108
REYNOLDS
SOUTHERN
PETERS CREEK PKWY.
CORPORATION PKWY.
OLD SALISBURY
WASHINGTON PARK
BOLTON SWIMMING POOL
BOLTON PARK
FORSYTH TECH. INSTITUTE
NATIONAL GUARD ARMORY
FIRE TRAINING SITE
WAUGHTOWN
FRONTIS
SOUTHSIDE
PROP.
THOROUGHFARE
BRIARCLIFF MANOR
3 MILES
2 MILES
1 MILE
ARGONNE
DIGGS BLVD.
STADIUM
SOUTHBOUND ST.
CUNNINGHAM AV.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Zinc

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula Zn	1
Natural Physical State at 25°C solid	1
Vapor Pressure _____ mm Hg at 20°C	
Melting Point 419.5 °F/°C Boiling Point 908 °F/°C	2
Flash Point (open or closed cup) _____ °C/°F	
Solubility - H_2O insoluble	1
Other soluble in acids and alkalis	1

Physical Features: (odor, color, etc.) shining white metal with bluish gray luster (1)

II. TOXICOLOGICAL DATA

	Zinc oxide dust		total dust			
Standards:	10 mg/m^3(3)	TLV	10 mg/m^3(4)	PEL	_____	IDLH _____

Routes of Exposure: Inhalation, Ingestion, Eye contact, skin contact

Acute/Chronic Symptoms: Inhalation of fumes can result in sweet taste, throat dryness, cough, weakness, generalized aching, chills, fever, nausea, vomiting. Ingestion of soluble salts may cause nausea, vomiting, purging (2).

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

Chemical Name: Zinc

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ____ — 1

Toxic by-products _____

B. Flammability LEL _____ UEL _____

C. Reactivity Hazard reacts slowly with ammonia water and aretic acid, rapidly with ammonia — 2

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 Condensed Chemical Dictionary, 10th Edition

(2) The Merck Index, 11th Edition, 1989

(3) Threshold Limit Values and Biological Exposure Indices for 1991-92, ACGIH

(4) 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Lead, inorganic dusts

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula Pb	1
Natural Physical State at 25°C solid	1
Vapor Pressure N/A mm Hg at 20°C	1
Melting Point 327.4 °F/°C Boiling Point 1,740 °F/°C	1
Flash Point (open or closed cup) N/A °C/°F	
Solubility - H_2O N/A	
Other N/A	

Physical Features: (odor, color, etc.) appearance and odor vary depending upon specific compound.

II. TOXICOLOGICAL DATA

suspected or confermed human carcinogen

Standards: .15 mg/m^3 (2) TLV 0.05 mg/m^3 (3) PEL N/A (4) IDLH

Routes of Exposure: inhalation, ingestion, eye contact, skin contact(3)

Acute/Chronic Symptoms: Acute: lassitude, pallor, constipation, abdominal pain, gingival gum line, tremors. Target organs: GI tract, CNS, kidneys, blood.(3)

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

Chemical Name: Lead, inorganic dusts

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes ___ No X ___ _____

Toxic by-products _____ _____

_____ _____

B. Flammability LEL N/A UEL _____ _____

C. Reactivity Hazard None _____

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) Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH.

(3) 29 CFR 1910.1025

(4) Pocket Guide to Chemical Hazards, NIOSH, 1987.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Cyanides (as CN) 1) Potassium Cyanide 2) Sodium Cyanide

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula KCN/NaCN	1
Natural Physical State at 25°C solid	1
Vapor Pressure ~0 mm Hg at 20°C	1
Melting Point 1175/1040°F/°C Boiling Point ?/2732 °F/°C	1
Flash Point (open or closed cup) not combustible°C/°F	1
Solubility - H_2O 72%/58%	1
Other	

Physical Features: (odor, color, etc.) white solids with a faint almond odor (1)

II. TOXICOLOGICAL DATA as CN

Standards: 5 mg/m^3 skin (2) TLV 5 mg/m^3 (3) PEL 50 mg/m^3 IDLH 1

Routes of Exposure: Inhalation, skin absorption, eye contact, ingestion (1)

Acute/Chronic Symptoms: Asphyxia and death can occur, weakness, headache, confusion, nausea, vomiting, incoordination of respiratory rate, slow gasping respiration, eye and skin irritation(1).

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

Chemical Name: Cyanides (as CN)

1) Potassium cyanide

2) Sodium cyanide

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes ___ No X ___ — 1

Toxic by-products _____

B. Flammability LEL _____ UEL _____

C. Reactivity Hazard Incompatible with strong oxidizers such as nitrates, chlorates, acids, acid salts — 1

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) Threshold Limit Value and Biological Exposure Indices for 1991-92, ACGIH

3) 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Nitric Acid

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula H N 03	1,2,3
Natural Physical State at 25°C liquid	3
Vapor Pressure 2.6 - 103 mm Hg at 20°C	3
Melting Point -41.49 °F/°C Boiling Point 122 °F/°C	1,2
Flash Point (open or closed cup) not combustibel °C/°F	3
Solubility - H_2O miscible	
Other	

Physical Features: (odor, color, etc.) fuming colorless to yellow liquid characteristic choking odor. (1,3) IP = 11.95 eV

II. TOXICOLOGICAL DATA

Standards: 2 ppm (4) TLV 2 ppm (5) PEL 100 ppm (3) IDLH

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

Acute/Chronic Symptoms: Acute: skin: corrosion of skin, irritation of eyes and mucous membranes, delayed pulmonary edema, Chronic: chemical bronchitis and pneutmonitis, can erode teeth. (3)

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

Chemical Name: Nitric Acid

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes ____ No x ____ — 3

Toxic by-products _____

B. Flammability LEL _____ UEL _____

C. Reactivity Hazard combustible organics, oxidizable matter, wood, metals, strong bases. — 1,3

D. Corrosivity Hazard yes/no pH: _____ — 3

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. Documentation of the TLVs, 4th Ed., 1980
3. Pocket Guide to Chemical Hazards, NIOSH, 1990
4. Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH
5. CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Perchloroethylene

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula C_2Cl_4	1
Natural Physical State at 25°C liquid	2
Vapor Pressure 14 mm Hg at 20°C	2
Melting Point -2 °F/°C Boiling Point 250 °F/°C	2
Flash Point (open or closed cup) N/A °C/°F	2
Solubility - H_2O 0.015%	2
Other misc with alcohol, ether, chloroform, benzene	1

Physical Features: (odor, color, etc.) colorless liquid with an odor like ether or chloroform IP=9.32 eV (2) OVA Relative Response = 70%

II. TOXICOLOGICAL DATA

Standards: 50 ppm(3) TLV 25 ppm (4) PEL suspect human carcinogen IDLH 2

Routes of Exposure: Inhalation, Ingestion, Skin and/or Eye Contact (2)

Acute/Chronic Symptoms: Irritation of eyes, nose, and throat, nausea, flushed face and neck, vertigo, dizziness, incoordination, headache, carcinogen (2)

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

Chemical Name: Perchloroethylene

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes ___ No X — 2

Toxic by-products _____

B. Flammability LEL none UEL none — 2

C. Reactivity Hazard Incompatible with strong oxidizers, chemically active metals, such as barium, lithium, and beryllium & barium; caustic soda; sodium hydroxide, potash — 2

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. NIOSH Pocket Guide to Chemical Hazards, 1990
3. Threshold Limit Values and Biological Exposure Indices for 1991-92, ACGIH.
4. CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Chromium (VI), insoluble salts

I. PHYSICAL/CHEMICAL PROPERTIES

		Reference
Chemical Formula	varies with compound	1
Natural Physical State at 25°C	solid	1
Vapor Pressure	N/A mm Hg at 20°C	
Melting Point	°F/°C Boiling Point °F/°C	
Flash Point (open or closed cup)	N/A °C/°F	
Solubility - H_2O	not soluble in water	1
Other		

Physical Features: (odor, color, etc.) Properties vary depending upon specific compound. Compounds include: zinc chromate, lead chromate, calcium chromate, etc.

II. TOXICOLOGICAL DATA

Standards: 0.05 mg/m^3(2) TLV 0.5mg/m^3(4) PEL 500 mg/m^3 IDLH 3

Routes of Exposure: Inhalation and ingestion

Acute/Chronic Symptoms: Chronic: fibrosis of the lung and epidemiological studies have shown increased incidence of lung cancer among workers in the manufacture of chrome pigments

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

Chemical Name: Chromium (VI), insoluble salts

III. HAZARDOUS CHARACTERISTICS | Reference

A. Combustibility Yes ___ No X ___

Toxic by-products _____

B. Flammability LEL N/A UEL _____

C. Reactivity Hazard strong oxidizers 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. Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH
3. Pocket Giude to Chemical Hazards, NIOSH, 1987
4. 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Xylene, O, M, & P (Dimethyl benzene)

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula C8 H10	1
Natural Physical State at 25°C liquid	1
Vapor Pressure 7-9 mm Hg at 20°C	1
Melting Point 13-14 °F/°C Boiling Point 137-140 °F/°C	1
Flash Point (open or closed cup) 90/84/81 °C/°F	1
Solubility - H_2O insoluble	1
Other soluble in alcohol, ether and most other organic solvents.	1

Physical Features: (odor, color, etc.) colorless liquid with aromatic/benzene odor. Common solvent for paints and coatings. IP = 8.5 eV. HNU relative response with 10.2 eV probe = 11.3, OVA relative response = 111 - 116%

II. TOXICOLOGICAL DATA

Standards: 100 ppm (2) TLV 100 ppm (3) PEL 1,000 ppm (4) IDLH

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

Acute/Chronic Symptoms: headache, fatigue, dizziness, lassitude, narcotic effects in high concentrations (5,6). Chronic effects not well defined (1).

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

Chemical Name: Xylene, O, M, & P

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ____ — 1,2,3,4

Toxic by-products _____

B. Flammability LEL 1.4% UEL 6.7% — 2

C. Reactivity Hazard strong oxidizers — 4

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) Threshold Limit Values and Biological Exposure Indices for 1991-1992.

(3) 29 CFR 1910.1000

(4) NIOSH Pocket Guide to Chemical Hazards, 1990.

(5) NFPA, Fire Protection Guide on Hazardous Materials, 8th Edition, 1984.

(6) Documentation of the TLV, 4th Edition, 1980

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Toluene (Methyl benzene, toluol)

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula C7H8	1,2,3,4
Natural Physical State at 25°C liquid	1,2,3,4
Vapor Pressure 20 mm Hg at 20°C	3
Melting Point -95 °F/°C Boiling Point 110.6 °F/°C	1,3,4
Flash Point (open or closed cup) 40 °C/°F	1,2,3,4
Solubility - H_2O slightly soluble	1,3,4
Other miscible with alcohol, chloroform, ether, acetone, glacial acetic acid, carbon disulfide	1,3,4

Physical Features: (odor, color, etc.) colorless liquid with an aromatic odor, IP 8.82 eV, (3) derived from coal tar oil or petroleum Relative response on HNU = 10

II. TOXICOLOGICAL DATA

Standards: 100 ppm (5) TLV 100 ppm (6) PEL 2000 ppm IDLH 4

Routes of Exposure: inhalation; ingestion, skin contact, eye contact

Acute/Chronic Symptoms: Narcotic in high concentrations, headache, lassitude, and nausea. Chronic: anemia and dermatitis. (2)

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

Chemical Name: Toluene

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ____ — 4

Toxic by-products _____

B. Flammability LEL 1.0% UEL 7.0% — 4

C. Reactivity Hazard strong oxidizers — 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) Documentation of the TLV, 4th Edition, 1980

(3) NIOSH Pocket Guide for Chemical Hazards, 1990

(4) NEPA, Protection Guide on Hazardous Materials, 8th Edition, 1984

(5) Threshold Limit Values and Biological Exposure Indices for 1991-1992.

(6) 1910.1000, 1989.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Methanol

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula CH3 OH	1
Natural Physical State at 25°C liquid	1
Vapor Pressure 92 mm Hg at 20°C	1
Melting Point -144 °F/°C Boiling Point 147 °F/°C	1
Flash Point (open or closed cup) 52 °C/°F	1
Solubility - H_2O miscible	1
Other	

Physical Features: (odor, color, etc.) colorless liquid with a pungent odor. I.P. = 10.84 eV. (1) Relative response on the HNU = 1

II. TOXICOLOGICAL DATA

Standards:	200 ppm (2) skin	TLV	200 ppm (3) skin	PEL	25,000 ppm (1)	IDLH

Routes of Exposure: Inhalation, absorption, eye contact, ingestion

Acute/Chronic Symptoms: Eye irritation, headache, drowsy, vomit, visual disturbances, light headaches, digestive disturbances, failure of vision. (1)

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

Chemical Name: Methanol

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ____ — 4

Toxic by-products None pertinent — 4

B. Flammability LEL 6.7% UEL 36% — 4

C. Reactivity Hazard Incompatible with strong oxidizers — 1

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) NIOSH Pocket Guide to Chemical Hazards, 1990.

(2) Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH.

(3) 29 CFR 1910.1000.

(4) Chemical Hazard Respones Information System, US Coast Guard, 1985

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: n-Butyl Alcohol

I. PHYSICAL/CHEMICAL PROPERTIES

	Refere
Chemical Formula $C_4H_{10}O$	1
Natural Physical State at 25°C liquid	2
Vapor Pressure 6 mm Hg at 20°C	3
Melting Point -129 °F/°C Boiling Point 243 °F/°C	3
Flash Point (open or closed cup) 99 °C/°F	3,4
Solubility - H_2O 9%	3
Other alcohol, ether, many organic solvents	1

Physical Features: (odor, color, etc.) Colorless liquid with a stron characteristic, mildly alcoholic odor (3) IP = 10.04 eV, OVA Relative Response = 50%

II. TOXICOLOGICAL DATA

Standards:	ceiling= 50ppm (5) skin TLV	ceiling= 50ppm(6) skin PEL	8,000ppm (3) IDLH

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

Acute/Chronic Symptoms: Irritation of the eyes, nose, and throat; headach drowsiness; eye problems and blurred vision; tearing of the eyes; dry, cr skin; visual intolerance of light (3)

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

Chemical Name: n-Butly alcohol

III. HAZARDOUS CHARACTERISTICS — Ref

A. Combustibility Yes X No ____ — 3

Toxic by-products not pertinant — 4

B. Flammability LEL 1.4% UEL 11.2% — 3

C. Reactivity Hazard Incompatible with strong oxidizers — 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. NIOSH Pocket Guide to Chemical Hazards, 1990
4. Chemical Hazard Response Information System, US Coast Guard, 1985.
5. Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH
6. 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Methyl Ethyl Ketone (2 Butanone)

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula C4 H8 O	1,2,3
Natural Physical State at 25°C liquid	1,2,3
Vapor Pressure 70.6 mm Hg at 20°C	2,3
Melting Point -123 °F/°C Boiling Point 175 °F/°C	2
Flash Point (open or closed cup) 35 °C/°F	1,2
Solubility - H_2O 27%	1,3
Other common organic solvents	2

Physical Features: (odor, color, etc.) clear, colorless liquid with acetone-like odor, odor detection 10 ppm IP - 9.48 eV Hnu sensitivity with 10.2 eV probe = 5.7

II. TOXICOLOGICAL DATA

Standards: 200 ppm (4) TLV 200 ppm (5) PEL 3000 ppm IDLH 3

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

Acute/Chronic Symptoms: irritation of eyes and nose, headache, dizziness, vomiting (3).

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

Chemical Name: Methyl Ethyl Ketone

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes x No ____ — 2

Toxic by-products _____

B. Flammability LEL 12% UEL 20% — 2

C. Reactivity Hazard very strong oxidizers — 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) Documentation of the TLV's, 1980.

(3) NIOSH Pocket Guide to Chemical Hazards, 1990.

(4) Threshold Limit Values and Biological Exposure Indices for 1991-1992, ACGIH

(5) 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Acetone

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula CH3COCH3	1,2
Natural Physical State at 25°C liquid	1,2
Vapor Pressure 180 mm Hg at 20°C	2
Melting Point -140 °F/°C Boiling Point 133 °F/°C	2
Flash Point (open or closed cup) 0 °C/°F	2
Solubility - H_2O miscilbe	2
Other	

Physical Features: (odor, color, etc.) colorless liquid with a fragrant, mint-like odor. IP=9.69 eV (2) HNU Relative Response = 6.3 with the 10.2 eV probe. OVA Relative Response = 60%.

II. TOXICOLOGICAL DATA

Standards: 750 ppm (3) TLV 750 ppm (4) PEL 20,000 ppm (2) IDLH

Routes of Exposure: Inhalation, contact with skin will cause dryness.

Acute/Chronic Symptoms: Irritation of eyes, nose and throat. Headaches, dizziness, and dermatitis. (2)

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

Chemical Name: Acetone

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ____ — 2

Toxic by-products _____

B. Flammability LEL 2.5% UEL 13% — 2

C. Reactivity Hazard oxidizing material and acids

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard — Exposure Rate

Background	yes/no	
Alpha particles	yes/no	
Beta particles	yes/no	
Gamma radiation	yes/no	

IV. REFERENCES

1. Chemical Safety Data Guide, BNA - 1985.
2. Pocket Guide to Chemical Hazards, NIOSH - 1990.
3. Threshold Limit Values and Biological Exposure Indices for 1991-1992
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

February 17, 1993

Mr. Fred Overstreet
Director, Division of Environmental Health
Forsyth County Health Department
Post Office Box 686
Winston-Salem, NC 27102-0686

RE: Stewart-Warner Bassick Sack
NCD 024 895 864
Site Inspection Prioritization
On-Site Reconnaissance

Dear Mr. Overstreet:

David Lilley of the NC Superfund Section spoke with Ms. Tommie Wilson of your office today to notify you that the NC Superfund Section will conduct an on-site reconnaissance of the subject site located in Forsyth County, North Carolina. The reconnaissance will be conducted on February 25, 1993 by Grover Nicholson of the NC Superfund Section.

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 reconnaissance team will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

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

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,

Pat DeRosa, Head
CERCLA Branch
NC Superfund Section

Enclosures

cc: Dexter Matthews
Doug Holyfield
Debbie Crane
Angie Coppola
David Lilley
File

Federal
Trip Notification & Authorization

Prepared by: GROVER NICHOLSON Today's Date: 17 FEB 93

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

Site Trip

Date of Trip: 25 FEB 93

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ___

NCD#: 024 895 864 Site Name: Stewart-Warner Bassick Sack (ILCO UNICAN)
City: WINSTON-SALEM County: FORSYTH

Reason for Trip: ~~SSI~~ SIP RECON

Name of Hotel (Overnight Trip): _____ Hotel Telephone Number: ( ) ___ - ____

Authorized by: David Bailey
Industrial Hygienist

Project Team Leader: G. NICHOLSON

Assistants: H. ZINN, _____, _____

Attach To Notification Form: 1 copy each: Submit to the Industrial Hygienist	Preliminary Assessment Form (First page only) 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: Fred Overstreet Title: Director, Div. of Env. Health
(Note if Dr., M.P., etc.)
Telephone Number: (919) 727-2760

Notes: Health Department Official Contacted: Ms. Tommie Wilson
Back Up Letter Required: Yes ✓ No ___

Notified Ms. Wilson for Mr. Overstreet on 2-17-93 (DBL)

Note: Signed original to Data Manager

LAW OFFICES OF
PARKER, POE, ADAMS & BERNSTEIN
P.O. BOX 389
ONE EXCHANGE PLAZA
RALEIGH, NORTH CAROLINA 27602-0389
TELEPHONE 919-828-0564 FACSIMILE 919-834-4564

RECEIVED
JAN 25 1993
SUPERFUND SECTION

CHARLOTTE OFFICE
2600 CHARLOTTE PLAZA
CHARLOTTE, NORTH CAROLINA 28244
TELEPHONE: 704-372-9000
FACSIMILE: 704-334-4706

RESEARCH TRIANGLE PARK OFFICE
P.O. BOX 13039
RESEARCH TRIANGLE PARK, N.C. 27709
TELEPHONE: 919-544-4500
FACSIMILE: 919-544-2798

SOUTHPARK OFFICE
4201 CONGRESS ST., SUITE 145
CHARLOTTE, NORTH CAROLINA 28209
TELEPHONE: 704-556-9600
FACSIMILE: 704-556-9601

JOHN J. BUTLER
PARTNER

FILE NUMBER

DIRECT DIAL

January 22, 1993

Mr. Grover Nicholson
North Carolina Department of Environment,
Health & Natural Resources
Superfund Branch
401 Oberlin Road
Raleigh, North Carolina 27605

RE: Former Stewart-Warner Site in Winston-Salem
Currently Occupied by Ilco-Unican Corporation

Dear Mr. Nicholson:

Enclosed as you requested is a copy of a letter written to William Meyer from Keith Johnson of Poyner & Spruill concerning soils at the Ilco-Unican Winston-Salem Facility. We believe this letter provides a misleading portrait of site activities, site responsibility and fails to mention the extensive site cleanup that Stewart-Warner undertook at the property.

Please let me know if we should provide a detailed response to this letter.

Sincerely,

Jay Butler

John J. Butler

JJB/ghd

Enclosure

[g:\jjb\sw\nichols1.ltr]

file

POYNER&SPRUILL
ATTORNEYS AT LAW

3600 Glenwood Avenue
Raleigh, North Carolina 27612
Mailing Address:
Post Office Box 10096
Raleigh, North Carolina 27605-0096
919/783-6400
Fax: 919/783-1075
Offices:
Raleigh/Rocky Mount/
Charlotte/Greenville

Keith H. Johnson
Direct Dial: 919/783-1013

October 5, 1992

BY HAND DELIVERY

Mr. William L. Meyer
Solid Waste Management
P. O. Box 2091
Raleigh, North Carolina 27602

RE: Ilco-Unican Winston-Salem Facility

Dear Bill:

At our meeting last week concerning contaminated soils in the southern side yard of the above-referenced property, you requested information about how those soils became contaminated. The enclosed documents are forwarded in response to that request.

Specifically enclosed are the following:

1. An RAL Final Report Concerning Assessment of Chemical Contamination Outside Spill Sites 1 and 2 produced for Bassick-Sack before the sale to Ilco. Spill sites 1 and 2 refer to the contaminated areas disclosed to Ilco before the sale, so the purpose of this report was assessment of the rest of the property. RAL concludes in that report that contamination exists outside those two spill sites due to: (i) "the unfortunate practice of dumping chemical waste in years past when . . . enforcement policies were non-existent", (ii) an inadequate air exhaust and ventilation system causing chemical emissions, and (iii) failure to adequately implement a waste management and spill prevention program.

2. Deposition testimony from two former Bassick-Sack employees concerning past waste dumping practices in the southern side yard. Those former employees are: Edwin Smith, former waste treatment operator, and R.A. Anderson, former safety inspector for the Bassick-Sack Division of Stewart-Warner. A 1981 internal audit done by Anderson that references the existence of one last waste pile is also enclosed; and

3. Deposition testimony from Royce Boles, a former Bassick-Sack employee, concerning the inadequate exhaust system for the heavy buffing department, the source of roof runoff contamination.

In addition, I will send to you under separate cover in the near future an affidavit from Charles Stewart, Bassick-Sack's former plant superintendant. Mr. Stewart's affidavit will likewise refer to wastes dumping practices which occurred before Ilco purchased the plant from Bassick-Sack, specifically of electroplating sludges, zinc from the die cast department, and sludges from a degreasing unit used in buffing operations.

If you have any questions or need any further information of this nature, please contact me.

Yours truly,

Keith H. Johnson

Keith H. Johnson

cc: Brian Wells
H. Glenn Dunn, Esq.

KHJ:msb
Enclosures

MJ1660-00081\LETTERS
MEYER.LTR

ILCO UNICAN CORP.

UNICAN

ILCO unica
Winston-Sale
NCD 024895864

June 21, 1991

Mr. Jerome Rhodes
Section Chief
Hazardous Waste Section
Department of Environmental Health
and Natural Resources
P.O. Box 27687
Raleigh, NC 27611-7687

RECEIVED
JUN 2 7 199
HAZARDOUS WASTE SECTION

Dear Mr. Rhodes:

During the removal of the oxidizing and electroplating lines, at ILCO UNICAN's Winston-Salem Facility, it became apparent that some type of spill or release occurred during previous ownership. The waste material has been removed from the concrete floor and properly contained in drums. The waste material was then sampled and analyzed for RCRA metals (TCLP) and cyanide. Based on recent laboratory analytical chemistry results, the waste has been determined to be a hazardous waste (F007/F008). The drums have since been labeled and dated accordingly. It is ILCO UNICAN's intention to properly dispose of this material and seek cost recovery from the previous owner who was responsible for the release.

It is currently believed that recycling for the purpose of metals recovery and re-use is the most prudent disposal option. However, a treatability study which would consist of homogenization of individual waste streams and resampling of the waste will be required to fully evaluate this alternative. For this reason we are herein requesting an extension of 180 days to the standard 90 days required for removal of this type of waste.

Attached for your review and approval are "Proposed Handling Procedures for Bassick Sack Wastes". This plan essentially provides for consolidation of each waste stream separately to allow for homogenization and sampling/analysis. This is required to confirm our belief that the material is suitable for metals reclamation. Once the homogenization and sampling/analyses is complete ILCO UNICAN will provide you with a detailed disposal plan that is the most appropriate for each waste stream.

400 Jeffreys Rd., (P.O. Box 2627) Rocky Mount, N.C. 27802-2627 Tel.: (919) 446-3321 Facsimile: (919) 446-4702

In conclusion, we are anxious to receive your comments regarding the requested extension and our proposed procedure for analyzing the waste streams for treatability evaluations. This is a one-time request to allow us to manage a waste left behind by a previous owners operations. Please direct any questions or your response to Brian Wells (919) 446-3321 Ext. 217 at the letterhead address above.

Sincerely,

Brian E. Wells, REA
Corporate Environmental Manager

cc: Susanna Gibbons, Poyner & Spruill
Jim Garrett, GTI
Frank Belflower
Norman Ward, Winston-Salem
Nader Iskander, Winston-Salem
Steve Phibbs, NCDHR

RECEIVED FEB 28 1991 HAZARDOUS WASTE SECTION

1990 HAZARDOUS WASTE ANNUAL REPORT
(Generators & On-Site TSD Facilities)

FILE COPY

I. FACILITY INFORMATION

Facility Name: ICO WICAN Facility EPA ID Number: NCD0248958

Location of Facility: 2941 INDIANA AVE
(Street or Route Number)

WINSTON-SALEM (City or Town) Forsyth (County) N.C. (State) 27105 (Zip Code)

Facility Contact: Anthony V. Wilder (Name) (919) (Area Code) 725-133 (Phone Number)

List EPA ID Number of each Transporter used during 1990: PAD009232745 FLD980550722 MID098011992 SCD036275626

II. QUANTITY VERIFICATION

The weights reported for each waste stream were determined from:

- ✓ Actual weight
- ✓ Gallons times the weight of water (8.34 lbs per gallon)
- ___ Gallons times the density of the waste
- ___ Other, specify ___

ENTERED Date: 3-7-91 By: ___ DATA PROCESSING

Estimated percentage of error in method used to determine weight: .5 %

Waste identification was determined from:

- ✓ Knowledge of product/raw materials
- ___ Sampling results
- ___ Other, specify ___

III. CERTIFICATION

I certify a program is in place to reduce the volume and toxicity of hazardous waste generated to the degree economically practicable, and the proposed method of treatment, storage or disposal is that practicable method cu available which minimized the present and future threat to human health and the environment.

-AND-

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the inforr I believe that the submitted information is true, accurate and complete. I am aware that there are significant penal submitting false information, including the possibility of fine and imprisonment.

Anthony V. Wilder (Signature) Anthony V. Wilder (Print or Type Name) Feb. 28 19 (Date Sign

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF SOLID WASTE MANAGEMENT

1990 HAZARDOUS WASTE ANNUAL REPORT
(Generators & On-Site TSD Facilities)

E
3/1/91

Continuation Sheet

EPA ID Number: NCD0 24895864

Waste Identification				On-Site Waste Management		Off-Site Waste Management			Waste Minimization	
Waste No.	Waste Form Code	Waste Source Code	Quantity Generated On-Site (lbs)	On-Site Handling Code	Quantity Stored** Treated/Recovered or Disposed On-Site (lbs)	Off-Site Handling Code	Quantity Shipped Off-Site (lbs)	Receiving Facility EPA ID Number	Production Index	Activity Code
F006	B306	A22	14005			R01	14005	PAD981038271	NA	W02
D003	B307	A08	7532			~~D80~~ SU	7532	MID096963194	NA	W12
D007	B505	A22	2295			T04	2295	MID096963194	NA	W13
F007	B313	A38	4660			T04	4660	MID098011992	NA	W52
D008	B305	A40	600			~~D80~~ SU1	600	MID098011992	NA	W19
F001	B202	A07	1485			R02	1485	SCD036275626	NA	W61
F003	B209	A21	4268			R01	4268	SCD036275626	NA	W73

ENTERED
Date 3-7-91
By
DATA PROCESSING

of December 31, 1990

PAGE 2 OF 2

3036/3037 (Revised 1-90)
us Waste Section
36-37

ILCO UNICAN CORP.
UNICAN
CAPITOL DIVISION

February 16, 1990

RECEIVED
FEB 27 1990
HAZARDOUS WASTE SECTION

Mr. Jerry Rhodes
State of North Carolina
Division of Solid Waste Management
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Mr. Rhodes:

Ilco Unican Corporation located at 2941 Indiana Avenue, Winston-Salem, N.C., is subject to annual reporting of hazardous wastes generated and disposed of during 1989.

Enclosed, please find the completed annual report forms for satisfaction of requirements under N. C. Rule 10 NCAC 10F.

If you have any questions, or require additional information, please feel free to contact me at anytime (919) 725-1331.

Sincerely,

Anthony V. Wilder
Plant Chemist

AVW/jhb

enclosure

2941 INDIANA AVENUE • WINSTON–SALEM, NORTH CAROLINA 27105 • TEL.: (919) 725-1331 FAX.: (919) 725-3269

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF SOLID WASTE MANAGEMENT

(39)

1989 HAZARDOUS WASTE ANNUAL REPORT
(Generators & On-Site TSD Facilities)

RECEIVED
FEB 27 1990
HAZARDOUS WASTE SECTION

I. FACILITY INFORMATION:

Facility Name: Ilco Unican Corporation

Facility SIC Code: 3499
Facility EPA ID Number: NCD024895864

Location of Facility: 2941 Indiana Avenue
(Street or Route Number)

Winston-Salem, Forsyth, North Carolina 27105
(City or Town) (County) (State) (Zip Code)

Facility Contact: Anthony V. Wilder (919) 725-1331
(Name) (Area Code) (Phone Number)

List EPA ID Number for each Transporter used during reporting year: SCD036275626

PAD0 09232745 NJD 991291584 MOD0 95038998 SCD 981932601 AL0 981023492 SCD0 73709

NJD0 54126164

II. QUANTITY VERIFICATION:

The weights reported for each waste stream were determined from:

X (a) actual weight
___ (b) gallons times the weight of water (8.34 pounds per gallon)
___ (c) gallons times the weight of the material per gallon
___ (d) other, specify _____

Estimated percentage of error in method used to determine weight: 3 %

Waste identification was determined from:

X (a) Knowledge of product/raw materials
X (b) Sampling results
___ (c) Other, specify _____

III. CERTIFICATION:

I certify a program is in place to reduce the volume and toxicity of hazardous waste generated to the degree to economically practicable, and the proposed method of treatment, storage or disposal is that practicable method curre available which minimized the present and future threat to human health and the environment.

-AND-

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware thatthere are significant penal for submitting false information, including the possibility of fine and imprisonment.

Anthony V. Wilder (Signature)

Anthony V. Wilder (Print or Type Name)

2/20/90 (Date Signed)

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF SOLID WASTE MANAGEMENT

RECEIVED
FEB 27 1990
HAZARDOUS WASTE SECTION

1989 HAZARDOUS WASTE ANNUAL REPORT
(Generators & On-Site TSD Facilities)

Facility EPA ID Number: NCDO 24895864

	Waste Identification				On-Site Waste Management		Off-Site Waste Management			Waste Minimization	
	EPA Waste No.	Waste Form Code	Waste Source Code	Quantity Generated On-Site (LBS)	On-Site Handling Code	Quantity Stored** Treated/Recovered or Disposed On-Site (LBS)	Off-Site Handling Code	Quantity Shipped Off-Site (LBS)	Receiving Facility EPA ID Number	Production Index	Activity Code
1	F003	B209	A21	3,200			R01	3,200	FIA980729610	NA	W02
2	F005	B211	A21	2,400			R01	2,400	SCD036275626	NA	W02
3	F007	B107	A22	10,000			T04	10,000	MID098011992	NA	W52
4	D003	B312	A22	600			T04	600	MID098011992	NA	W52
5	F009	B105	A22	2,400			T04	2,400	MID098011992	NA	NA
6	F006	B306	A22	7,800			R01	7,800	PA981038227	NA	W02
7	F006	B306	A22	41,460			R01	41,460	SCD070375985	NA	W02
8	D008	B404	A22	800			T03	800	SCD044442333	NA	NA
9	D000	B001	A22	420			T03	420	SCD044442333	NA	W21
10											

For additional waste streams complete the "Continuation Sheet"

** As of December 31,1989

NOTE: Read Instructions before completing form

DEHNR 3036/3037 (Revised 1-90)
Hazardous Waste Section
Doc. No. 36-37

ILCO UNICAN CORP.
UNICAN
CAPITOL DIVISION (Formerly BASSICK•SACK)

30 G

December 2, 1988

DEC 5 1988

Mr. Jerome H. Rhodes
Hazardous Waste Branch
Solid Waste Management Section
North Carolina Dept. of Human Resources
P. O. Box 2091
North Carolina 27602-2091

Dear Mr. Rhodes:

With reference to your November 8, 1988, letter allowing us a 30-day extension of accumulation time for storage of hazardous waste without a permit, we are enclosing a copy of the manifest signed by writer and the transporter.

This request was for NCD024895864.

Sincerely,

I. D. Blakley
Plant Engineer

IDB/jhb

enclosure

cc: Steve Phibbs

2941 INDIANA AVENUE • WINSTON–SALEM, NORTH CAROLINA 27105 • TEL.: (919) 725-1331 FAX.: (919) 725-3269

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)734-5424

PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. N C D 0 2 4 8 9 5 8 6 4 Manifest Document No. 0 0 1 2 5
2. Page 1 of 1

Information in the shaded areas is not required by Federal law, but is by State law.

Generator's Name and Mailing Address
Ilco Unican Corporation, Capitol Division
2941 Indiana Avenue, Winston-Salem, NC 27105
Generator's Phone ( )

A. State Manifest Document Number: N/A
B. State Generator's ID: N/A

Transporter 1 Company Name: Willms Trucking Company
6. U.S. EPA ID Number: S C D 0 7 3 7 0 9 2 9 7
C. State Transporter's ID: N/A
D. Transporter's Phone: 803-767-3333

Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID: N/A
F. Transporter's Phone: N/A

Designated Facility Name and Site Address
GSX Services, Inc.
Route 1, Box 255
Pinewood, South Carolina
10. U.S. EPA ID Number: S C D 0 7 0 3 7 5 9 8 5
G. State Facility's ID: N/A
H. Facility's Phone: 803-452-6003

U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
Hazardous Waste Solid N.O.S. ORME NA9189 GSX Codes 92-1101	001	DH	17000	lb.	F006 D008

Additional Descriptions for Materials Listed Above
a. W-00092-1101
b.
c.
d.

K. Handling Codes for Wastes Listed Above

Special Handling Instructions and Additional Information
GSX Work Order No. 89396 "This load has been prepared for shipment consistent with EPA guidelines".

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws of the State of South Carolina.

I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Isaac D. Blakley
Signature: Isaac D. Blakley
Month Day Year: 1 12 18

Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Freddie Lee
Signature: Freddie Lee
Month Day Year: 1 12 18

Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

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

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

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

49

June 14, 1988

Ilco Unican Capital division
2941 Indiana Ave
Winston-Salem NC 27105

RE: EPA ID No.: NCD024895864

Dear Sir:

Based on information supplied by you for the site identified with the above EPA ID number, the state has accepted and processed the change RCRA listing or information that you requested.

Listed below is site information contained on our computer files:

COMPANY NAME	Ilco Unican Capital division
OWNERSHIP	Ilco Unican
CONTACT	Miller, R.R.
PHONE NUMBER	(919)725-1331
LOCATION ADDRESS	2941 Indiana Ave
CITY, STATE & ZIP	Winston-Salem NC 27105

Please verify that the above computer listing/information is correct by notifying us of any corrections.

We are advising EPA of the change. Please notify us if there is any further change in your operations which would affect your status. Your EPA ID number has not been inactivated.

Sincerely,

R. J. Edwards

R. J. Edwards, Compliance Officer
Hazardous Waste Management Branch

CC: STEPHEN E. PHIBBS
EPA Region IV
Forsyth County Health Department

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N.C. Department of Human Resources
Division of Health Services
Solid and Hazardous Waste Management Branch

NOTIFICATION FOR CHANGE IN COMPANY NAME, OWNERSHIP, FACILITY CONTACT, PHONE NUMBER, OR MAILING ADDRESS

DATE: 2/18/88

EPA ID NUMBER: NCD024895864

Mr. Jim Edwards
Solid and Hazardous Waste Management Branch
Division of Health Services
Post Office Box 2091
Raleigh, NC 27602-2091

APPROVED
BY: [illegible]
DATE: 12-19-88

Dear Mr. Edwards:

Our company requests the following change under RCRA:

	EXISTING	CHANGE TO
COMPANY NAME	Stewart Warner Bassick Sack	Olco Unican Capital Division
OWNERSHIP	Stewart Warner Corp.	Olco Unican
FACILITY CONTACT		Same
FACILITY PHONE NUMBER		Same
FACILITY MAILING ADDRESS		Same

I certify that this information is accurate and correct to the best of my knowledge. I am authorized to make this request on behalf of my company at the location given.

Signature

Company Title

Steve Phillips
2/18/88

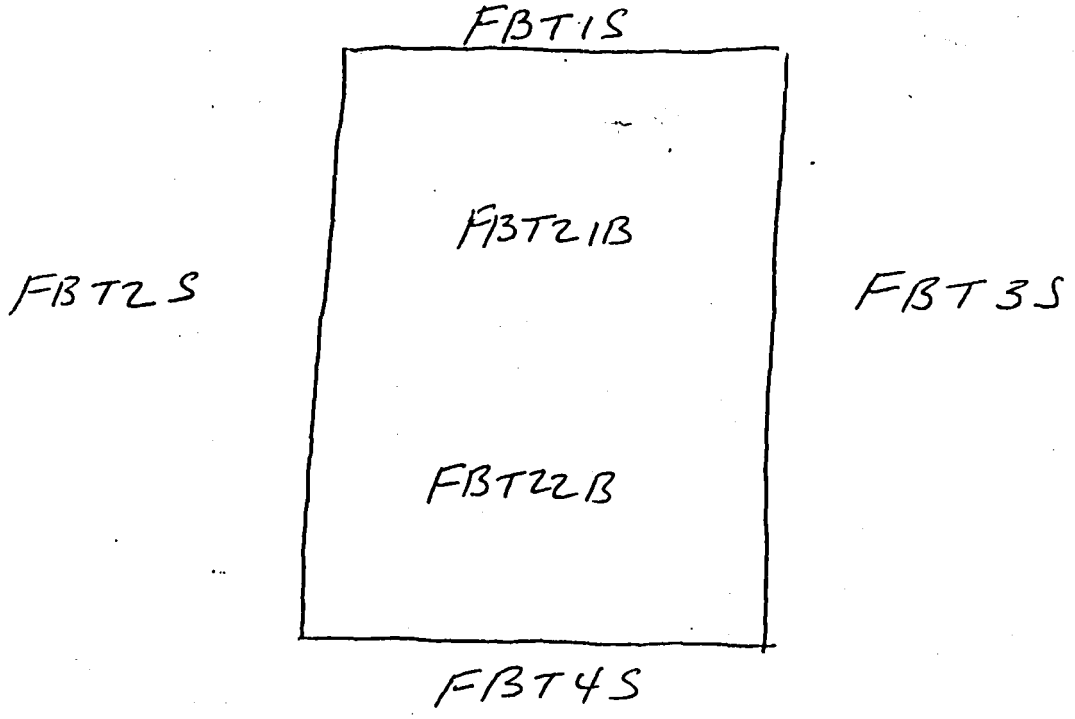
DHS 3347 (8/85)
Solid & Hazardous Waste Management Branch (Review 6/90)

TANK #1 FOUNDRY BAGHOUSE TANK

PILE

FBT 1

FBT 2



IEA
An Aquarion Company

An Environmental Testing Company
Post Office Box 12846
Research Triangle Park, NC 27709

Phone 919·677·0090
Fax 919·677·0427

January 14, 1993

Brian Wells
ILCO Unican Corporation
P. O. Box 2627
Rocky Mount, NC 27802-2627

IEA Project No.: 560050
IEA Reference No.: W9212141
Client Project I.D.: W/S

Dear Mr. Wells,

Transmitted herewith are the results of analyses on eight samples submitted to our laboratory.

The sample(s) were received chilled and intact.

Analyses were performed according to approved methodologies and meet the requirements of the IEA Quality Assurance Program except where noted. Please see the enclosed reports for your results and a copy of the Chain of Custody documentation.

Please do not hesitate to call your Client Account Representative should you have any questions regarding this report.

Very truly yours,

IEA, Inc.

Darlene R. Brandt
for
Linda F. Mitchell
Director, Technical Support Services

State Certification:

Georgia - #816	Tennessee - #00296	Alabama - #40210
New Jersey - #67719	Virginia - #00179	South Carolina - #99021
California - #1768	West Virginia - #50	North Carolina - #37720/#84
Massachusetts - NC039	Kentucky - #90049	Kansas - E-158/E-1189

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-3	Date Sampled:	12-07-92
Client Sample No:	FBT21B	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1752

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 5700 mg/kg. The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1443

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 12 mg/kg.

Comment:
Quantitation limit elevated due to sample dilution prior to analysis. Sample diluted due to the presence of non-target compounds.

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-4	Date Sampled:	12-07-92
Client Sample No:	FBT22B	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-21-92 Analyzed by: Joaquin
Time Analyzed: 1640

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 14000 mg/kg.
The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-20-92 Analyzed by: Joaquin
Time Analyzed: 1455

The sample contains a petroleum hydrocarbon blend with a distillation range similar to gasoline. Total concentration is 260 mg/kg.
The quantitation limit is 25 mg/kg.

Comment:
Quantitation limit elevated due to sample dilution prior to analysis.
Sample diluted due to the presence of target compounds.

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-5	Date Sampled:	12-07-92
Client Sample No:	FBT1S	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-21-92 Analyzed by: Joaquin
Time Analyzed: 1727

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 1200 mg/kg. The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1554

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.5 mg/kg.

Comment:
Quantitation limit elevated due to sample dilution prior to analysis. Sample diluted due to the presence of non-target compounds.

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-6	Date Sampled:	12-07-92
Client Sample No:	FBT2S	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-22-92 Analyzed by: Joaquin
Time Analyzed: 0907

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 4200 mg/kg. The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1630

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-7	Date Sampled:	12-07-92
Client Sample No:	FBT3S	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-20-92 Analyzed by: Joaquin
Time Analyzed: 1241

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 19000 mg/kg.
The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-20-92 Analyzed by: Joaquin
Time Analyzed: 1529

The sample contains a petroleum hydrocarbon blend with a distillation range similar to gasoline. Total concentration is 300 mg/kg.
The quantitation limit is 25 mg/kg.

Comment:
Quantitation limit elevated due to sample dilution prior to analysis.
Sample diluted due to the presence of target compounds.

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050-8	Date Sampled:	12-07-92
Client Sample No:	FBT4S	Date Received:	12-08-92
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 2011

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 15000 mg/kg. The quantitation limit is 200 mg/kg.

Comment:

Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1743

The sample contains a petroleum hydrocarbon blend with a distillation range similar to gasoline. Total concentration is 190 mg/kg. The quantitation limit is 12 mg/kg.

Comment:
Quantitation limit elevated due to sample dilution prior to analysis. Sample diluted due to the presence of target compounds.

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050	Date Sampled:	N/A
Client Sample No:	QC Blank	Date Received:	N/A
Client Project No:	W/S	Date Extracted:	12-11-92

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil,kerosene,varsol)
Date Analyzed: 12-14-92 Analyzed by: Correa
Time Analyzed: 1046

The sample does not contain a petroleum hydrocarbon blend in the distillation range referenced above. The quantitation limit is 2.0 mg/kg.

Comment:
N/A = Not Applicable
Corresponding Samples: 560-050-3 through 560-050-8

==========

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-19-92 Analyzed by: Joaquin
Time Analyzed: 1321

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:
N/A = Not Applicable
Corresponding Samples: 560-050-3 560-050-6
560-050-5 560-050-8

FAX

IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Sample No:	560-050	Date Sampled:	N/A
Client Sample No:	QC Blank	Date Received:	N/A
Client Project No:	W/S		

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 12-20-92 Analyzed by: Joaquin
Time Analyzed: 0913

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:
N/A = Not Applicable
Corresponding Samples: 560-050-4
560-050-7

FAX

IEA
An Aquarion Company

GC/MS PURGEABLES
SW-846 METHOD 8240

IEA Sample Number:	560-050-1	Date Received:	12/08/92
Client Name:	ILCO Unican Corp.	Date Sampled:	12/07/92
Client Project ID:	W/S	Date Analyzed:	12/11/92
Sample Identification:	FBT1	Analysis By:	Stephenson
Matrix:	Soil	Dilution Factor:	5.0
Moisture Correction Factor:	N/A		

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
1	Acetone	10	BQL
2	Benzene	5	BQL
3	Bromodichloromethane	5	BQL
4	Bromoform	5	BQL
5	Bromomethane	10	BQL
6	2-Butanone	10	BQL
7	Carbon disulfide	5	BQL
8	Carbon tetrachloride	5	BQL
9	Chlorobenzene	5	BQL
10	Dibromochloromethane	5	BQL
11	Chloroethane	10	BQL
12	2-Chloroethylvinyl ether	10	BQL
13	Chloroform	5	BQL
14	Chloromethane	10	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethene (total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	100
23	2-Hexanone	10	BQL
24	Methylene chloride	5	BQL
25	4-Methyl-2-pentanone	10	BQL
26	Styrene	5	BQL
27	1,1,2,2-Tetrachloroethane	5	BQL
28	Tetrachloroethene	5	BQL
29	Toluene	5	51
30	1,1,1-Trichloroethane	5	BQL
31	1,1,2-Trichloroethane	5	BQL
32	Trichloroethene	5	BQL
33	Vinyl acetate	10	BQL
34	Vinyl chloride	10	BQL
35	Xylenes (total)	5	640

Comments:
Sample specific quantitation limits may be calculated by multiplying the quantitation limit by the dilution factor.
BQL = Below Quantitation Limit
Quantitation limit elevated due to sample dilution prior to analysis.
Sample diluted due to high concentration of target compounds present.

IEA
An Aquarion Company

BASE/NEUTRAL/ACID EXTRACTABLES
SW-846 METHOD 8270

IEA Sample Number:	560-050	Date Received:	N/A
Client Name:	ILCO Unican Corp.	Date Sampled:	N/A
Client Project I.D.:	W/S	Date Extracted:	12/10/92
Sample Identification:	QC Blank (SVB110)	Date Analyzed:	12/11/92
Matrix:	Solid	Analysis By:	Kesler
Moisture Correction Factor:	N/A	Dilution Factor:	1.0

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
40	Fluorene	330	BQL
41	Hexachlorobenzene	330	BQL
42	Hexachlorobutadiene	330	BQL
43	Hexachlorocyclopentadiene	330	BQL
44	Hexachloroethane	330	BQL
45	Indeno(1,2,3-cd)pyrene	330	BQL
46	Isophorone	330	BQL
47	2-Methylnaphthalene	330	BQL
48	2-Methylphenol (o-cresol)	330	BQL
49	4-Methylphenol (p-cresol)	330	BQL
50	Naphthalene	330	BQL
51	2-Nitroaniline	1600	BQL
52	3-Nitroaniline	1600	BQL
53	4-Nitroaniline	1600	BQL
54	Nitrobenzene	330	BQL
55	2-Nitrophenol	330	BQL
56	4-Nitrophenol	1600	BQL
57	N-Nitroso-di-n-propylamine	330	BQL
58	N-Nitrosodiphenylamine	330	BQL
59	Pentachlorophenol	1600	BQL
60	Phenanthrene	330	BQL
61	Phenol	330	BQL
62	Pyrene	330	BQL
63	1,2,4-Trichlorobenzene	330	BQL
64	2,4,5-Trichlorophenol	330	BQL
65	2,4,6-Trichlorophenol	330	BQL

Comments:
Sample specific quantitation limits may be calculated by multiplying the quantitation limit by the dilution factor and/or moisture correction factor where reported.
BQL = Below Quantitation Limit
N/A = Not Applicable
Corresponding Samples: 560-050-2
Filename: 1211806
FORM 8270 (2) Rev. 081792

IEA
An Aquarion Company

BASE/NEUTRAL/ACID EXTRACTABLES
SW-846 METHOD 8270

IEA Sample Number:	560-050	Date Received:	N/A
Client Name:	ILCO Unican Corp.	Date Sampled:	N/A
Client Project I.D.:	W/S	Date Extracted:	12/10/92
Sample Identification:	QC Blank (SVB110)	Date Analyzed:	12/11/92
Matrix:	Solid	Analysis By:	Kesler
Moisture Correction Factor:	N/A	Dilution Factor:	1.0

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
1	Acenaphthene	330	BQL
2	Acenaphthylene	330	BQL
3	Anthracene	330	BQL
4	Benzoic acid	1600	BQL
5	Benzo(a)anthracene	330	BQL
6	Benzo(b)fluoranthene	330	BQL
7	Benzo(k)fluoranthene	330	BQL
8	Benzo(g,h,i)perylene	330	BQL
9	Benzo(a)pyrene	330	BQL
10	Benzyl alcohol	660	BQL
11	bis(2-Chloroethoxy)methane	330	BQL
12	bis(2-Chloroethyl)ether	330	BQL
13	bis(2-Chloroisopropyl)ether	330	BQL
14	bis(2-Ethylhexyl)phthalate	330	BQL
15	4-Bromophenyl phenyl ether	330	BQL
16	Benzyl butyl phthalate	330	BQL
17	4-Chloroaniline	660	BQL
18	2-Chloronaphthalene	330	BQL
19	4-Chloro-3-methylphenol	660	BQL
20	2-Chlorophenol	330	BQL
21	4-Chlorophenyl phenyl ether	330	BQL
22	Chrysene	330	BQL
23	Dibenzo(a,h)anthracene	330	BQL
24	Dibenzofuran	330	BQL
25	Di-n-butylphthalate	330	BQL
26	1,3-Dichlorobenzene	330	BQL
27	1,4-Dichlorobenzene	330	BQL
28	1,2-Dichlorobenzene	330	BQL
29	3,3'-Dichlorobenzidine	660	BQL
30	2,4-Dichlorophenol	330	BQL
31	Diethyl phthalate	330	BQL
32	2,4-Dimethylphenol	330	BQL
33	Dimethyl phthalate	330	BQL
34	4,6-Dinitro-2-methylphenol	1600	BQL
35	2,4-Dinitrophenol	1600	BQL
36	2,4-Dinitrotoluene	330	BQL
37	2,6-Dinitrotoluene	330	BQL
38	Di-n-octylphthalate	330	BQL
39	Fluoranthene	330	BQL

IEA
An Aquarion Company

BASE/NEUTRAL/ACID EXTRACTABLES
SW-846 METHOD 8270

IEA Sample Number:	560-050-2	Date Received:	12/08/92
Client Name:	ILCO Unican Corp.	Date Sampled:	12/07/92
Client Project I.D.:	W/S	Date Extracted:	12/10/92
Sample Identification:	FBT2	Date Analyzed:	12/14/92
Matrix:	Soil	Analysis By:	Kesler
Moisture Correction Factor:	1.25	Dilution Factor:	20

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
40	Fluorene	330	BQL
41	Hexachlorobenzene	330	BQL
42	Hexachlorobutadiene	330	BQL
43	Hexachlorocyclopentadiene	330	BQL
44	Hexachloroethane	330	BQL
45	Indeno(1,2,3-cd)pyrene	330	BQL
46	Isophorone	330	BQL
47	2-Methylnaphthalene	330	61000
48	2-Methylphenol (o-cresol)	330	BQL
49	4-Methylphenol (p-cresol)	330	BQL
50	Naphthalene	330	12000
51	2-Nitroaniline	1600	BQL
52	3-Nitroaniline	1600	BQL
53	4-Nitroaniline	1600	BQL
54	Nitrobenzene	330	BQL
55	2-Nitrophenol	330	BQL
56	4-Nitrophenol	1600	BQL
57	N-Nitroso-di-n-propylamine	330	BQL
58	N-Nitrosodiphenylamine	330	BQL
59	Pentachlorophenol	1600	BQL
60	Phenanthrene	330	18000
61	Phenol	330	BQL
62	Pyrene	330	BQL
63	1,2,4-Trichlorobenzene	330	BQL
64	2,4,5-Trichlorophenol	330	BQL
65	2,4,6-Trichlorophenol	330	BQL

Comments:
Sample specific quantitation limits may be calculated by multiplying the quantitation limit by the dilution factor and/or moisture correction factor where reported.
BQL = Below Quantitation Limit
Sample diluted due to high concentration of target compounds present.

IEA
An Aquarion Company

BASE/NEUTRAL/ACID EXTRACTABLES
SW-846 METHOD 8270

IEA Sample Number:	560-050-2	Date Received:	12/08/92
Client Name:	ILCO Unican Corp.	Date Sampled:	12/07/92
Client Project I.D.:	W/S	Date Extracted:	12/10/92
Sample Identification:	FBT2	Date Analyzed:	12/14/92
Matrix:	Soil	Analysis By:	Kesler
Moisture Correction Factor:	1.25	Dilution Factor:	20

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
1	Acenaphthene	330	BQL
2	Acenaphthylene	330	BQL
3	Anthracene	330	BQL
4	Benzoic acid	1600	BQL
5	Benzo(a)anthracene	330	BQL
6	Benzo(b)fluoranthene	330	BQL
7	Benzo(k)fluoranthene	330	BQL
8	Benzo(g,h,i)perylene	330	BQL
9	Benzo(a)pyrene	330	BQL
10	Benzyl alcohol	660	BQL
11	bis(2-Chloroethoxy)methane	330	BQL
12	bis(2-Chloroethyl)ether	330	BQL
13	bis(2-Chloroisopropyl)ether	330	BQL
14	bis(2-Ethylhexyl)phthalate	330	BQL
15	4-Bromophenyl phenyl ether	330	BQL
16	Benzyl butyl phthalate	330	BQL
17	4-Chloroaniline	660	BQL
18	2-Chloronaphthalene	330	BQL
19	4-Chloro-3-methylphenol	660	BQL
20	2-Chlorophenol	330	BQL
21	4-Chlorophenyl phenyl ether	330	BQL
22	Chrysene	330	BQL
23	Dibenzo(a,h)anthracene	330	BQL
24	Dibenzofuran	330	BQL
25	Di-n-butylphthalate	330	BQL
26	1,3-Dichlorobenzene	330	BQL
27	1,4-Dichlorobenzene	330	BQL
28	1,2-Dichlorobenzene	330	BQL
29	3,3'-Dichlorobenzidine	660	BQL
30	2,4-Dichlorophenol	330	BQL
31	Diethyl phthalate	330	BQL
32	2,4-Dimethylphenol	330	BQL
33	Dimethyl phthalate	330	BQL
34	4,6-Dinitro-2-methylphenol	1600	BQL
35	2,4-Dinitrophenol	1600	BQL
36	2,4-Dinitrotoluene	330	BQL
37	2,6-Dinitrotoluene	330	BQL
38	Di-n-octylphthalate	330	BQL
39	Fluoranthene	330	BQL

IEA
An Aquarion Company

GC/MS PURGEABLES
SW-846 METHOD 8240

IEA Sample Number:	560-050	Date Received:	N/A
Client Name:	ILCO Unican Corp.	Date Sampled:	N/A
Client Project ID:	W/S	Date Analyzed:	12/10/92
Sample Identification:	QC Blank (VBLK7K)	Analysis By:	Stephenson
Matrix:	Solid	Dilution Factor:	1.0
Moisture Correction Factor:	N/A		

Number	Compound	Quantitation Limit (ug/kg)	Results Concentration (ug/kg)
1	Acetone	10	BQL
2	Benzene	5	BQL
3	Bromodichloromethane	5	BQL
4	Bromoform	5	BQL
5	Bromomethane	10	BQL
6	2-Butanone	10	BQL
7	Carbon disulfide	5	BQL
8	Carbon tetrachloride	5	BQL
9	Chlorobenzene	5	BQL
10	Dibromochloromethane	5	BQL
11	Chloroethane	10	BQL
12	2-Chloroethylvinyl ether	10	BQL
13	Chloroform	5	BQL
14	Chloromethane	10	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethene (total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	2-Hexanone	10	BQL
24	Methylene chloride	5	BQL
25	4-Methyl-2-pentanone	10	BQL
26	Styrene	5	BQL
27	1,1,2,2-Tetrachloroethane	5	BQL
28	Tetrachloroethene	5	BQL
29	Toluene	5	BQL
30	1,1,1-Trichloroethane	5	BQL
31	1,1,2-Trichloroethane	5	BQL
32	Trichloroethene	5	BQL
33	Vinyl acetate	10	BQL
34	Vinyl chloride	10	BQL
35	Xylenes (total)	5	BQL

Comments:
Sample specific quantitation limits may be calculated by multiplying the quantitation limit by the dilution factor.
BQL = Below Quantitation Limit
N/A = Not Applicable
Corresponding Samples: 560-050-1
Filename: 1210G03

FORM 8240 Rev. 100391

iea

an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 27050

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER _____

COMPANY: ILCO UNICAN CORP

Page 1 of PE 1

PROJECT #: W/S

PROJECT NAME: UST REMOVAL

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	1310	1330	TH-GC METHOD 8550/5030	TPH/MTBE (Vitreous)								
FBT1	12/1/92	1:00		✓	FORMER BIL TANK		✓		✓											
FBT2	12/1/92	1:10		✓	" " " "		✓			✓										
FBT2B	12/1/92	1:20		✓	" " " "		✓				✓									
FBT2B	12/1/92	1:35		✓	" " " "		✓				✓									
FBT1S	12/1/92	1:45		✓	" " " "		✓				✓									
FBT2S	12/1/92	1:55		✓	" " " "		✓				✓									
FBT3S	12/1/92	2:05		✓	" " " "		✓				✓									
FBT4S	12/1/92	2:15		✓	" " " "		✓				✓									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY:	DATE	TIME
	12/3/92	3:30		12/4/92	9:20

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY:	DATE	TIME

IEA QUOTE NO.:

IEA RUSH NO.:

PROJECT MANAGER (PLEASE PRINT): BRIAN E. WELLS

P.O. NO.:

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:
SEND RESULTS TO: ILCO UNICAN CORP
400 JEFFERYS ROAD
ROCKYMOUNT NC 27801

CHAIN OF CUSTODY RECORD

iea an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

NO: 27050

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER _____

COMPANY: ILCO UNICAN CORP

Page 1 of 1

PROJECT #: W/S
PROJECT NAME: UST REMOVAL
SAMPLERS (SIGNATURE): [signature]

SAMPLE ID	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	8240	8270	TPH-GCM-FID 3550/5030 (Specialty Analytical)									
FBT1	12/1/92	1:00		✓	FOUNDRY BH TANK		✓		✓											
FBT2	12/1/92	1:10		✓	" " " "		✓			✓										
FBT2B	12/1/92	1:20		✓	" " " "		✓				✓									
FBT2B	12/1/92	1:35		✓	" " " "		✓				✓									
FBT1S	12/1/92	1:45		✓	" " " "		✓				✓									
FBT2S	12/1/92	1:55		✓	" " " "		✓				✓									
FBT3S	12/1/92	2:05		✓	" " " "		✓				✓									
FBT4S	12/1/92	2:15		✓	" " " "		✓				✓									

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	12/1/92	3:30	[signature]	12/1/92	3:30
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
[signature]	12/1/92	5:10	[signature]	12/1/92	9:45

IEA QUOTE NO.

IEA RUSH NO.

PROJECT MANAGER (PLEASE PRINT): BRIAN E. WELLS

P.O. NO.

REMARKS ON SAMPLE RECEIPT
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS
SEND RESULTS TO: ILCO UNICAN CORP
400 JEFFERYS ROAD
ROCKYMOUNT NC 27801

FIELD REMARKS
TCO-050

IEA
An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 617·272·5212
Fax 508·667·7871

January 25, 1993

Mr [redacted]
ILCO Unican Corp.
3000 Weston Parkway
Cary, NC 27513

Project Identification: W/S UST Removal

IEA Report Number: 0020-321

Dear Mr. Wells:

Enclosed please find the analytical results for the project referenced above. The laboratory received the samples on January 16, 1993.

Please note that the surrogate recovery value for 2,4,6-Tribromophenol in in the EPA Method 8270 report for sample YTSP (0020-321-02) is below the method specified acceptance limits. A review of the ABN batch in which this sample ran leads us to attribute the low recovery to matrix effects.

If you have any questions or need additional information, please call our client service representative.

Sincerely,
INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Mark Randall

Mark Randall
Director of Operations

MR:lg

IEA
An Aquarion Company

Analysis Report: EPA Method 8080

Client:	ILCO Unican Corp.	IEA ID:	0020-321-01
Project:	W/S UST Removal	Sample:	FTBSP
Report Date:	01/25/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/18/93		
Extracted:	01/18/93		
Analyzed:	01/21/93	Dilution	
By:	JWL	Factor:	17

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Aldrin	10	BQL
2	alpha-BHC	10	BQL
3	beta-BHC	10	BQL
4	delta-BHC	10	BQL
5	gamma-BHC	10	BQL
6	Chlordane	50	BQL
7	4,4'-DDD	10	BQL
8	4,4'-DDE	10	BQL
9	4,4'-DDT	10	BQL
10	Dieldrin	10	BQL
11	Endosulfan I	10	BQL
12	Endosulfan II	10	BQL
13	Endosulfan sulfate	10	BQL
14	Endrin	10	BQL
15	Endrin aldehyde	10	BQL
16	Heptachlor	10	BQL
17	Heptachlor epoxide	10	BQL
18	Methoxychlor	20	BQL
19	Toxaphene	100	BQL
20	Aroclor 1016	100	BQL
21	Aroclor 1221	100	BQL
22	Aroclor 1232	100	BQL
23	Aroclor 1242	100	BQL
24	Aroclor 1248	100	BQL
25	Aroclor 1254	100	20,000
26	Aroclor 1260	100	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene	D %
Dibutylchlorendate	D %

Comments:
BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Results and quantitation limits for soil samples adjusted for % moisture.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to high concentration of target compounds present.
D = Diluted below calibration.

CHAIN OF CUSTODY RECORD

IEA
An Aquarion Company
3000 WESTON PKWY.
CARY, N.C. 27513
PH # 919-677-0090
FAX # 919-677-0427

NO: 35987

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER _____

COMPANY: Ilco Unican Corp.

Page 1 of 1

PROJECT #: W/S
PROJECT NAME: UST Removal
SAMPLERS (SIGNATURE): [signature]

SAMPLE ID	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	8240	8270	8080	RCRA Metals TCLP w/Mercury	RCRA Metals Total	Total Cyanide							
FBSP	1/14/93	2:10p		✓	Foundry Tank Backfill Soil Pile	1	✓				✓										
FTSP	1/14/93	2:18p		✓	Yard Tank Soil Pile	3	✓		✓	✓	✓										
FTSP	1/14/93	3:09p		✓	Outside fence Tank Soil Pile	4	✓		✓	✓	✓	✓									
FTDS	1/14/93	3:50p	✓		Outside fence tank Discolored Layer	3	✓					✓	✓	✓							

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/14/93	4:30p	[signature]	1/14/93	4:30p
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME

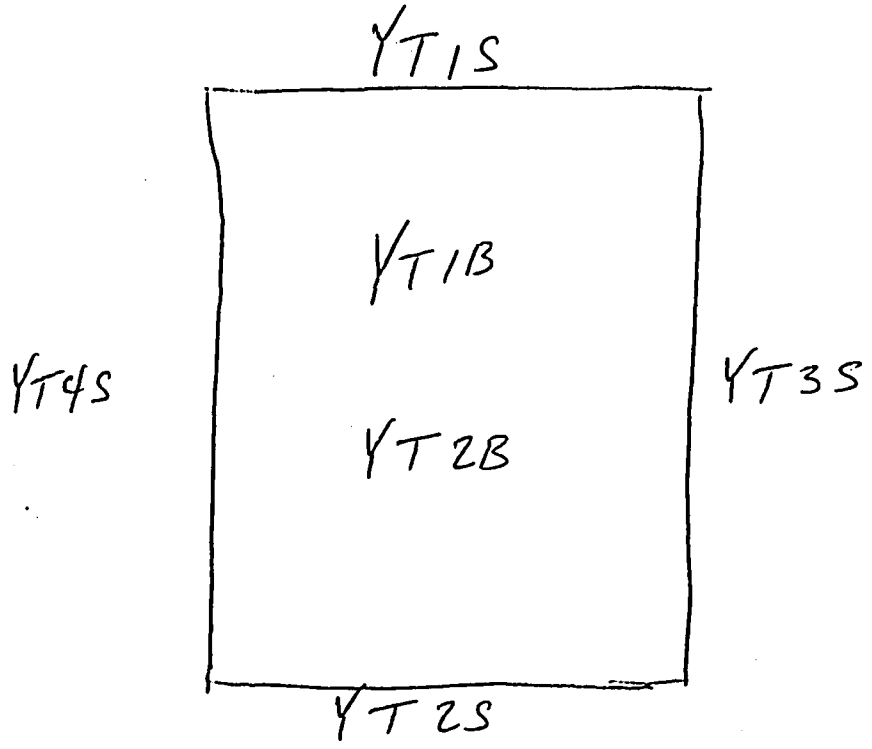
IEA QUOTE NO.:
IEA RUSH NO.:
PROJECT MANAGER (PLEASE PRINT): BRIAN E. WELLS
P.O. NO.: UST Removal P.O. - Consu-

REMARKS ON SAMPLE RECEIPT
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

TANK #2 YARD TANK



IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: QC Blank

Matrix: Solid
Date Received: N/A
Date Sampled: N/A

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	BQL	12/22/92	12/23/92	LG

Comments:
BQL = Below Quantitation Limit
N/A = Not Applicable
O&G (Grav) = Oil & Grease Gravimetric
Corresponding Samples: 560-051-1 through 6

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-6
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT4S

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	30 mg/kg	12/22/92	12/23/92	LG

Comments:

O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-5
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT3S

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	BQL	12/22/92	12/23/92	LG

Comments:
BQL = Below Quantitation Limit
O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-4
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT2S

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	BQL	12/22/92	12/23/92	LG

Comments:
BQL = Below Quantitation Limit
O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-3
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT1S

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	BQL	12/22/92	12/23/92	LG

Comments:
BQL = Below Quantitation Limit
O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-2
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT2B

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	200 mg/kg	12/22/92	12/23/92	LG

Comments:

O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

IEA Project #: 560-051
IEA Sample #: 560-051-1
Client Name: ILCO Unican Corporation
Client Proj. I.D.: W/S
Sample I.D.: YT1B

Matrix: Soil
Date Received: 12/09/92
Date Sampled: 12/08/92

Parameter	Method	Detection Limits	Results	Date Prepared	Date Analyzed	Analyst
O&G (Grav)	SW-846 9071	10 mg/kg	BQL	12/22/92	12/23/92	LG

Comments:
BQL = Below Quantitation Limit
O&G (Grav) = Oil & Grease Gravimetric

IEA
An Aquarion Company

An Environmental Testing Company
Post Office Box 12846
Research Triangle Park, NC 27709

Phone 919·677·0090
Fax 919·677·0427

January 4, 1993

Brian E. Wells
ILCO Unican Corporation
P. O. Box 2627
Rocky Mount, NC 27802-2627

IEA Project No.: 560051
IEA Reference No.: W9212155
Client Project I.D.: W/S

Dear Mr. Wells,

Transmitted herewith are the results of analyses on six samples submitted to our laboratory.

The sample(s) were received chilled and intact.

Analyses were performed according to approved methodologies and meet the requirements of the IEA Quality Assurance Program except where noted. Please see the enclosed reports for your results and a copy of the Chain of Custody documentation.

Please do not hesitate to call your Client Account Representative should you have any questions regarding this report.

Very truly yours,

IEA, Inc.

Darlene R. Branff
for
Linda F. Mitchell
Director, Technical Support Services

State Certification:

Georgia - #816	Tennessee - #00296	Alabama - #40210
New Jersey - #67719	Virginia - #00179	South Carolina - #99021
California - #1768	West Virginia - #50	North Carolina - #37720/#84
Massachusetts - NC039	Kentucky - #90049	Kansas - E-158/E-1189

IEA
An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 617·272·5212
Fax 508·667·7871

January 25, 1993

Mr [redacted]
ILCO Unican Corp.
3000 Weston Parkway
Cary, NC 27513

Project Identification: W/S UST Removal

IEA Report Number: 0020-321

Dear Mr. Wells:

Enclosed please find the analytical results for the project referenced above. The laboratory received the samples on January 16, 1993.

Please note that the surrogate recovery value for 2,4,6-Tribromophenol in in the EPA Method 8270 report for sample YTSP (0020-321-02) is below the method specified acceptance limits. A review of the ABN batch in which this sample ran leads us to attribute the low recovery to matrix effects.

If you have any questions or need additional information, please call our client service representative.

Sincerely,
INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Mark Randall

Mark Randall
Director of Operations

MR:lg

CHAIN OF CUSTODY RECORD

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

NO: 27044

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER _____

Page 1 of 1

COMPANY: ILCO UNICAN CORP

PROJECT #: W/S

PROJECT NAME: UST REMOVAL

SAMPLERS (SIGNATURE): [signature]

SAMPLE ID	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS 9071											
YTIB	12/8/92	9:45		✓	YARD TANK	1	✓		✓											
YT2B	12/8/92	10:00		✓	" "	1	✓		✓											
YT1S	12/8/92	10:05		✓	" "	1	✓		✓											
YT2S	12/8/92	10:20		✓	" "	1	✓		✓											
YT3S	12/8/92	10:29		✓	" "	1	✓		✓											
YT4S	12/8/92	10:40		✓	" "	1	✓		✓											

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	12/8/92	11:10	[signature]	12/8/92	11:10
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	**P.O. NO.**
BRIAN E. WELLS	

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☑ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

SEND RESULTS TO:

FIELD REMARKS

ILCO UNICAN CORP.
400 JEFFERYS ROAD
ROCKY MOUNT N.C. 27801

CHAIN OF CUSTODY RECORD

iea — an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

NO: 27044

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER

Page 1 of 1

COMPANY: ILCO UNICAN CORP

PROJECT #: W/S
PROJECT NAME: UST REMOVAL
SAMPLERS (SIGNATURE): [signature]

SAMPLE ID	DATE	TIME			STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS 907									
YT1B	12/8/92	9:45		✓	YARD TANK	1	✓		✓									
YT2B	12/8/92	10:00		✓	" "	1	✓		✓									
YT1S	12/8/92	10:08		✓	" "	1	✓		✓									
YT2S	12/8/92	10:20		✓	" "	1	✓		✓									
YT3S	12/8/92	10:29		✓	" "	1	✓		✓									
YT4S	12/8/92	10:40		✓	" "	1	✓		✓									

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	12/8/92	11:40	[signature]	12/8/92	11:40
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
[signature]	12/8/92	5:50	[signature]	12/9/92	1010

IEA QUOTE NO.:
IEA RUSH NO.:
PROJECT MANAGER (PLEASE PRINT): BRIAN E. WELLS
P.O. NO.:

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS: SEND RESULTS TO: ILCO UNICAN CORP. 400 JEFFERYS ROAD ROCKY MOUNT N.C. 27801

560-051

FIELD REMARKS:

CHAIN OF CUSTODY RECORD

IEA
An Aquarion Company
3000 WESTON PKWY.
CARY, N.C. 27513
PH # 919-677-0090
FAX # 919-677-0427

NO: 35987

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER

COMPANY: Ico Unocal Corp.

Page 1 of 1

PROJECT # / PROJECT NAME: W/S / UST - Removal

SAMPLERS SIGNATURE: [signature]

SAMPLE	DATE	TIME	GRAB	COMP	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	8240	8010	8080	Kerosene	Kerosene	Kerosene							
SP	1/14/93	2:10p		✓	Laundry Tank Bottom Soil Pile	1	✓				✓										
SP	1/14/93	2:15p		✓	Yard Tank Soil Pile	3	✓		✓	✓	✓										
TSP	1/14/93	3:09p		✓	Outside Fence Tank Soil Pile	4	✓		✓	✓	✓	✓									
TDS	1/14/93	3:50p		✓	Outside Fence Tank Drill Cuttings	3	✓					✓	✓	✓							

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/15/93	4:30p	[signature]	1/15/93	4:30p
RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	**P.O. NO.**
BRIAN E. WELLS	USTKERNEL PO#[illegible]

REMARKS ON SAMPLE RECEIPT: BOTTLE INTACT ☐ CUSTODY SEALS ☐ PRESERVED ☐ SEALS INTACT ☐ CHILLED ☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

IEA
An Aquarion Company

Analysis Report: EPA Method 8270
(PAGE 1 OF 2 PAGES)

Client:	ILCO Unican Corp.	IEA ID:	0020-321-02
Project:	W/S, UST Removal	Sample:	YTSP
Report Date:	01/21/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/16/93		
Extracted:	01/18/93		
Analyzed:	01/20/93	Dilution	
By:	LT	Factor:	1.2

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Acenaphthene	330	BQL
2	Acenaphthylene	330	BQL
3	Aniline	1650	BQL
4	Anthracene	330	BQL
5	Benzoic acid	1650	BQL
6	Benzo(a)anthracene	330	BQL
7	Benzo(b)fluoranthene	330	BQL
8	Benzo(k)fluoranthene	330	BQL
9	Benzo(g,h,i)perylene	330	BQL
10	Benzo(a)pyrene	330	BQL
11	Benzyl alcohol	660	BQL
12	bis(2-Chloroethoxy)methane	330	BQL
13	bis(2-Chloroethyl)ether	330	BQL
14	bis(2-Chloroisopropyl)ether	330	BQL
15	bis(2-Ethylhexyl)phthalate	330	BQL
16	4-Bromophenyl phenyl ether	330	BQL
17	Benzyl butyl phthalate	330	BQL
18	4-Chloroaniline	660	BQL
19	2-Chloronaphthalene	330	BQL
20	4-Chloro-3-methylphenol	660	BQL
21	2-Chlorophenol	330	BQL
22	4-Chlorophenyl phenyl ether	330	BQL
23	Chrysene	330	BQL
24	Dibenzo(a,h)anthracene	330	BQL
25	Dibenzofuran	330	BQL
26	Di-n-butyl phthalate	330	BQL
27	1,3-Dichlorobenzene	330	BQL
28	1,4-Dichlorobenzene	330	BQL
29	1,2-Dichlorobenzene	330	BQL
30	1,2-Diphenylhydrazine	330	BQL
31	3,3'-Dichlorobenzidine	660	BQL
32	2,4-Dichlorophenol	330	BQL
33	Diethyl phthalate	330	BQL
34	2,4-Dimethylphenol	330	BQL
35	Dimethyl phthalate	330	BQL
36	2-Methyl-4,6-dinitrophenol	1650	BQL
37	2,4-Dinitrophenol	1650	BQL
38	2,4-Dinitrotoluene	330	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8270
(PAGE 2 OF 2 PAGES)

Client: ILCO Unican Corp. IEA ID: 0020-321-02
Project: W/S, UST Removal Sample: YTSP

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
39	2,6-Dinitrotoluene	330	BQL
40	Di-n-octylphthalate	330	BQL
41	Fluoranthene	330	BQL
42	Fluorene	330	BQL
43	Hexachlorobenzene	330	BQL
44	Hexachlorobutadiene	330	BQL
45	Hexachlorocyclopentadiene	330	BQL
46	Hexachloroethane	330	BQL
47	Indeno(1,2,3-cd)pyrene	330	BQL
48	Isophorone	330	BQL
49	2-Methylnaphthalene	330	BQL
50	2-Methylphenol (o-cresol)	330	BQL
51	4-Methylphenol (p-cresol)	330	BQL
52	Naphthalene	330	BQL
53	2-Nitroaniline	1650	BQL
54	3-Nitroaniline	1650	BQL
55	4-Nitroaniline	1650	BQL
56	Nitrobenzene	330	BQL
57	2-Nitrophenol	330	BQL
58	4-Nitrophenol	1650	BQL
59	N-Nitrosodimethylamine	330	BQL
60	N-Nitroso-di-n-propylamine	330	BQL
61	N-Nitrosodiphenylamine	330	BQL
62	Pentachlorophenol	1650	BQL
63	Phenanthrene	330	BQL
64	Phenol	330	BQL
65	Pyrene	330	BQL
66	1,2,4-Trichlorobenzene	330	BQL
67	2,4,5-Trichlorophenol	330	BQL
68	2,4,6-Trichlorophenol	330	BQL

Surrogate Standard Recovery:

2-Fluorophenol	74 %
Phenol-d6	63 %
Nitrobenzene-d5	74 %
2-Fluorobiphenyl	81 %
2,4,6-Tribromophenol	6 %
Terphenyl-d14	110 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Quantitation limits adjusted for % moisture.

IEA
An Aquarion Company

Analysis Report: EPA Method 8240
(PAGE 1 OF 2 PAGES)

Client:	ILCO Unican Corp.	IEA ID:	0020-321-02
Project:	W/S, UST Removal	Sample:	YTSP
Report Date:	01/22/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/16/93		
Analyzed:	01/21/93	Dilution	
By:	JAG	Factor:	1.2

Priority Pollutant Compounds

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	trans-1,2-Dichloroethene	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	BQL
24	1,1,2,2-Tetrachloroethane	5	BQL
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	10	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8240
(PAGE 2 OF 2 PAGES)

Client: ILCO Unican Corp. IEA ID: 0020-321-02
Project: W/S, UST Removal Sample: YTSP

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
Other TCL Compounds:			
32	Acetone	100	BQL
33	2-Butanone	100	BQL
34	Carbon disulfide	5	BQL
35	1,2-Dibromoethane	5	BQL
36	2-Hexanone	50	BQL
37	Methyl-t-butylether	5	BQL
38	4-Methyl-2-pentanone	50	BQL
39	Styrene	5	BQL
40	Vinyl Acetate	50	BQL
41	Xylenes (Total)	5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	98 %
Toluene-d8	94 %
Bromofluorobenzene	77 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.

IEA
An Aquarion Company

Analysis Report: EPA Method 8080

Client:	ILCO Unican Corp.	IEA ID:	0020-321-02
Project:	W/S UST Removal	Sample:	YTSP
Report Date:	01/25/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/18/93		
Extracted:	01/18/93		
Analyzed:	01/21/93	Dilution	
By:	JWL	Factor:	1.6

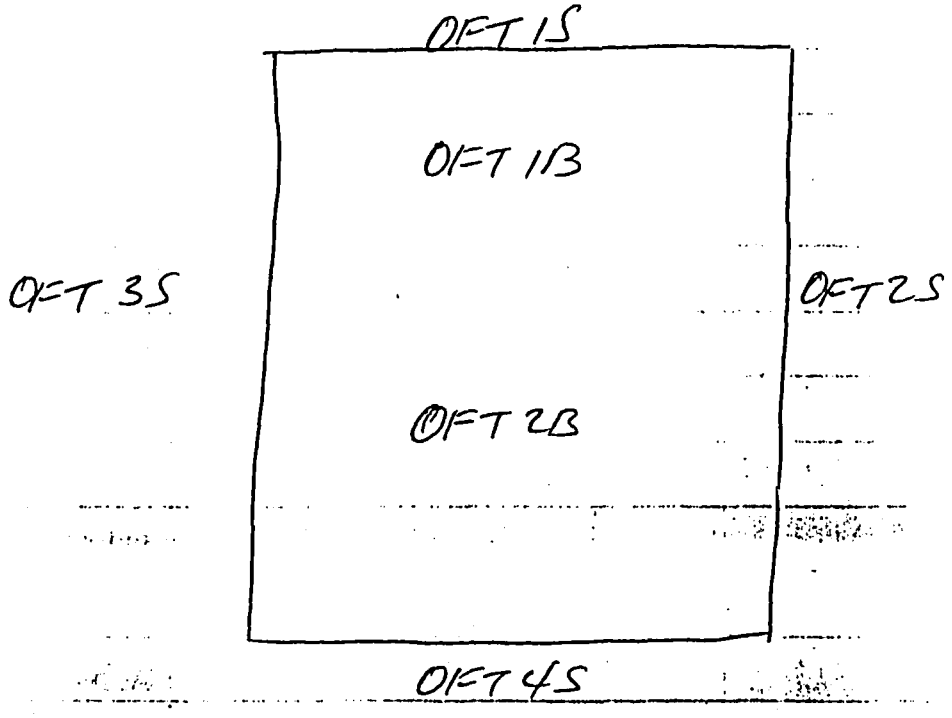
Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Aldrin	10	BQL
2	alpha-BHC	10	BQL
3	beta-BHC	10	BQL
4	delta-BHC	10	BQL
5	gamma-BHC	10	BQL
6	Chlordane	50	BQL
7	4,4'-DDD	10	BQL
8	4,4'-DDE	10	BQL
9	4,4'-DDT	10	BQL
10	Dieldrin	10	BQL
11	Endosulfan I	10	BQL
12	Endosulfan II	10	BQL
13	Endosulfan sulfate	10	BQL
14	Endrin	10	BQL
15	Endrin aldehyde	10	BQL
16	Heptachlor	10	BQL
17	Heptachlor epoxide	10	BQL
18	Methoxychlor	20	BQL
19	Toxaphene	100	BQL
20	Aroclor 1016	100	BQL
21	Aroclor 1221	100	BQL
22	Aroclor 1232	100	BQL
23	Aroclor 1242	100	BQL
24	Aroclor 1248	100	BQL
25	Aroclor 1254	100	BQL
26	Aroclor 1260	100	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene	46 %
Dibutylchlorendate	43 %

Comments:
BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Results and quantitation limits for soil samples adjusted for % moisture.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of non-target compounds.

TANK 3 OUTSIDE FENCE TANK



OFTDS = Outside Fence Tank Discolored Soil Sample

OFTSP = Outside Fence Tank Soil Pile

IEA
An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 617·272·5212
Fax 508·667·7871

January 12, 1993

Mr. Brian Wells
Ilco Unican Corporation
400 Jefferys Road
Rocky Mount, NC 27801

Project Identification: UST REMOVAL

IEA Report Number: I110-001

Dear Mr. Wells:

Enclosed please find the analytical results for the project referenced above. The laboratory received the samples on January 6, 1993.

If you have any questions or need additional information, please call our client service representative.

Sincerely,
INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Mark Randall

Mark Randall
Director of Operations

MR:lg

IEA
An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 01/07/93 Received Date: 01/06/93
Client: Ilco Unican Corporation IEA Job Number: I110-001
Project: UST REMOVAL

Sample #	Client ID	Parameter	Results	Units	PQL	Date Analyzed
1	OFT1B	Oil & Grease-Grav	100	mg/kg	11	01/07/93
2	OFT2B	Oil & Grease-Grav	1,800	mg/kg	11	01/07/93
3	OFT1S	Oil & Grease-Grav	8,500	mg/kg	12	01/07/93
4	OFT2S	Oil & Grease-Grav	100	mg/kg	13	01/07/93
5	OFT3S	Oil & Grease-Grav	19,000	mg/kg	13	01/07/93
6	OFT4S	Oil & Grease-Grav	1,900	mg/kg	12	01/07/93

COMMENTS:

PQL = Practical Quantitation Limit
BQL = Below Quantitation Limit
Results and quantitation limits for soil samples adjusted for % moisture and dilution.

an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 27052

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☐ RCRA ☐ OTHER _____

COMPANY: Ilco Unican Corp.

REC'D: P. Hebhart 1/6/93 - 10:07 I110-001

Page 1 of 1

PROJECT #: W/S

PROJECT NAME: UST Removal

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	90 71
OFT1B	1/4/93	2:45	✓	✓	Outside Fence Tank		✓		✓
OFT2B	1/4/93	3:01	✓	✓	" " "		✓		✓
OFT1S	1/4/93	3:10	✓	✓	" " "		✓		✓
OFT2S	1/4/93	3:22	✓	✓	" " "		✓		✓
OFT3S	1/4/93	3:36	✓	✓	" " "		✓		✓
OFT4S	1/4/93	3:45	✓	✓	" " "		✓		✓

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
	1/4/93	4:10P		1/4/93	4:10P
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
	1/4/93	4:55		1-5-93	9:40

IEA QUOTE NO.:

IEA RUSH NO.:

PROJECT MANAGER (PLEASE PRINT): Brian Wells

P.O. NO.: Previous P.O on UST Removal

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS: Relinquished 1-5-93 4:30 SEND RESULTS TO:

562-052

FIELD REMARKS: Ilco Unican Corp.
400 Jefferys Road
Rocky Mount, N.C. 27801

IEA
An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 617·272·5212
Fax 508·667·7871

January 25, 1993

Mr. Brian Wells
ILCO Unican Corp.
3000 Weston Parkway
Cary, NC 27513

Project Identification: W/S UST Removal

IEA Report Number: 0020-321

Dear Mr. Wells:

Enclosed please find the analytical results for the project referenced above. The laboratory received the samples on January 16, 1993.

Please note that the surrogate recovery value for 2,4,6-Tribromophenol in in the EPA Method 8270 report for sample YTSP (0020-321-02) is below the method specified acceptance limits. A review of the ABN batch in which this sample ran leads us to attribute the low recovery to matrix effects.

If you have any questions or need additional information, please call our client service representative.

Sincerely,
INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Mark Randall

Mark Randall
Director of Operations

MR:lg

IEA
An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 01/22/93
Client: ILCO Unican Corp.
Project: W/S, UST Removal

Received Date: 01/16/93
IEA Job Number: 0020-321

Sample #	Client ID	Parameter	Results	Units	PQL	Date Analyzed
		TOTAL METALS:				
4	OFTDS	Arsenic	9.16	mg/kg	0.50	01/20/93
4	OFTDS	Barium	677	mg/kg	10	01/19/93
4	OFTDS	Cadmium	13.1	mg/kg	1.0	01/19/93
4	OFTDS	Chromium	96.1	mg/kg	3.0	01/19/93
4	OFTDS	Lead	1770	mg/kg	10	01/19/93
4	OFTDS	Mercury	BQL	mg/kg	0.10	01/18/93
4	OFTDS	Selenium	BQL	mg/kg	0.50	01/20/93
4	OFTDS	Silver	25.5	mg/kg	2.0	01/19/93
4	OFTDS	Cyanide	4.76	mg/kg	0.50	01/22/93

COMMENTS:

PQL = Practical Quantitation Limit
BQL = Below Quantitation Limit
Results adjusted for % moisture.

Result3.wk1 Rev. 100192

IEA
An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 01/22/93
Client: ILCO Unican Corp.
Project: W/S, UST Removal

Received Date: 01/16/93
IEA Job Number: 0020-321

Sample ID: OFTDS IEA ID: 0020-321-04

	Leachate Result (mg/L)	PQL (mg/L)	Regulatory Limit (mg/L)	Date Analyzed
TCLP Metals:				
Mercury	BQL	0.0020	0.2	01/18/93
Silver	BQL	0.020	5	01/18/93
Arsenic	BQL	0.0050	5	01/19/93
Barium	2.27	0.20	100	01/18/93
Cadmium	0.301	0.010	1	01/18/93
Chromium	BQL	0.030	5	01/18/93
Lead	65.4	0.10	5	01/18/93
Selenium	BQL	0.0050	1	01/19/93

Sample ID: OFTSP IEA ID: 0020-321-03

	Leachate Result (mg/L)	PQL (mg/L)	Regulatory Limit (mg/L)	Date Analyzed
TCLP Metals:				
Mercury	BQL	0.0020	0.2	01/18/93
Silver	BQL	0.020	5	01/18/93
Arsenic	BQL	0.0050	5	01/19/93
Barium	1.58	0.20	100	01/18/93
Cadmium	0.196	0.010	1	01/18/93
Chromium	BQL	0.030	5	01/18/93
Lead	5.05	0.10	5	01/18/93
Selenium	BQL	0.0050	1	01/19/93

COMMENTS:

PQL = Practical Quantitation Limit.
BQL = Below Quantitation Limit.
The EPA has deleted the requirement to spike correct TCLP analysis (November 24, 1992 Federal Register, Page 55114).

IEA
An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 01/22/93
Client: ILCO Unican Corp.
Project: W/S, UST Removal

Received Date: 01/16/93
IEA Job Number: 0020-321

IEA ID: TCLP Blank 1/17

	Leachate Result (mg/L)	PQL (mg/L)	Regulatory Limit (mg/L)	Date Analyzed
TCLP Metals:				
Mercury	BQL	0.0020	0.2	01/18/93
Silver	BQL	0.020	5	01/18/93
Arsenic	BQL	0.0050	5	01/19/93
Barium	BQL	0.20	100	01/18/93
Cadmium	BQL	0.010	1	01/18/93
Chromium	BQL	0.030	5	01/18/93
Lead	BQL	0.10	5	01/18/93
Selenium	BQL	0.0050	1	01/19/93

COMMENTS:

PQL = Practical Quantitation Limit.
BQL = Below Quantitation Limit.
The EPA has deleted the requirement to spike correct TCLP analysis (November 24, 1992 Federal Register, Page 55114).

IEA
An Aquarion Company

Analysis Report: EPA Method 8270
(PAGE 1 OF 2 PAGES)

Client:	ILCO Unican Corp.	IEA ID:	0020-321-03
Project:	W/S, UST Removal	Sample:	OFTSP
Report Date:	01/21/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/16/93		
Extracted:	01/18/93		
Analyzed:	01/20/93	Dilution	
By:	LT	Factor:	12

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Acenaphthene	330	BQL
2	Acenaphthylene	330	BQL
3	Aniline	1650	BQL
4	Anthracene	330	BQL
5	Benzoic acid	1650	BQL
6	Benzo(a)anthracene	330	BQL
7	Benzo(b)fluoranthene	330	BQL
8	Benzo(k)fluoranthene	330	BQL
9	Benzo(g,h,i)perylene	330	BQL
10	Benzo(a)pyrene	330	BQL
11	Benzyl alcohol	660	BQL
12	bis(2-Chloroethoxy)methane	330	BQL
13	bis(2-Chloroethyl)ether	330	BQL
14	bis(2-Chloroisopropyl)ether	330	BQL
15	bis(2-Ethylhexyl)phthalate	330	BQL
16	4-Bromophenyl phenyl ether	330	BQL
17	Benzyl butyl phthalate	330	BQL
18	4-Chloroaniline	660	BQL
19	2-Chloronaphthalene	330	BQL
20	4-Chloro-3-methylphenol	660	BQL
21	2-Chlorophenol	330	BQL
22	4-Chlorophenyl phenyl ether	330	BQL
23	Chrysene	330	BQL
24	Dibenzo(a,h)anthracene	330	BQL
25	Dibenzofuran	330	BQL
26	Di-n-butyl phthalate	330	BQL
27	1,3-Dichlorobenzene	330	BQL
28	1,4-Dichlorobenzene	330	BQL
29	1,2-Dichlorobenzene	330	BQL
30	1,2-Diphenylhydrazine	330	BQL
31	3,3'-Dichlorobenzidine	660	BQL
32	2,4-Dichlorophenol	330	BQL
33	Diethyl phthalate	330	BQL
34	2,4-Dimethylphenol	330	BQL
35	Dimethyl phthalate	330	BQL
36	2-Methyl-4,6-dinitrophenol	1650	BQL
37	2,4-Dinitrophenol	1650	BQL
38	2,4-Dinitrotoluene	330	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8270
(PAGE 2 OF 2 PAGES)

Client: ILCO Unican Corp. IEA ID: 0020-321-03
Project: W/S, UST Removal Sample: OFTSP

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
39	2,6-Dinitrotoluene	330	BQL
40	Di-n-octylphthalate	330	BQL
41	Fluoranthene	330	BQL
42	Fluorene	330	BQL
43	Hexachlorobenzene	330	BQL
44	Hexachlorobutadiene	330	BQL
45	Hexachlorocyclopentadiene	330	BQL
46	Hexachloroethane	330	BQL
47	Indeno(1,2,3-cd)pyrene	330	BQL
48	Isophorone	330	BQL
49	2-Methylnaphthalene	330	BQL
50	2-Methylphenol (o-cresol)	330	BQL
51	4-Methylphenol (p-cresol)	330	BQL
52	Naphthalene	330	BQL
53	2-Nitroaniline	1650	BQL
54	3-Nitroaniline	1650	BQL
55	4-Nitroaniline	1650	BQL
56	Nitrobenzene	330	BQL
57	2-Nitrophenol	330	BQL
58	4-Nitrophenol	1650	BQL
59	N-Nitrosodimethylamine	330	BQL
60	N-Nitroso-di-n-propylamine	330	BQL
61	N-Nitrosodiphenylamine	330	BQL
62	Pentachlorophenol	1650	BQL
63	Phenanthrene	330	13,000
64	Phenol	330	BQL
65	Pyrene	330	7,700
66	1,2,4-Trichlorobenzene	330	BQL
67	2,4,5-Trichlorophenol	330	BQL
68	2,4,6-Trichlorophenol	330	BQL

Surrogate Standard Recovery:

2-Fluorophenol	D %
Phenol-d6	D %
Nitrobenzene-d5	D %
2-Fluorobiphenyl	D %
2,4,6-Tribromophenol	D %
Terphenyl-d14	D %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Quantitation limits adjusted for % moisture.
D = Diluted below calibration.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of non-target compounds.

CHAIN OF CUSTODY RECORD

IEA
An Aquarion Company
3000 WESTON PKWY.
CARY, N.C. 27513
PH # 919-677-0090
FAX # 919-677-0427

NO: 35987

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☒ DRINKING WATER ☑ RCRA ☐ OTHER

COMPANY: ILCO UNICAN CORP.

Page 1 of 1

PROJECT #: W/S
PROJECT NAME: UST Removal
SAMPLERS (SIGNATURE):

SAMPLE ID	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	624/VOC	8270	8080	RCRA metals TCLP (Pb)	RCRA metals Total	Total Cyanide							
TBSP	1/14/93	2:10p		✓	Laundry Tank Backfill Soil Pile	1	✓				✓										
TSP	1/14/93	2:18p		✓	Yard Tank Soil Pile	3	✓		✓	✓	✓										
ETSP	1/14/93	3:09p		✓	Outside Fence Tank Soil Pile	4	✓		✓	✓	✓	✓									
FTDS	1/14/93	3:50p	✓		Outside Fence Tank Distributed Cages	3	✓					✓	✓	✓							

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/14/93	4:30p	[signature]	1/14/93	4:30p
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME

IEA QUOTE NO.:
IEA RUSH NO.:
PROJECT MANAGER (PLEASE PRINT): BRIAN E. WELLS
P.O. NO.: UST Removal P.O. - Consu

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☒ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

IEA
An Aquarion Company

Analysis Report: EPA Method 8080

Client:	ILCO Unican Corp.	IEA ID:	0020-321-03
Project:	W/S UST Removal	Sample:	OFTSP
Report Date:	01/25/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/18/93		
Extracted:	01/18/93		
Analyzed:	01/21/93	Dilution	
By:	JWL	Factor:	63

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Aldrin	10	BQL
2	alpha-BHC	10	BQL
3	beta-BHC	10	BQL
4	delta-BHC	10	BQL
5	gamma-BHC	10	BQL
6	Chlordane	50	BQL
7	4,4'-DDD	10	BQL
8	4,4'-DDE	10	BQL
9	4,4'-DDT	10	BQL
10	Dieldrin	10	BQL
11	Endosulfan I	10	BQL
12	Endosulfan II	10	BQL
13	Endosulfan sulfate	10	BQL
14	Endrin	10	BQL
15	Endrin aldehyde	10	BQL
16	Heptachlor	10	BQL
17	Heptachlor epoxide	10	BQL
18	Methoxychlor	20	BQL
19	Toxaphene	100	BQL
20	Aroclor 1016	100	BQL
21	Aroclor 1221	100	BQL
22	Aroclor 1232	100	BQL
23	Aroclor 1242	100	BQL
24	Aroclor 1248	100	40,000
25	Aroclor 1254	100	BQL
26	Aroclor 1260	100	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene	D %
Dibutylchlorendate	D %

Comments:
BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Results and quantitation limits for soil samples adjusted for % moisture.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to high concentration of target compounds present.
D = Diluted below calibration.

IEA
An Aquarion Company

Analysis Report: EPA Method 8240
(PAGE 1 OF 2 PAGES)

Client:	ILCO Unican Corp.	IEA ID:	0020-321-03
Project:	W/S, UST Removal	Sample:	OFTSP
Report Date:	01/22/93	Type:	Soil
Collected:	01/14/93	Container:	Glass
Received:	01/16/93		
Analyzed:	01/21/93	Dilution	
By:	JAG	Factor:	50

Priority Pollutant Compounds

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	trans-1,2-Dichloroethene	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	BQL
24	1,1,2,2-Tetrachloroethane	5	BQL
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	10	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8240
(PAGE 2 OF 2 PAGES)

Client: ILCO Unican Corp. IEA ID: 0020-321-03
Project: W/S, UST Removal Sample: OFTSP

Number	Compound	PQL (ug/kg dry wt.)	Result (ug/kg dry wt.)
Other TCL Compounds:			
32	Acetone	100	BQL
33	2-Butanone	100	BQL
34	Carbon disulfide	5	BQL
35	1,2-Dibromoethane	5	BQL
36	2-Hexanone	50	BQL
37	Methyl-t-butylether	5	BQL
38	4-Methyl-2-pentanone	50	BQL
39	Styrene	5	BQL
40	Vinyl Acetate	50	BQL
41	Xylenes (Total)	5	800

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	97 %
Toluene-d8	83 %
Bromofluorobenzene	94 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
Quantitation limits for this sample are obtained by multiplying the PQL by the dilution factor.
Quantitation limit elevated due to smaller amount of sample analyzed.
Smaller amount of sample analyzed due to the presence of non-target compounds.

IEA
An Aquarion Company
3000 WESTON PKWY.
CARY, N.C. 27513
PH # 919-677-0090
FAX # 919-677-0427

CHAIN OF CUSTODY RECORD

NO: 35987

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☑ RCRA ☐ OTHER _____

COMPANY: ICO UNICAN CORP.

Page 1 of 1

PROJECT #: W/S

PROJECT NAME: UST Removal

SAMPLERS (SIGNATURE): [signature]

SAMPLE ID	DATE	TIME	G	C	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	8240	8270	8080	RCRA Metals TCLP	RCRA Metals Total	Total Cyanide							
TBSP	1/14/93	2:00p		✓	Foundry Tank Backhouse Soil Pile	1	✓				✓										
TSP	1/14/93	2:18p		✓	Foundry Tank Soil Pile	3	✓		✓	✓	✓										
TSP	1/14/93	3:09p		✓	Outside fence Tank. Soil Pile	4	✓		✓	✓	✓	✓									
TDS	1/14/93	3:50p	✓		Outside fence Tank Discolored Layer	3	✓					✓	✓	✓							

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/14/93	4:38	[signature]	1/14/93	4:38p
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	1/15/93	12:32

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
BRIAN E. WELLS	UST REMOVAL P.O - Con Sm

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

RECD: [illegible] 1/15/93 C020-321

FIELD REMARKS

01/25/93 15:13 ☎508 667 7871 IEA-MASS →→→ ILCO UNICAN RMT 016

Provided by Brian Wells

	3 SOIL OUTSIDE ENGG TANK		2 SOIL YARD TANK		1 SOIL FOUNDRY BAGHOUSE TANK			
CONSTITUENT	SAMPLE ID #	RESULT	SAMPLE ID #	RESULT	SAMPLE ID #	RESULT	METHOD	UNIT
ARSENIC	OFTDS	9.16					TOTAL	mg/l
BARIUM	OFTDS	677					TOTAL	mg/l
CADMIUM	OFTDS	13.1					TOTAL	mg
CHROMIUM	OFTDS	96.1					TOTAL	mg/l
LEAD	OFTDS	1770					TOTAL	mg/l
MERCURY	OFTDS	BQL					TOTAL	mg
SELENIUM	OFTDS	BQL					TOTAL	mg/l
SILVER	OFTDS	25.5					TOTAL	mg/l
CYANIDE	OFTDS	4.76					TOTAL	mg
MERCURY	OFTDS	BQL	~~OFTSP~~	~~BQL~~			TCLP	mg/l
SILVER	OFTDS	BQL	~~OFTSP~~	~~BQL~~			TCLP	mg/l
ARSENIC	OFTDS	BQL	~~OFTSP~~	~~BQL~~			TCLP	mg/l
BARIUM	OFTDS	2.27	~~OFTSP~~	~~[illegible]~~			TCLP	mg/l
CADMIUM	OFTDS	0.301	~~OFTSP~~	0.1[illegible]			TCLP	mg/l
CHROMIUM	OFTDS	BQL	~~OFTSP~~	~~BQL~~			TCLP	mg/l
LEAD	OFTDS	65.4	~~OFTSP~~	~~[illegible]~~			TCLP	mg/l
SELENIUM	OFTDS	BQL	~~OFTSP~~	~~BQL~~			TCLP	mg/l
MERCURY	OFTSP	BQL					TCLP	mg
SILVER	OFTSP	BQL					TCLP	mg
ARSENIC	OFTSP	BQL					TCLP	mg/l
BARIUM	OFTSP	1.58					TCLP	mg/l
CADMIUM	OFTSP	0.196					TCLP	mg
CHROMIUM	OFTSP	BQL					TCLP	mg
LEAD	OFTSP	5.05					TCLP	mg
SELENIUM	OFTSP	BQL					TCLP	mg
AROCLOR 1254	OFTSP	BQL	YTSP	BQL	FTBSP	20,000	8080	ug/l
AROCLOR 1248	OFTSP	40,000	YTSP	BQL	FTBSP	BQL	8080	ug/l
XYLENES	OFTSP	800	YTSP	BQL	FBT1	640	8240	ug/K
PHENANTHRENE	OFTSP	13,000	YTSP	BQL	FBT2	18,000	8270	ug/l
PYRENE	OFTSP	7700	YTSP	BQL	FBT2	BQL	8270	ug/l
3550					FBT21B	5700	SW846-3550	mg/l
					FBT22B	14000	"	"
					FBT1S	1200	"	"
					FBT2S	4200	"	"

	Soil Outside Fence Tank		Soil Yard Tank		Soil Foundry Baghouse Tank			
Constituent	Sample ID#	Result	Sample ID#	Result	Sample ID#	Result	Method	Un
3550					FBT 3 S	19,000	SW846-3550	mg/
"					FBT 4 S	15,000	"	"
Ethylbenzene	OFTSP	BQL	YTSP	BQL	FBT1	100	8240	ug/
Toluene	OFTSP	BQL	YTSP	BQL	FBT1	51	8240	ug/
2-Methyl Naphthalene	OFTSP	BQL	YTSP	BQL	FBT2	61,000	8270	ug/
Napthalene	OFTSP	BQL	YTSP	BQL	FBT2	12,000	8270	ug/
9071	OFT1B	100	YT1B	BQL			SW-846 9071	mg/
"	OFT2B	1800	YT2B	200			"	
"	OFT1S	8500	YT1S	BQL			"	"
"	OFT2S	100	YT2S	BQL			"	"
"	OFT3S	19,000	YT3S	BQL			"	"
"	OFT4S	19000	YT43	30			"	"

Foundry Baghouse Tank

FBTSP = Foundry Baghouse Tank Soil Pile

TPH - 3550/5030 - Sampled 12/7/92
8240 - Sampled 12/7/92
8270 - Sampled 12/7/92
8080 - Run sample 1/14/93

YTSP - Yard Tank Soil Pile

9071 - Sampled 12/8/92
8240 - Run Sample 1/14/93
8270 - Run Sample 1/14/93
8080 - Run Sample 1/14/93

OFTSP - Outside fence tank soil pile

9071 Sampled 1/4/93
8240 - Run Sample 1/14/93
8270 - Run sample 1/14/93
8080 - Run Sample 1/14/93
RCRA Metals - TCLP - Run Sample 1/14/93

OFTDS = Outside fence tank discarded soil
RCRA Metals - Totals
RCRA Metals - TCLP w/ mercury
Cyanides - Totals

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

RECEIVED
MAR 2 1992
SUPERFUND SECTION

4WD-WPB

MAR 19 1992

Mr. Grover Nicholson
Contracts Management Branch
North Carolina Department of Environment,
Health and Natural Resources
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Mr. Nicholson:

The following North Carolina contractor Site Inspection (SI) reports have been reviewed and accepted by the Region IV Site Assessment Section:

Site Name	Disposition
* Stewart-Warner Corp., Bassick-Sack Div. NCD024895864 SSI Phase I Report	ESI
* Statesville Road Landfill NCD000605097 SSI Phase I Report	SIP-High
* Old Western North Carolina Fairgrounds NCD986185411 SSI Phase II Report	ESI
* Monarch Furniture Corp. NCD990883001 SSI Phase I Report	ESI
* Aquair Corporation NCD074511361 SSI Phase II Report	SIP-High
* Hoover Repair Shop NCD003233673 SSI Phase II Report	NFRAP
* Winston Container Company NCD024477556 SSI Report	NFRAP

Printed on Recycled Paper

Although the Hoover Repair Shop site has been NFRAP'ed, the site has been referred to EPA's Emergency Response and Removal Branch in order to achieve onsite source stabilization to prevent the contamination from contributing further to the groundwater contamination which is already known to exist.

If you should have any questions, please feel free to contact me at (404) 347-5065.

Sincerely yours,

Craig A. Benedikt

Craig A. Benedikt
EPA NC CERCLA Project Officer

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

June 21, 1991

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

Date:_____
Site Disposition:_____
EPA Project Manager:_____

RE: Phase I, Screening Site Investigation
Stewart-Warner Corp., Bassick-Sack Division
Winston-Salem, Forsyth County, North Carolina
NCD 024 895 864

Dear Ms. Cain:

Enclosed herewith is the Phase I, Screening Site Investigation Report by Greenhorne & O'Mara, Inc. for Stewart-Warner Corp., Bassick-Sack Division (NCD 024 895 864). The Phase I portion included a review of available information, a target survey, and an on and off-site reconnaissance of the facility and the surrounding area. Based on the available information for the subject site, the North Carolina Superfund Section is recommending that the site be considered for an Expanded Site Investigation now, rather than undergoing any additional sampling of a Phase II, Screening Site Investigation.

The Stewart-Warner Corp., Bassick-Sack Division site lies in the north central portion of the City of Winston-Salem in Forsyth County. The site consists of a main building, warehouse, foundry and wastewater treatment plant on 9.8 acres between the Southern Railroad and Indiana Avenue. The site was originally a cotton mill and was purchased by Stewart-Warner in 1945 for metal finishing of furniture hardware. In 1988, Ilco-Unican Corp. purchased the facility to manufacture zinc die cast locks.

There have been several reported spills of hazardous wastes onsite and, in 1987, a Notice of Violation was issued to Stewart-Warner to address contamination resulting from the spills. Consequently, a remediation effort was undertaken by Stewart-Warner under the

An Equal Opportunity Affirmative Action Employer

direction of the Solid and Hazardous Waste Section of the North Carolina Department of Environment, Health, and Natural Resources (NCDEHNR). Several reports and sampling analyses characterizing the extent of soil contamination were developed throughout cleanup. Additional sources of contamination were discovered when an excavation exposed buried drums containing organic wastes. The cleanup effort was expanded to include this new area.

Despite the remedial efforts at the site, the present owner, Ilco-Unican, underwent its own assessment of site contamination. Further sampling indicated that areas of the site remain contaminated.

The site is located on the western edge of the Piedmont Physiographic Province. Elevations at the site range from 970 to 990 feet above mean sea level. Drainage from the site is to the east and south to an unnamed perennial tributary of Peters Creek. Land uses within four miles of the site include: commercial, industrial, residential and institutional uses. Directly across Indiana Avenue from the subject site are two (2) schools, Lowrance Elementary School (174 students and faculty), and Hanes Middle School (684 students and faculty).

The facility itself has pproximately 130 employees. The nearest residence is located within 800 feet of the site. There are approximately 86,984 people estimated to reside within a 4-mile radius of the site. Approximately, 3047 people rely on domestic wells for their potable water within a 4-mile radius of the site. The nearest well is believed to be located approximately 2 miles north of the site.

Due to the documented spills since 1987, confirmed soils contamination, contaminated baghouse dust (zinc), proximity of two (2) schools to the site and the age of the site (unregulated years), the North Carolina Superfund Section is recommending that this site be considered for Expanded Site Investigation now, rather than undergoing any additional sampling of a Phase II, Screening Site Investigation.

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

Sincerely,

Harvey Allen

Harvey H. Allen, PE
Environmental Engineer

Enclosures

file

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

January 2, 1991

Mr. Fred Overstreet
Director, Division of Environmental Health
Forsyth County Health Department
Post Office Box 2975
Winston-Salem, North Carolina 27102-2975

RE: Phase I Screening Site Investigation
Off-Site Reconnaissance
Stewart Warner Corp./Bassick Sack
NCD024895864

Dear Mr. Overstreet:

David Lilley of the North Carolina Superfund Section spoke with you today to notify you that the North Carolina Superfund Section will conduct an off-site reconnaissance of the subject site located in Forsyth County, North Carolina. The reconnaissance will be conducted on January 10, 1991 by Harvey Allen of the North Carolina Superfund Section.

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 Harvey Allen at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

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,

Pat B for GCN

Grover Nicholson, Head
Contracts Management Branch
Superfund Section

Enclosures

cc: Jiff Coffey
Doug Holyfield
Steve Reid
Pat Bowden
Ann Rudd
David Lilley
File

Federal
Trip Notification & Authorization

Prepared by: Harvey Allen

Today's Date: 12/21/90

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

Site Trip

Date of Trip: 1/10/90

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ____

NCD#: 024 895 864 Site Name: Stewart Warner Corp./Bassick Sack
City: Winston-Salem County: Forsyth

Reason for Trip: Phase I, SSI
off-site Reconnaissance

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

Authorized by: David B. [illegible]
Industrial Hygienist

Project Team Leader: Harvey Allen

Assistants: Marie Fisher (G&O), Helene Kasser (G&O), _____

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

- Preliminary Assessment Form (First page only)
- 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. Fred Overstreet Title: Director, Div. of Env. Health
(Note if Dr., M.P., etc.)
Telephone Number: (919) 722 - 2760

Notes: Health Department Official Contacted: Mr. Fred Overstreet
Back Up Letter Required: Yes ✓ No ____
Notified Mr. Overstreet on 1-2-90 (DBL)

Note: Signed original to Data Manager

24 October 1989

TO: File

FROM: Jack Butler

SUBJECT: Stewart-Warner Corporation/Bassick Sac, NCD024895864

Mr. Brian Wells (919/446-3321) contacted our office on this date to obtain a status report on the subject site. Mr. Wells was informed that a Site Investigation for the subject site had been scheduled for the 4th quarter of 1990.

JB/ds/ste-war.doc/p.1

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

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

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

18 March 1988

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

Dear Ms. Deihl:

* Enclosed is a 103(c) CERCLA notification and a clean up plan for Bassick-Sack. The NC RCRA staff is overviewing the clean up. The RCRA Notice of Violation is also enclosed.

Sincerely,

Lee Crosby

Lee Crosby, Head
Superfund Branch
Solid Waste Management Section

LC/tb/ibm-35

Enclosures

* a.k.a. Stewart-Warner (Forsyth Co.)

STEWART-WARNER CORPORATION SYMBOL OF SW EXCELLENCE
Bassick·Sack Division
2941 INDIANA AVENUE · WINSTON-SALEM, NORTH CAROLINA 27105 · 919/725-1331

(54)

March 17, 1988

RECEIVED
MAR 18 1988
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Mr. William L. Meyer
Solid and Hazardous Waste Management Branch
Environmental Health Section
P. O. Box 2091
Raleigh, NC 27602-2091

Dear Mr. Meyer:

Attached is the annual hazardous waste report for January 1, 1987, to December 31, 1987.

If there are any questions, please call 919-725-1331.

Sincerely,

I. D. Blakley
Plant Engineer

IDB/jhb

cc: C. Butler
W. Kiley

attachment

P.S. Note: Effective February 4, 1988 Bassick-Sack was sold:

New Name and Address:

Ilco Unican Corp.
Capitol Division
2941 Indiana Avenue
Winston-Salem,NC 27105

Contact: I. D. Blakley

N. C. DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES

N. C. 1987 HAZARDOUS WASTE GENERATOR ONLY ANNUAL (PART A) REPORT *

RECEIVED MAR 18 1988 HAZARDOUS WASTE MANAGEMENT BRANCH

Four Digit Standard Industrial Classification (SIC) No. For Operations In Your Company That Generated The Waste 3714/19

Installation EPA ID Number: NCD024895864

I. Name of Installation: STEWART WARNER CORP. BASSICK SRCH DIV

II. Location of Installation: 2941 INDIANA AVENUE
(Street or Route Number)

WINSTON SALEM FORSYTH NC 27105
(City or Town) (County) (State) (Zip Code)

V. Installation Contact: ISAAC D. BLAKLEY 919 725331
(Name) (Area Code) (Phone Number)

Waste Identification:

A. EPA Waste No.	B. Description of Waste/ Chemical Name	1. Remedial Action Waste	C. Quantity Generated (LBS)	D. Handling Method/Quantity/Location Waste Shipped to: 1. Handling Method Code	2. Quantity Shipped to TSD or Recovery Facility (LBS)	3. TSD Facility EPA ID No./ Recovery Facility Name	E. In Storage December 31, 1987: 1. Storage Method Code	2. Quantity (LBS)
F006	WASTEWATER SLUDGE		84200	T01	84200	SCD070375885		0
D008	LEAD BURRING DUST		1300	T01	1300	SCD070375885		0
F001	WASTE LACQUER		823	S01	823	NCD086871281		0
F006	PLATING WASTE & OIL		6795	S01	6795	SCD070375885		0
F005	FLAMMABLE LIQUID		4114	S01	4114	ALD981020894		0

If more space is needed check ____ and complete attachment 1

VI. List EPA ID Numbers for each Transporter used during reporting year: SCD073709297 VAD000651778, SCD000822313, ALD981020894

VII. CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Isaac D. Blakley (Signature) ISAAC D. BLAKLEY (Print or Type Name) 3-17-88 (Date Signed)

*Read instructions before completing form

DHS 3036 (Revised 1-80) Do. No. 0351A
Hazardous Waste Management Branch

WOMBLE CARLYLE SANDRIDGE & RICE
1600 ONE TRIAD PARK
AND
2400 WACHOVIA BUILDING
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TELEX 806498

WRITER'S DIRECT NUMBER

(919) 721-3714

March 1, 1988

Ms. Lee Crosby
North Carolina Department of Human Resources
Solid & Hazardous Waste Section
CERCLA Unit
Post Office Box 2091
Raleigh, North Carolina 27602-2091

Re: Notice pursuant to 42 U.S.C. § 9603(c) -- Bassick-Sack facility

Dear Lee:

As you are aware, we represent Bassick-Sack as to its facility located in Winston-Salem, North Carolina. The purpose of this letter is to notify you pursuant to 42 U.S.C. § 9603(c), as may be required, of the existence of a potential "facility" at which hazardous substances may have been stored or disposed. Attached is a letter dated February 21, 1988 to Mr. R. Douglas Holyfield, Field Operations Supervisor, Solid & Hazardous Waste Section, North Carolina Department of Human Resources. As the letter indicates, Bassick-Sack has been conducting a remedial action (with the permission of the Solid & Hazardous Waste Section) at those areas described as spill sites No. 1 and No. 2 in our "Assessment of Chemical Contamination" submitted to the Section July 30, 1987. During the course of this remedial action we have discovered an additional contaminated area adjacent to the Bassick-Sack facility.

Further, as the letter indicates, Bassick-Sack had GSX Chemical Services, Inc. personnel excavate an area adjacent to the Bassick-Sack facility to an approximate depth of three (3) feet revealing a number (approximately ten (10)) drums from which

our technical consultant took multiple samples. The results of those samples indicates the existence of minimal levels of heavy metals contamination (substantially below E.P. toxicity). However, a number of volatile organics, at varying levels, were detected.

In view of the discovery of this additional contamination, Bassick-Sack submitted on February 21, 1988 an addendum to its "Comprehensive Sampling/Analysis Plan to Determine the Extent of Chemical Contamination at Spill Sites Located at Bassick-Sack Division, Winston-Salem, North Carolina," previously submitted to the Solid & Hazardous Waste Section in August, 1987. The addendum outlined the general procedures Bassick-Sack will instruct its contractor to follow in remediating this contamination.

On February 29, 1988, R. Douglas Holyfield of the Solid & Hazardous Waste Section permitted Bassick-Sack to go forward in remediating this contamination. Post-excavation samples will later be shared with the Solid & Hazardous Waste Section.

At this time, the total amount of hazardous substances, if any, within the pit area is unknown. As this information becomes available, we will share it with the Solid & Hazardous Waste Section in conjunction with our post-excavation sampling results and backfilling requests.

Should you have any questions concerning the contents of this letter please feel free to call upon me.

Very truly yours,

Brad A. DeVore

BAD/asi

cc: Edgar DeVylder, Esq.
Jim Stanley
R. Howard Grubbs, Esq.

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

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

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

August 17, 1987

Mr. Jim E. Stanley, Generator. Manager.
Stewart Warner Corporation., Bassick Sack Division.
2941 Indiana Avenue
Winston Salem, N.C. 27105

Re: Comprehensive Site Report for Bassick Sack NCD024895864

Dear Mr. Stanley:

This office has received the site report submitted August 5, 1987. In response to the findings and proposed remediation, this office concurs with implementing an immediate 1.5 feet. excavation in the affected areas. This should reduce most of the metal concentrations and define remaining zones of contamination on a smaller scale. However, proceeding in this manner, (excavation prior to comprehensive assessment of contamination) may increase the volume of uncontaminated soil which will be disposed of as hazardous waste.

As this preliminary sampling has succeeded in identifying contamination with depth in places, subsequent sampling must be able to pinpoint contamination/residual levels within the sites. As noted in the original approval letter dated June 26, 1987 the following concerns must be addressed.

1. Residual levels of contamination will be determined based on extractable results including cyanide (using deionized water). Alternative methods for analyzing cyanide such as that for free cyanides may be proposed.

2. Individual extractable results per section will be required instead of a composite across sections A-E.

3. Background levels for nickel, chrome and cyanide should be based on extractable results.

4. Post-excavation sampling procedures should be described that will include sampling trench bottom, sidewall, and the specific location within each section. This may be illustrated by cross sections, etc.

In conclusion, the areas downgradient of the spill site (East of 2A & 1E) must be characterized. The proposed schedule for completion should be adhered to as close as possible. Please call should you have any questions.

Sincerely

R. Douglas Holyfield

R. Douglas Holyfield, Field Operations Supervisor
Environmental Health Section
Solid and Hazardous Waste Management Branch

RDH/dd/7107A

CC.Steve Phibbs

W[illegible]BLE CARLYLE SANDRIDGE [illegible]RICE

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WRITER'S DIRECT NUMBER

(919) 721-3714

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AUG 27 1987
HAZARDOUS WASTE MANAGEMENT BRANCH

August 21, 1987

Mr. R. Douglas Holyfield
Field Operations Supervisor Hazardous
Waste Compliance Unit Solid and
Hazardous Management Branch
306 N. Wilmington Street
Room 213, Bath Building
Raleigh, NC 27602

Re: Allowable Residual Contamination Limits
for Stewart-Warner Clean-Up

Dear Mr. Holyfield:

As you know, we represent Stewart-Warner, Bassick-Sack, in this matter. Pursuant to the letter sent to you by Jim E. Stanley, General Manager of Bassick-Sack, dated July 30, 1987 we wish to enter into meaningful negotiations concerning the residual clean-up levels proposed in your letter of June 26, 1987. As will be outlined below, it is our position alternative residual levels exist, supported by acceptable data, which when met will provide adequate protection of human health and the environment in the spill site areas.

Please find enclosed a proposal presented by Research and Analytical Laboratories, Inc. for establishing maximum limits for the hazardous substances found at chemical spill sites 1 and 2. The limits proposed are ten times the interim primary drinking water standards for copper, zinc and chromium. Further, the limits for nickel and cyanide are also ten times the drinking water quality standards proposed by the United States Environmental Protection Agency for those substances. We believe these limits are justified, by among other things the limited human

contact with the contaminated areas, the depth to groundwater at the site, and the predominantly clay to clay-loam soils found at the site.

Stewart-Warner desires a speedy completion of this matter and will attempt to comply, to the best of its ability, with the schedule found within the comprehensive site report submitted July 30, 1987. Further, we believe the proposed clean-up limits can reasonably be met with current clean-up technology and will afford proper protection to human health and the environment in the spill site areas.

We assert the emphasis of the clean-up effort should be placed upon the cyanide and chromium contamination as they are the only "toxics" among the hazardous substances detected at the spill sites. Upon the clean-up of those substances to the proposed residual limits, we request the Department of Human Resources refrain from requiring any further clean-ups of copper, zinc or nickel. Any further clean-up would result in costs to Stewart-Warner vastly disproportionate to any benefit afforded to the protection of human health or the environment in the area. This again is justified by the distance to groundwater in the area, the limited human contact with the area, and the fact these substances are not "toxics." Any residual amounts of copper, zinc or nickel remaining after the excavation of cyanide and chromium will not be a threat to human health or the environment. Therefore, we request that upon the completion of a clean-up to the proposed residual limits for cyanide and chromium that Bassick-Sack not be required to conduct any further excavation solely for the purpose of removing copper, zinc or nickel.

If you have any questions concerning the limits proposed by Research and Analytical Laboratories or of Bassick-Sack's position in this matter please feel free to contact me at (919) 721-3714.

Thank you for your cooperation.

Very truly yours,

Brad A. DeVore

BAD:llp
Enclosures

cc: Mr. J. Rhodes
Mr. Jim E. Stanley
R. Howard Grubbs, Esquire

AUG 27 1987
SOLID & HAZARDOUS WASTE MANAGEMENT

17

Proposal For Establishing Maximum Limits For Cyanide, Copper, Chromium, Zinc, and Nickel

at Chemical Spill Sites 1 and 2
Stewart Warner Corporation -
Bassick Sack Division
Winston Salem, North Carolina

Prepared for:

Stewart Warner Corporation-
Bassick Sack Division
Winston Salem, North Carolina

Prepared by:

Research And Analytical Laboratories, Inc.
106 Street
Kernersville, North Carolina

August 1987

RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations

Proposal For Establishing Maximum Limits For Cyanide, Copper, Chromium, Zinc, and Nickel at Chemical Spill Sites 1 and 2 Bassick Sack Division, Winston Salem, North Carolina

It is proposed by Research and Analytical Laboratories, Inc., a subsidiary of Russell and Axon Engineers - Planners - Architects, Inc., that the following maximum limitations be imposed for contaminants identified within Chemical Spill Sites 1 and 2 which include the following:

Parameter	Maximum Limit Concentration		
Cyanide	44	mg/kg	
Copper	10	mg/l	Extractable
Zinc	50	mg/l	Extractable
Chromium	0.5	mg/l	Extractable
Nickel	3.5	mg/l	Extractable

1.0 Justification

These limitations were developed based upon the following considerations:

1) Minimum contact area with respect to exposure to human or wildlife habitat

2) No ground water potable source identified within 2,000 feet

3) Depth to groundwater estimated by USGS to be between 35 to 40 feet

4) Soil type predominantly clay to clay-loam at 1.0 foot depth

5) Federal Office of Drinking Water Health Advisory indicates existing advisory limits to be used as a guideline but limits recommended have no legal basis

6) No limitations have been adopted by EPA with respect to a maximum acceptable limit for cyanide in soil

7) According to EPA, there is no accepted method that is used for analyzing extractable cyanide in soil

P. O. Box 473 • 106 Short Street • Kernersville, North Carolina 27284 • 919/996-2841

2.0 Rationale

The rationale used for developing maximum acceptable limitations for copper, zinc, chromium, and nickel was based upon current Federal Drinking Water Standards (ie: Zn, Cu, Cr) and/or Federal Health Advisory recommendations (ie: Ni) times a factor of ten. The ten factor was considered acceptable based upon the above justifications.

The rationale for developing a maximum acceptable limitation for total cyanide in soil was based upon the conservative assumption that 100 percent of the total cyanide is extractable and the federal health advisory recommendation of 0.22 mg/l (ie: in water) is acceptable. Using a factor of 10 based upon minimum contact area this would give an acceptable maximum cyanide concentration in water of 2.2 mg/l (ie: 0.22 X 10). Since there is no standard cyanide leachate method to calculate the maximum cyanide concentration in soil the following back calculation is recommended:

1) Assume total cyanide in soil equals 44 mg/kg
2) 100 grams of soil contains 4.4 mg of cyanide
3) A 100 gram sample is extracted, using the EP Toxicity Procedure approved by EPA to a final volume of 2.0 liters
4) Assume 100 percent of cyanide is extractable
5) Then 4.4 mg of Cn divided by 2.0 liters equals 2.2 mg/l of Cn
6) 2.2 mg/l of Cn equals 0.22 mg/l of Cn (Health Advisory) X 10

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WRITER'S DIRECT NUMBER
(919) 721-3714

RECEIVED
AUG 27 1987
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

7

August 25, 1987

Mr. R. Douglas Holyfield,
Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid and Hazardous Waste Branch
306 N. Wilmington St.
Room 213, Bath Building
Raleigh, North Carolina 27602

Re: Meeting on Residual Contamination Limits for Stewart-Warner Clean-ups

Dear Mr. Holyfield:

The purpose of this letter is to review and confirm our meeting, on August 21, 1987, which included ourselves, R. Howard Grubbs (attorney for Bassick-Sack), Jim E. Stanley (Plant Manager, Bassick-Sack), Jim Chesire, Sid Champion (Research and Analytical Laboratories) and Jill Ledford (North Carolina Attorney General's Office).

At that meeting you were given a list of proposed residual contamination clean-up limits for the heavy metals and cyanide currently found at Bassick-Sack spill sites No. 1 and No. 2. It is our position those levels are supported by acceptable data and when met will provide adequate protection of human health and the environment. The proposed limits are 10 times the interim primary drinking water standards for copper, zinc and chromium. Also, the proposed limits for cyanide and nickel are 10 times the drinking water quality standards the United States Environmental Protection Agency has proposed for those substances. We believe these limits are justified, by among other

things, the limited human contact with the contaminated areas, the estimated depth to groundwater and the predominately clay to clay-loam soils found at the site. Any residual contamination will be "locked" into soil well below the surface. We expect no human contact with any residual contamination and no migration of residual contaminants to any water source. Further, the limits proposed are the same as those applied to the disposal of like contaminated materials in municipal landfills. We assert, due to the site specific factors involved, the same limits apply equally to Bassick-Sack's situation.

We requested DHR approve these proposed clean-up limits due to the soil and groundwater factors described. We understand DHR's desire to clean-up all the state's contaminated areas as near as possible to "drinking water standards" in its continuing effort to protect human health and the environment. However, the groundwater and soil factors at the Bassick-Sack spill sites reveal we are dealing with soil rather than water contamination there. As a result, the water quality standard limits proposed by DHR are inapplicable to Bassick-Sack spill sites No. 1 and No. 2. Attempts to reach those limits will only result in costs to Bassick-Sack vastly disproportionate to any further protection afforded human health or the environment in the area.

We also requested DHR accept the formula, proposed by R&A Labs, for determining cyanide levels at the site. As the proposal indicates, there is no established procedure to determine the "extractable" levels of cyanide within contaminated soils. Further, R&A Lab's proposed formula is very conservative as it assumes a 100% leaching of cyanide from contaminated soils. It is well known factors such as the biological destruction of cyanide will alter this percentage. Therefore, we request DHR approve this formula and the 44 mg/l "totals" cyanide residual contamination limit proposed.

You have indicated the proposed limits will be reviewed by members of your staff, including Mr. Jerry Rhodes and Mr. Steve Phibbs, and their opinions will be made part of any decision concerning them. It is our understanding Mr. Phibbs generally agrees with our proposed limits based on the site specific factors and his personal review of spill sites No. 1 and No. 2. However, we do not speak for Mr. Phibbs and assume he will be in direct contact with you in the near future.

Further, we discussed whether it would be required, after the necessary excavation of chromium and cyanide to conduct further excavation solely for the purpose of removing residual amounts of copper, zinc or nickel. Our understanding is that DHR would not overly concerned about any remaining amounts of copper or zinc but would conduct some review of residual nickel levels.

We understand, pursuant to your letter to Jim E. Stanley, dated August 17, 1987, DHR has approved the initiation of excavation at the spill sites. As a result, we requested DHR accept the composite extractables found in the site assessment plan as representative of the extractables of the spill site sections. This request is justified by the small size of the sections. This would allow Bassick-Sack to pursue a rapid clean-up by avoiding the additional month long (or longer) delay required to perform extractables on each section and level of the spill sites. Instead, because many of those sections will be the subject of the initial excavation, we request extractables be conducted on samples taken after the excavation.

Finally, we requested DHR approve of our proposed limits prior to the initiation of excavation. Bassick-Sack does not wish to delay the proper excavation of spill sites No. 1 and No. 2 because of ambiguous or misunderstood clean-up requirements. Ambiguous clean-up requirements may result in contractors having to repeatedly return to the site to perform additional actions. As DHR is aware, this sort of problem inevitably leads to long delays in clean-ups due to the unavailability of contractors and the required retesting of areas to confirm remaining contamination levels. Therefore, Bassick-Sack wishes to have the required clean-up levels clearly understood between itself and DHR prior to initiating any remedial action. It is our position this will both lead to a speedy and proper clean-up of spill sites No. 1 and No. 2 and avoid unnecesary expenses and delays for Bassick-Sack and DHR.

We appreciate your meeting with us and discussing the above matters and thank you for your further review of the proposed limits we presented. It is hoped we can to come to a mutually satisfactory decision in this matter. Thank you for your cooperation.

Very truly yours,

Brad A. DeVore

BAD:dlm

cc: Mr. J. Rhodes
Mr. S. Phibbs
Mr. Jim E. Stanley
Mr. R. Howard Grubbs, Esq.

Central files
IRC Unicoa
Winston-Salem
6

(55)

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

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

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

August 26, 1987

Mr. Jim Stanley, General Manager
Stewart Warner Corp., Bassick-Sack Division
2941 Indiana Avenue
Winston-Salem, NC 27105

RE: Proposed Residual Contamination Levels

Dear Mr. Stanley:

As described during our meeting 8-21-87, this office has received the proposal and offers the following comments:

In response to the justifications for using ten times (10x) the Interim Primary Drinking Water Standards, it would be inappropriate to concur with these levels prior to initiating a comprehensive cleanup effort. This office has and will continue to use the Interim Primary and Secondary Drinking Water Standards as a guideline for cleanup levels. Any residual levels in excess of these standards could subject the site to enforcement by the Division of Environmental Management, Groundwater Section. The levels for each are: chromium, .05 ppm., nickel, .35 ppm., and cyanide, .20 ppm. In addition, Bassick-Sack may use a 40 mg/kg level for total cyanides during cleanup as a working method, but extractable levels per section must be submitted as an indication of residual levels. (free cyanides at 10 ppm at a pH of 5 may also be used as previously permitted).

As requested by Mr. Devore's letter of 8-21-87, this office will address cyanide, chromium, and nickel concentrations. This however, does not preclude enforcement activities by the Division of Environmental Management should they choose to address copper or zinc.

As discussed during the meeting, efforts to complete remedial activities should be initiated within the proposed schedule as soon as possible. Split sampling should be arranged through Mr. Steve Phibbs at (919) 761-2390 5 days in advance of sampling. Please call me at (919) 733-2178 should you have any questions regarding this review.

Sincerely,

Gary D. Babb for
R. Douglas Holyfield, Field Operations Supervisor
Solid & Hazardous Waste Management Branch

cc: Steve Phibbs

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

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

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

December 21, 1987

Mr. Jim Stanley, General Manager
Stewart Warner Corporation, Bassick-Sack Division
2941 Indiana Avenue
Winston-Salem, North Carolina 27105

RE: Site Remediation, Docket #87-468

Dear Mr. Stanley:

Since our meeting of August 12, 1987, this office has not been apprised of the remediation efforts at this site. Mr. Steve Phibbs, Waste Management Specialist with this office has evaluated the site and has indicated to me that the proposed excavation of contaminated soils has not been implemented.

This office has previously reviewed and approved the proposed remedial action plan which included a 30-day target date to complete remedial activities. By appearances it would seem that 120 days is more than adequate to initiate and complete remediation.

As previously cited in the Notice of Violation, Docket #87-468, the disposal and storage of the subject wastes is in violation of 10 NCAC 10F .0032(a) in that the site is not a permitted hazardous waste treatment, storage or disposal facility. Subsquently in that Bassick-Sack Division has failed to initiate and/or complete remedial activities per an immediate response exclusion, it is the determination of this office that Bassick-Sack Division, has not demonstrated that all contaminated soils can be practicably removed or decontaminated. Therefore, Bassick-Sack Division must be able to close the unit and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills [265.310]. In addition, for the purposes of closure, post-closure, and financial responsibility, such a unit is then considered to be a landfill, and Bassick-Sack Division must meet all of the requirements for landfills specified in Subpart G and H of this Part.

By January 30, 1988, Bassick-Sack Division must have completed remedial activities including, excavation and post-sampling with results submitted to this office or be prepared to comply with the closure and post-closure requirements noted above.

If you should have any questions, feel free to contact me at (919) 733-2178.

Sincerely,

R. Douglas Holyfield

R. Douglas Holyfield, Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid and Hazardous Waste Management Branch

RDH:dd

cc: Steve Phibbs

7785A

JAN 1 4 1988

STEWART-WARNER CORPORATION SYMBOL OF EXCELLENCE SW
Bassick·Sack Division
2941 INDIANA AVENUE · WINSTON-SALEM, NORTH CAROLINA 27105 · 919/725-1331

January 12, 1988

37

Mr. R. Douglas Holyfield
Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid & Hazardous Waste Section
306 North Wilmington Street
Room 213, Bath Building
Raleigh, North Carolina 27602

Re: Stewart-Warner response to Section letter of December 21, 1987

Dear Mr. Holyfield:

We are in receipt of your letter of December 21, 1987, in which you expressed dissatisfaction with the progress of the remedial activities scheduled to be conducted at our Bassick-Sack Division facility located in Winston-Salem. We understand failure to complete the required remedial activities (including excavation, post-sampling and sharing of results) by January 30, 1988 may result in the Section categorizing the facility spill sites as hazardous waste landfills thereby requiring Bassick-Sack to comply with the closure and post-closure requirements found at 10 N.C.A.C. 10F.0033 (40 CFR S 265.310). Further, we understand the basis for this action would be the failure to complete the required remedial action within the time allowed by the general immediate response exclusion thereby leaving the Section to conclude Bassick-Sack is unable to demonstrate the contaminated soils can be practicably removed or decontaminated.

While we admit our unfortunate neglect in keeping your office apprised of our progress in initiating the required remedial action, we assure you actions have been and continue to be taken pursuant to that effort. Briefly, after submitting our proposed remedial action plan and schedule August 4, 1987, and obtaining your approval for same August 17, 1987, we met with the Section on August 21, 1987 to discuss the plan and our proposed residual contamination levels. We received your response to our proposals August 26, 1987, and thereafter initiated actions to receive bids from various contractors to conduct the remedial action. The first week of September, 1987, we began bid negotiations which concluded in accepting GSX Corporation's offer to conductthe remedial action. Thereafter, GSX submitted a proposed contract and later on October 6, 1987 a proposed scope of work. These documents were reviewed by our attorneys and executive officers and revised copies were returned to GSX for their approval October 13, 1987. Thereafter, we were unable to obtain a response from GSX for approximately one month, with that response being unsatisfactory. This delay in negotiations by GSX was due to matters outside of our control, however, negotiations have continued since that time and have resulted in a final agreement signed January 5, 1988.

As you are aware, our original schedule for completion, submitted August 4, 1987, indicated extensions could be required due to factors beyond our control. It was our belief initiating negotiations with another contractor would have resulted in a longer delay than completing those then underway with GSX. We now intend to begin the required remedial actions as soon as possible and will take all efforts to keep the Section informed of our progress.

Obviously, we wish to avoid the burdensome expenditures necessary to comply with the closure and post-closure requirements. As a result, we will attempt to complete the required remedial actions by the January 30, 1988 deadline. However, GSX has tentatively established a start-up date for the remedial action between January 18 and February 2, 1988. As you are aware, in our original schedule we estimated approximately one month was required to complete the excavation and share post-sampling results with the Section. Therefore, because of this late start-up date and the unknown factors generally associated with remedial actions of this nature (including adverse weather conditions as now exist in the Winston-Salem area), we request the Section relax its January 30, 1988 deadline for completion of the remedial action to a time approximately one month from our initiation date.

Finally, we request a meeting with the Section prior to its imposing any of the closure and post-closure requirements on Bassick-Sack in the event you are in disagreement with any portion of this letter and/or we are unable to meet the January 30, 1988 or any later designated deadline. Should you have any questions concerning this letter, our requests or our ongoing efforts to initate and complete the required remedial action, please feel free to call upon me.

Very truly yours,

Jim Stanley

Jim Stanley
General Manager

JES/jhb

1-19-88
1-25 equipment moving in
2-25 remediation to be complete with results submitted to this office
agreed to

Steward

39

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

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

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

January 25, 1988

Mr Brad A. DeVore
Womble, Carlyle, Sandridge & Rice
P.O. Drawer 84
Winston-Salem, North Carolina 27102

RE: Bassick-Sack NCD 024 895 864

Dear Mr. DeVore:

Upon receipt and review of Jim Stanley's letter of January 12, 1988, I spoke with Mr. Stanley, January 19, 1988, and discussed the following. I agreed to the revised schedule of January 25, 1988, for implementing the remedial work. I requested that pending favorable weather that the remediation be completed with final results submitted to this office by February 25, 1988. Hopefully, by sampling section by section as described in your letter of January 18, 1988, contamination should be effectively removed.

Upon review of this data and our split-sampling data, we will address the closure and post-closure requirements noted previously.

Please call should you have any questions.

Sincerely,

R. Douglas Holyfield

R. Douglas Holyfied, Field Operations Supervisor
Hazardous Waste Compliance Unit
Hazardous Waste Branch

RDH:dd

cc: Steve Phibbs
Jim Stanley

7942A

NCD024895864
Steve

JAN 20 1988

38

WOMBLE CARLYLE SANDRIDGE & RICE
1600 ONE TRIAD PARK
AND
2400 WACHOVIA BUILDING
WINSTON-SALEM, NORTH CAROLINA 27101

CHARLOTTE OFFICE
2290 CHARLOTTE PLAZA
CHARLOTTE, NORTH CAROLINA 28244
TELEPHONE (704) 331-4900
TELECOPY (704) 334-6914
TELEX 853609

MAILING ADDRESS
POST OFFICE DRAWER 84
WINSTON-SALEM, NORTH CAROLINA 27102
TELEPHONE (919) 721-3600
TELECOPY (919) 721-3660
TELEX 806498

RALEIGH OFFICE
901 WACHOVIA BUILDING
227 FAYETTEVILLE STREET MALL
POST OFFICE BOX 831
RALEIGH, NORTH CAROLINA 27602
TELEPHONE (919) 828-7214
TELECOPY (919) 834-4295
TELEX 806498

WRITER'S DIRECT NUMBER
(919) 721-3714

January 18, 1988

Mr. R. Douglas Holyfield
Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid & Hazardous Waste Section
306 North Wilmington Street
Room 213, Bath Building
Raleigh, North Carolina 27602

Re: Confirmation of January 12, 1988 conversation concerning Bassick-Sack facility

Dear Mr. Holyfield:

The purpose of this letter is to confirm our conversation of January 12, 1988 during which we agreed to present you with the reasons for the delay in the initiation of the remedial activities scheduled to be conducted at the Bassick-Sack Division facility located in Winston-Salem as well as a proposed schedule for the remedial action and an overview of the proposed sampling scheme. Also, on behalf of the Section you agreed to relax your January 30, 1988 deadline for completion of the required remedial action thereby allowing Bassick-Sack to avoid the imposition of the closure and post-closure requirements found at 10 N.C.A.C. 10F.0033 (40 CFR 265.310) for failure to meet that deadline.

As you are aware, by way of Mr. Jim Stanley's letter of January 12, 1988, Bassick-Sack has had difficulty in retaining the services of a contractor to conduct the required remedial activities at its facility. While my client admits its unfortunate neglect in keeping your office apprised of the progress of negotiations and the initiation the required activities, be assured actions have been consistently taken pursuant to that effort. Briefly, after submitting a proposed remedial action plan and schedule August 4, 1987, and obtaining your approval for same August 17, 1987, we met with you on August 21, 1987 to discuss the plan and certain proposed residual contamination levels. We received your response to the proposals August 6, 1987 and

thereafter immediately initiated actions to receive bids from various contractors to conduct the remedial activities. In the first week of September, 1987 bid negotiations were conducted and concluded in accepting GSX Chemical, Inc.'s offer to conduct the remedial activities. Thereafter, GSX submitted a proposed contract and later on October 6, 1987 a proposed scope of work. Review of these documents by myself, Bassick-Sack attorneys and executive officers resulting in revised copies being sent to GSX for their approval October 13, 1987. Specifically, questions concerning indemnification, costs of delay and other essential matters required further negotiations. However, we were unable to obtain a response from GSX for approximately one month, with that response being unsatisfactory. This delay in negotiations by GSX was due to matters outside of our control and was not the result of a lack of effort on our part. However, negotiations have been pursued since that time and resulted in a final agreement signed January 5, 1988. Although the delay in negotiations was somewhat lengthy, it was our belief beginning negotiations with another contractor would have caused an even longer delay than the one which resulted from completion of the effort with GSX. In addition, GSX was the only bidding contractor with the ability to both conduct the necessary excavation and dispose of the resulting hazardous materials.

In response to your request for a schedule outlining the initiation and completion date for the required remedial action, please be informed GSX Chemicals, Inc. has assured us it will begin preparing the site for excavation on January 26, 1988 and will follow the schedule for completion presented in our proposed remedial action plan, submitted August 4, 1987. GSX proposes to "prep" the site over a two to three day period and thereafter complete the required excavation, weather permitting, within approximately ten (10) days. The excavation will be conducted by section, that is, the sections will be excavated individually with samples being taken from each at the conclusion of soil removal. We believe this will substantially reduce the time required to share post-sampling results with the Section. In all, assuming approval from the Section concerning residual contamination levels, we will attempt to the best of our ability to follow the thirty (30) day schedule found in our proposed remedial action plan.

You also requested details on our proposed sampling plan. Briefly, we intend to follow the sampling procedures found in our proposed remedial action plan including the use of stainless steel augers or trowels to take three to five samples per section excavated (depending on the size of the section). We intend to provide site access to Steve Phibbs or other Section representatives in order to share split samples. Thereafter, we

will analyze composite extractables for each section and will present the results to the Section as soon as possible. We believe the composite extractables will adequately reflect the contamination, if any, remaining in each section due to the small size of the sections and the multiple samples taken from them. Bassick-Sack intends to delay any back filling of the excavated areas with clean material until it receives confirmation from the Section the required remedial activities have been completed. This position is taken to avoid removing the clean fill as a hazardous material in the event the Section and Bassick-Sack agree further excavation or treatment is required. Therefore, Bassick-Sack intends to reduce the turn around time for post-excavation sampling and results as much as possible and assumes the Section, within its capabilities, will do the same.

Further, per our discussion, in addition to relaxing the January 30, 1988 deadline, we understand the Section agrees to meet with Bassick-Sack representatives prior to imposing any of the closure or post-closure requirements found at 10 N.C.A.C. § 10F.0033 in the event the Section disagrees with any aspect of this letter and/or Bassick-Sack fails to comply with any further Section deadlines. We make this request in order to avoid misunderstandings relating to factors beyond Bassick-Sack's control such as poor weather conditions and other general unknowns often associated with remedial activities of this nature.

In conclusion, we appreciate the Section's understanding in this matter and assure you all efforts will be taken to bring it to a speedy and satisfactory conclusion. In the event you are not in agreement with the contents of this letter or some other aspect of the proposed remedial activities, please feel free to contact me directly. We would especially appreciate any such response in reference to our proposed remedial action plan due to its January 26, 1988 scheduled date of initiation. Again, we thank you for your cooperation in this matter.

Very truly yours,

Brad A. DeVore

BAD/asi

cc: Edgar DeVylder, Esq.
Jim Stanley
R. Howard Grubbs, Esq.

WOMBLE CARLYLE SANDRIDGE & RICE
1600 ONE TRIAD PARK
AND
2400 WACHOVIA BUILDING
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RALEIGH, NORTH CAROLINA 27602
TELEPHONE (919) 828-7214
TELECOPY (919) 834-4295
TELEX 806498

WRITER'S DIRECT NUMBER
(919) 721-3714

January 26, 1988

Mr. R. Douglas Holyfield
Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid & Hazardous Waste Section
306 North Wilmington Street
Room 213, Bath Building
Raleigh, North Carolina 27602

Re: Bassick-Sack Facility

Dear Doug:

The purpose of this letter is to inform you of the progress of the clean-up action being taken at the Bassick-Sack facility. On Friday, January 22, 1988, representatives of GSX Chemicals Service, Inc., Bassick-Sack and R&A Laboratories met to overview the proposed scope of work and other aspects of the contract controlling the clean-up action. The purpose of the meeting was to allow any contractual difficulties to be properly handled before initiation of the action.

After the meeting, representatives of GSX Chemical Services, Inc. (including the excavation and backfilling subcontractor), Basssick-Sack and R&A Laboratories made a physical site review of the contaminated areas to assess their location and coordinate a proper excavation and removal. During the course of this site review, the excavation and backfilling subcontractor indicated concern about some of the spill sites being adjacent to "banks" or "berms" which in all likelihood, due to the adverse weather conditions, would cause uncontaminated soil to fall back into the excavated areas. The subcontractor estimated the adjacent uncontaminated soils would fall into the excavated areas due to the combination of wet weather and the heavy machinery to be utilized in the excavation. As a result, he requested we enable him to backfill the excavated areas immediately. After we explained our need to share split samples with the Section prior to backfilling the excavated areas (i.e, to avoid having to treat the backfill as a hazardous waste <u>if</u> any further excavation is

required), the subcontractor requested we discuss the problem with the Section.

Thereafter, Jim Chesire (of R&A Laboratories) and I discussed the possibility of having the Section accept R&A Laboratorie's residual contamination data as controlling on the determination on whether the individual sections were "clean". As you are aware, R&A Laboratories intends to take multiple samples from each section and perform "extractable" analyses of their composite. Expected turn around time for the analyses is approximately forty-eight (48) hours. As a result, we contemplated being able to assess each section and potentially backfilling it within a 2-3 day period.

As you are aware, we discussed these testing and backfilling topics in our conversation of January 25, 1988. In the course of that conversation, we understand you agreed this testing sequence would be acceptable, if required due to adverse weather and/or site conditions. In addition, we agreed to take all steps to allow for proper split sampling and reduce the likelihood of uncontaminated soil entering the excavated areas. However, if that task could not be reasonably accomplished, the Section agreed to accept R&A Laboratories' results.

Based on the foregoing, we understand R&A Laboratories test results will be acceptable to Section and will be the basis for the Section's declaring a section "clean" <u>if</u> due to adverse weather and/or site conditions uncontaminated soil cannot be prevented from entering the excavated areas. Further, a determination on the adverse conditions will be made by the Section, in all likelihood by Steve Phibbs, at the time of the excavation. While we hope to avoid using this testing sequence, we appreciate the Section's cooperation in the matter and will attempt to keep you updated as to the progress of our efforts. If you should have any questions please feel free to call upon me.

Very truly yours,

Brad A. DeVore

BAD/asi

cc: Edgar DeVylder, Esq.
Jim Stanley

STEWART-WARNER CORPORATION SYMBOL OF EXCELLENCE SW
Bassick·Sack Division
2941 INDIANA AVENUE · WINSTON-SALEM, NORTH CAROLINA 27105 · 919/725-1331

August 3, 1987

RECEIVED
AUG 5 1987
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Mr. R. Douglas Holyfield
Field Operations Supervisor
Hazardous Waste Compliance Unit
Solid and Hazardous Management Branch
306 N. Wilmington Street
Room 213, Bath Building
Raleigh, North Carolina 27602

Dear Mr. Holyfield:

Enclosed are two (2) copies for your review of the Comprehensive Site report for THE ASSESSMENT OF CHEMICAL CONTAMINATION AT SPILL SITES 1 and 2 Bassick-Sack Division, Winston-Salem, North Carolina.

Mr. James M. Cheshire, President of Research and Analytical Laboratories, Inc., will coordinate between Stewart-Warner Corporation and professional hazardous waste removal and disposal companies any remedial activities necessary for compliance.

We desire a speedy completion of this matter and will attempt, to the best of our ability, to comply with the schedule found within the Report. In addition, while this process is initiated, we wish to enter into meaningful negotiations concerning the residual clean-up levels proposed in your letter of June 26, 1987. It is our position alternative residual levels exist, supported by acceptable data, which when met will provide adequate protection of human health and the environment. Further, we question whether the limits proposed can reasonably be met with current clean-up technologies at all or at least without costs to us vastly disproportionate to the protection afforded to human health or the environment. Therefore, we look forward to meeting with you in the near future to discuss this matter.

If you should have any questions concerning this report, please feel free to contact me at any time.

Sincerely,

Jim E. Stanley

Jim E. Stanley
General Manager

JES/jhb

enclosure

N. DEPARTMENT OF HUMAN RESOURCES
VISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

JUN 22 1987
SOLID & HAZARDOUS WASTE MANAGEMENT

Chain of Custody Record

Hazardous Waste Materials

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

Company's Name Stewart Warner - Bassick Sack Telephone (919) 725-1331

Address Indiana Ave, Winston-Salem, N.C.

Collector's Name S Phillips (signature) Telephone (919) 761-2396

Date Sampled 5/29/87 Time Sampled 3:15 p.m.

Type of Process Generating Waste Electroplating process

Field Information

Samples collected after spillage from the facilities wastewater treatment system.

Field Sample No. 000991 000992

Chain of Possession:

	signature	title	inclusive dates
1.	Steve Phillips	Waste Mgt. Specialist	5/29/87 - 6/5/87
2.	[illegible]	Hydrogeology	6/5/87
3.	[illegible]	Chemist	9 June 87

Results reported

signature	title	date
Annette L. Jay	Lab Tech	18 June 87

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

G-36

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY) [illegible]

(Record of item checked above)

TO: File:

FROM: D. Holzfield

DATE 1-12-88

TIME 4:15 pm

SUBJECT Bassich - Sack Brad Davore

SUMMARY OF COMMUNICATION

Negotiated with 4 contractors - bids bogged down
- settled on GSX
- no work prior to Jan. 26, 1988

2-3 days to mobilize
Removal by Jan 28th 1988 5-days to excavate
Jim Chestine to sample/split with Steve

CONCLUSIONS, ACTION TAKEN OR REQUIRED

1- requested explanation of delay
2- schedule of remedial activities
3- sampling grid proposal/plan
4- Extractables required

Call Steve!

INFORMATION COPIES
TO:

EPA Form 1300-6 (7-72)

N. C. DEPARTMENT OF HUMAN RES ES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Receipt for Samples

The 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.

Steve Phillips — Inspector's Name
310 E. Third St. Winston-Salem, N.C. — Inspector's Address

Stewart Warner, Brosick Sack — Name of Firm
Winston-Salem, N.C. — Firm Address

Jim Stanley — Firm Owner, Operator, or Agent
Plant Manager — Title

SAMPLE NUMBER	COLLECTED		SAMPLE TYPE			DUPLICATE SAMPLES			SAMPLE LOCATION	
	DATE	TIME	WATER	SOIL	OTHER	OFFERED	ACCEPTED	REJECTED	ON-SITE	OFF-SITE
02354	1/28/88	2:00pm		✓			✓		✓	
02355	1/28/88	2:00p.m		✓			✓		✓	
02356	1/28/88	2:00p.m		✓			✓		✓	
02357	1/28/88	2:00pm		✓			✓		✓	

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

Steve Phillips
Signature of Inspector

Waste Management Specialist
Title

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

Signature of Firm Owner, Operator, or Agent

Title

COMMENTS

DHS 3241 (7/84)
Solid & Hazardous Waste

N. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

RECEIVED APR 19 1988 SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Chain of Custody Record

Hazardous Waste Materials

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

Company's Name Stewart Warner, Basick Sack Telephone( ) ___

Address Winston-Salem, N.C

Collector's Name S. Phibbs, J. Cheshire Telephone (919) 761-2390
signature

Date Sampled 1/28/88 Time Sampled 2:00 p.m.

Type of Process Generating Waste Electroplating of Furniture Hardware

Field Information

Samples collected from designated areas 1-A, 1-B, 1-C and 1-D to verify contamination has been removed

Field Sample No. 002354 002355 002356 002357 ___ ___ ___

Chain of Possession:

1. Steve Phibbs — Waste Management Spec — 1/28/88 - Curre
signature — title — inclusive dates

2. R. Doyle Hatfield — Field Operations Supr. — 2-1-86
signature — title — inclusive dates

3. W C Walker — Chemist — 1 Feb 88
signature — title — inclusive dates

Results reported
Annette L. Jay — Chem Analyst — 18 April 88
signature — title — date

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

Split Sample

.. Department of Human Resources
sion of Health Services

SAMPLE ANALYSES REQUEST

Area 1-D

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Number #34D027895864 Field Sample Number 002357

ne of Site Stewart Warner, Bassick Sack Site Location Winston-Salem, N.C.

ected By S. Tibbs, J. Cheshire# 08 Date Collected 1/28/88 Time 2:00 p.m.

RECEIVED APR 19 1988 HAZARDOUS WASTE MANAGEMENT BRANCH

e of Sample:

nvironmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample collected from designated area to verify site has been cleaned up as described in approved remediation plan.
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	<0.01	✓ Arsenic	2.0	✓ Silver	<10
✓ Barium	0.18	✓ Barium	52	Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	4.0	Zinc	
✓ Chromium	<0.20	Chloride		✓ Ph.	8.4
✓ Lead	<1.00	✓ Chromium	57	Conductivity	
✓ Mercury	0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron		✓ Cr VI	26
✓ Cyanide	<0.5	✓ Lead	49		
		Manganese			
		✓ Mercury	<0.1		
		Nitrate			
		✓ Selenium	<0.25		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Received ___ Date Reported 18 April 88

Extracted ___ Date Analyzed ___

rted By ___ Lab Number 002043 FEB 1 89

191 (Revised 7/85)
nd Hazardous Waste (Review 7/87)

N. C. Department of Human Resources
Division of Health Services

Split Sample

SAMPLE ANALYSES REQUEST

Area 1-C

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Site Number 34D024895864 Field Sample Number 002356

Name of Site Stewart Warner, Bassick Sack Site Location Winston-Salem, N.C.

Collected By S. Tibbs, J. Chesher ID# 08 Date Collected 1/28/88 Time 3:00 p.m.

Type of Sample:

Environmental	Concentrate
___ Groundwater (1)	✓ Solid (5)
___ Surface Water (2)	___ Liquid (6)
✓ Soil (3)	___ Sludge (7)
___ Other (4)	___ Other (8)

Comments: Sample collected from designated area to verify site has been cleaned up as described in approved remediation plan.

RECEIVED APR 19 1988 HAZARDOUS WASTE MANAGEMENT BRANCH

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	<0.01	✓ Arsenic	1.5	✓ Silver	<10
✓ Barium	0.39	✓ Barium	76	___ Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	5.0	___ Zinc	
✓ Chromium	<0.20	___ Chloride		✓ Ph	8.0
✓ Lead	<1.00	✓ Chromium	59	___ Conductivity	
✓ Mercury	<0.02	___ Copper		___ TDS	
✓ Selenium	<0.005	___ Fluoride		___ TOC	
✓ Silver	<0.20	___ Iron		✓ CN⁻	33
✓ Cyanide	<0.5	✓ Lead	67		
		___ Manganese			
		✓ Mercury	<0.1		
		___ Nitrate			
		✓ Selenium	<0.25		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
___ P&T:GC/MS		___ EDB		___ Methoxychlor	
___ Acid:B/N Ext.		___ PCB's		___ Toxaphene	
___ TOX		___ Petroleum		___ 2,4-D	
		___ Endrin		___ 2,4,5-TP (silvex)	
		___ Lindane			

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported 18 April 88

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 002042 FLD 100

LS 3191 (Revised 7/85)
Solid and Hazardous Waste (Review 7/87)

Department of Human Resources
ion of Health Services

Split Sample

SAMPLE ANALYSES REQUEST

Area 1-B

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Number 34D0248965864 Field Sample Number 002355

ic of Site Stewart Warner, Bassick Sach Site Location Winston-Salem, N.C.

ected By S. Phillips, J. Cheshire ID# 08 Date Collected 1/28/88 2:00 p.m.

: of Sample:

ıvironmental	Concentrate
___ Groundwater (1)	✓ Solid (5)
___ Surface Water (2)	___ Liquid (6)
✓ Soil (3)	___ Sludge (7)
___ Other (4)	___ Other (8)

Comments: Sample collected from designated area to verify site has been cleaned up as described in remediation plan.

RECEIVED APR 19 1988 WASTE MANAGEMENT BRANCH

INORGANIC CHEMISTRY

Extractables		Total					
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	0.01	✓ Arsenic	25	✓ Silver	<10
✓ Barium	0.28	✓ Barium	113	___ Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	7.0	___ Zinc	
✓ Chromium	<0.20	___ Chloride		✓ Ph	7.3
✓ Lead	<1.00	✓ Chromium	52	___ Conductivity	
✓ Mercury	<0.02	___ Copper		___ TDS	
✓ Selenium	<0.005	___ Fluoride		___ TOC	
✓ Silver	<0.20	___ Iron		✓ Cl⁻	29
✓ Cyanide	<0.5	✓ Lead	97		
		___ Manganese			
		✓ Mercury	<0.1		
		___ Nitrate			
		✓ Selenium	<2.3		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
___ P&T:GC/MS		___ EDB		___ Methoxychlor	
___ Acid:B/N Ext.		___ PCB's		___ Toxaphene	
___ TOX		___ Petroleum		___ 2,4-D	
		___ Endrin		___ 2,4,5-TP (silvex)	
		___ Lindane			

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
___ Gross Alpha	
___ Gross Beta	

Received ___ Date Reported 18 April 88

Extracted ___ Date Analyzed ___

rted By ___ Lab Number 002041 FCJ 183

3191 (Revised 7/85)
nd Hazardous Waste (Revised 7/87)

N. C. Department of Human Resources
Division of Health Services

Split Sample

SAMPLE ANALYSES REQUEST

Area 1-A

State Laboratory of Public Health
P. O. Box 2804
306 N. Wilmington Street
Raleigh, 2761

Site Number 34D024895864 Field Sample Number 002354

Name of Site Stuart Warner, Bassick Sack Site Location Winston-Salem

Collected By S. Phillips, J. Cheshire ID# 08 Date Collected 1/28/88 Time 2:00 p.m.

RECEIVED APR 19 1988 HAZARDOUS WASTE MANAGEMENT BRANCH

Type of Sample:

Environmental	Concentrate
___ Groundwater (1)	✓ Solid (5)
___ Surface Water (2)	___ Liquid (6)
✓ Soil (3)	___ Sludge (7)
___ Other (4)	___ Other (8)

Comments: Sample collected from designated area. To verify site has been cleaned up as described in remediation plan

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	0.02	✓ Arsenic	30	✓ Silver	<10
✓ Barium	0.22	✓ Barium	40	Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	<40	Zinc	
✓ Chromium	<0.20	Chloride		✓ Ph	7.8
✓ Lead	<1.00	✓ Chromium	73	Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	0.008	Fluoride		TOC	
✓ Silver	<0.20	Iron		✓ Cr+	26
✓ Cyanide	<0.5	✓ Lead	137		
		Manganese			
		✓ Mercury	<0.1		
		Nitrate			
		✓ Selenium	<12.4		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Date Received ___ Date Reported 18 April 88

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 002040 F_J 1 03

DHS 3191 (Revised 7/85)

N.C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Receipt for Samples

The 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.

Steve Phillips — 310 E. Third St., Winston-Salem, N.C.
Inspector's Name — Inspector's Address

Stewart Warren Patrick Snyder — Winston-Salem, N.C.
Name of Firm — Firm Address

Jim Stanley
Firm 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
003394	1/29/88	2:30pm		✓			✓		✓	
003395	2/2/88	2:15pm		✓			✓		✓	
~~003396~~				✓			✓		✓	
~~003397~~				✓			✓		✓	

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

Steve Phillips
Signature of Inspector

Waste Management Specialist
Title

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

K Sidney L. Champion (R+A Labs)
Signature of Firm Owner, Operator, or Agent

Title

COMMENTS

DHS 3241 (7/84)
Solid & Hazardous Waste

N. DEPARTMENT OF HUMAN RESOURC
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

RECEIVED APR 19 1988 SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Chain of Custody Record

Hazardous Waste Materials

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

Company's Name Stewart Warner Bassick Sub Telephone( ) ____

Address Winston-Salem, N.C.

Collector's Name Steve Hobbs (signature) Telephone(919) 761-2392

Date Sampled 1/29/88 Time Sampled 7:30 p.m.

Type of Process Generating Waste Electroplating of furniture fixtures

Field Information

Samples collected from remedial activity at Bassick Sub

Field Sample No. 003394 003395 ____ ____ ____ ____ ____

Chain of Possession:

	signature	title	inclusive dates
1.	Steve Hobbs	Waste Management Specialist	1/29/88 - 2/2/88
2.	Robert Glaser	Hydrogeologist	2/4/88
3.	[illegible]	Chemist	4 Feb 88

Results reported

signature	title	date
Annette L. Jay	Chem Analyst	18 April 88

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

. Department of Human Resources
ision of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Number 34002489 5864 Field Sample Number 003395
ne of Site Stewart Warner Bassick Sack Site Location Winston-Salem, N.C.
ected By S. Phillips, J. Cheshire ID# 08 Date Collected 2/12/88 Time 2:15 p.m.
e of Sample:

APR 19 1988 HAZARDOUS WASTE MANAGEMENT BRANCH

nvironmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Samples collected from Area
___ Surface Water (2)	___ Liquid (6)	3-A from remedial investigation
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	<0.01	✓ Arsenic	7.0	✓ Silver	<10
✓ Barium	0.22	✓ Barium	95	Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	5.0	Zinc	
✓ Chromium	<0.20	Chloride		✓ Ph	7.5
✓ Lead	<1.00	✓ Chromium	28	Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron		✓ C.N.	29
~~Cyanide~~		✓ Lead	112		
Cyanide	<0.5	Manganese			
		✓ Mercury	<0.1		
		Nitrate			
		✓ Selenium	<2.5		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Received ___ Date Reported 18 April 88
Extracted ___ Date Analyzed ___
rted By ___ Lab Number 002420 [illegible]

3191 (Revised 7/85)
nd Hazardous Waste (Revised 7/87)

J. C. Department of Human Resources
Division of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

RECEIVED APR 19 1988 SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Site Number 34D024895864 Field Sample Number [illegible]
Name of Site Stuart Hines Landfill Site Site Location [illegible]
Collected By [illegible] ID# [illegible] Date Collected 1/29/88 Time [illegible]

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample collected from Area 1-E
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

(42)

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/Kg	Parameter	Results mg/Kg
✓ Arsenic	<0.01	✓ Arsenic	40	✓ Silver	<10
✓ Barium	0.30	✓ Barium	105	Sulfates	
✓ Cadmium	<0.08	✓ Cadmium	<4.0	Zinc	
✓ Chromium	<0.20	Chloride		✓ Ph	7.9
✓ Lead	<1.00	✓ Chromium	57	Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron		✓ CN	22
		✓ Lead	116		
✓ Cyanide	<0.5	Manganese			
		✓ Mercury	<0.1		
		Nitrate			
		✓ Selenium	12		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Date Received ___ Date Reported 18 April 88
Date Extracted ___ Date Analyzed ___
Reported By ___ Lab Number 002419 [illegible]

DHS 3191 (Revised 7/85)

N. C. DEPARTMENT OF HUMAN R URCES
DIVISION OF HEALTH SERVIC
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Receipt for Samples

The 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.

Steve Phillips — Inspector's Name
310 E. Third St., Winston-Salem, N.C. — Inspector's Address

Stewart Warner Bassick Sack — Name of Firm
Indiana Ave. Winston-Salem, N.C — Firm Address

Jim Stanley, Jim Cheshire — Firm Owner, Operator, or Agent
Title

SAMPLE NUMBER	COLLECTED DATE	COLLECTED TIME	SAMPLE TYPE WATER	SAMPLE TYPE SOIL	SAMPLE TYPE OTHER	DUPLICATE SAMPLES OFFERED	DUPLICATE SAMPLES ACCEPTED	DUPLICATE SAMPLES REJECTED	SAMPLE LOCATION ON-SITE	SAMPLE LOCATION OFF-SITE
003396	2/9/88	2:50pm		✓			✓		✓	
003397	2/9/88	3:12pm		✓			✓		✓	
003398	2/9/88	3:40p.m.		✓			✓		✓	
003396	2/9/88	3:57pm.		✓			✓		✓	
003400	2/9/88	4:15pm		✓			✓		✓	
003401	2/9/88	4:40pm		✓			✓		✓	

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

Steve Phillips
Signature of Inspector

Waste Management Specialist
Title

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

Kevin M. Cheshire
Signature of Firm Owner, Operator, or Agent

President
Title

COMMENTS

DHS 3241 (7/84)
Solid & Hazardous Waste

DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ✓ Generator ___ Transporter ___ Treatment Facilit
___ Storage Facility ___ Disposal Facility ___ Landfill
___ Other: ___

Company's Name Stewart Warner Bassick Sack Telephone( ) ___

Address Indian Ave., Winston-Salem, N.C.

Collector's Name Steve Phillips (signature) Telephone (919) 761-2390

Date Sampled 2/9/88 Time Sampled 2:30 p.m.

Type of Process Generating Waste Electroplating of Furniture Fixtures

Field Information
Samples collected from areas where clean up has taken place

Field Sample No. 003396 003397 003398 003399 003400 003401

Chain of Possession:

1. Steve Phillips (signature) — Waste Management Specialist (title) — 2/9/88-2/10/88 (inclusive dates)
2. [illegible] (signature) — Environmental Chemist (title) — 2/11/88 (inclusive dates)
3. Annette L. Jay (signature) — Chem. Analyst (title) — 11 Feb 88 (inclusive dates)

Results reported
Annette L. Jay (signature) — Chem Analyst (title) — 15 April 88 (date)

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

:. C. Department of Human Resources
·ivision of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

ite Number 34D024895864 Field Sample Number 003396

!ame of Site Stewart Warner Bassick Sack Site Location Winston-Salem, N.C.

:ollected By S. Phillips, J. Cheshire ID# 08 Date Collected 2/4/88 Time 2:50pm

'ype of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area C-H
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

(41)

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ Arsenic	<0.01	___ Arsenic		___ Silver	
✓ Barium	0.16	___ Barium		___ Sulfates	
✓ Cadmium	<0.08	___ Cadmium		___ Zinc	
✓ Chromium	<0.20	___ Chloride		✓ Ph	6.9
✓ Lead	<1.00	___ Chromium		___ Conductivity	
✓ Mercury	<0.02	___ Copper		___ TDS	
✓ Selenium	<0.005	___ Fluoride		___ TOC	
✓ Silver	<0.20	___ Iron		___	
✓ Cyanide	<0.5	___ Lead		___	
___		___ Manganese		___	
___		___ Mercury		___	
___		___ Nitrate		___	
___		___ Selenium		___	

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
___ P&T:GC/MS		___ EDB		___ Methoxychlor	
___ Acid:B/N Ext.		___ PCB's		___ Toxaphene	
___ TOX		___ Petroleum		___ 2,4-D	
___		___ Endrin		___ 2,4,5-TP (silvex)	
___		___ Lindane		___	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls
___
___

RADIOCHEMISTRY

Parameter	Results PCi/1
___ Gross Alpha	
___ Gross Beta	
___	
___	

ıte Received ___ Date Reported 15 April 88

ıte Extracted ___ Date Analyzed ___

·ported By ___ Lab Number 003096 [illegible]

:S 3191 (Revised 7/85)
id and Hazardous Waste (Review 7/87)

'. Department of Human Resources
sion of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Number 34D024895864 Field Sample Number C03397

ne of Site Stewart Warner, Bassick Sack Site Location Winston-Salem, N.C

'ected By S. Phillips, J. Chedwick ID# 08 Date Collected 2/9/88 Time 3:12 p.m.

e of Sample:

nvironmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area 2-B
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ Arsenic	<0.01	Arsenic		Silver	
✓ Barium	0.17	Barium		Sulfates	
✓ Cadmium	<0.08	Cadmium		Zinc	
✓ Chromium	<0.20	Chloride		✓ Ph	7.3
✓ Lead	<1.00	Chromium		Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron			
✓ Cyanide	<0.5	Lead			
		Manganese			
		Mercury			
		Nitrate			
		Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Received ___ Date Reported 15 April 88

Extracted ___ Date Analyzed ___

rted By ___ Lab Number U03097 [illegible]

·191 (Revised 7/85)

. Department of Human Resources
ion of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Number 3AD024895364 Field Sample Number 003401

e of Site Stewart Warren Branch Park Site Location Winston-Salem, N.C.

:cted By S. Phillips, G. Chesh... ID# 08 Date Collected 7/9/88 Time

· of Sample:

:vironmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area 3-B
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
Arsenic	<0.01	Arsenic		Silver	
Barium	0.19	Barium		Sulfates	
Cadmium	<0.08	Cadmium		Zinc	
Chromium	<0.20	Chloride		Ph	
Lead	<1.00	Chromium		Conductivity	
Mercury	<0.02	Copper		TDS	
Selenium	<0.005	Fluoride		TOC	
Silver	<0.20	Iron			
Cyanide	<0.5	Lead			
		Manganese			
		Mercury			
		Nitrate			
		Selenium			

ORGANIC CHEMISTRY

'arameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
'&T:GC/MS		EDB		Methoxychlor	
\cid:B/N Ext.		PCB's		Toxaphene	
'OX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
MF) Coliform Colonies/100mls
MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

ceived _____ Date Reported 15 April 88

:racted _____ Date Analyzed _____

d By _____ Lab Number 003101 FC1199

(Revised 7/85)

N. C. Department of Human Resources
Division of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Healt
P. O. Box 2804
306 N. Wilmington Stree
Raleigh, 2761

Site Number 34 DOE 4895864 Field Sample Number [illegible]
Name of Site Stewart Warner Epoxy Site Site Location Winston-Salem, N.C
Collected By [illegible] ID# [illegible] Date Collected 2/9/88 Time 4:15 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area 2-E
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ Arsenic	<0.01	Arsenic		Silver	
✓ Barium	0.39	Barium		Sulfates	
✓ Cadmium	<0.08	Cadmium		Zinc	
✓ Chromium	<0.20	Chloride		Ph	
✓ Lead	<1.00	Chromium		Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron			
✓ Cyanide	<0.5	Lead			
		Manganese			
		Mercury			
		Nitrate			
		Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Received ___ Date Reported 15 April 88
Extracted ___ Date Analyzed ___
Reported By ___ Lab Number ___

3191 (Revised 7/85)

C. Department of Human Resources
ision of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

: Number 341.024895864 Field Sample Number 003399

me of Site Stewart Warner Bassick Sarke Site Location Winston-Salem, N.C

lected By S. Hill, J. Chaline ID# 08 Date Collected 2/9/88 Time 3:57 p.m

e of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area, 2-D
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

RECEIVED

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ Arsenic	<0.01	___ Arsenic		___ Silver	
✓ Barium	0.40	___ Barium		___ Sulfates	
✓ Cadmium	<0.08	___ Cadmium		___ Zinc	
✓ Chromium	<0.20	___ Chloride		___ Ph	
✓ Lead	<1.00	___ Chromium		___ Conductivity	
✓ Mercury	<0.02	___ Copper		___ TDS	
✓ Selenium	<0.005	___ Fluoride		___ TOC	
✓ Silver	<0.20	___ Iron			
✓ Cyanide	<0.5	___ Lead			
		___ Manganese			
		___ Mercury			
		___ Nitrate			
		___ Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		___ EDB		___ Methoxychlor	
Acid:B/N Ext.		___ PCB's		___ Toxaphene	
TOX		___ Petroleum		___ 2,4-D	
		___ Endrin		___ 2,4,5-TP (silvex)	
		___ Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
___ Gross Alpha	
___ Gross Beta	

eceived ___ Date Reported 15 April 88

xtracted ___ Date Analyzed 003399

ed By ___ Lab Number ___

N. C. Department of Human Resources
Division of Health Services

SAMPLE ANALYSES REQUEST

State Laboratory of Public Hea
P. O. Box 280
306 N. Wilmington Str
Raleigh, 276

Site Number 3A D029995264 Field Sample Number 003398

Name of Site Stewart Warner Borsick Tank Site Location Livingston - Salem, N.C.

Collected By S. Smith, J. Chaline ID# 08 Date Collected 4/19/88 Time 3:40 p.m.

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	✓ Solid (5)	Sample Area 2-C
___ Surface Water (2)	___ Liquid (6)	
✓ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ Arsenic	<0.01	Arsenic		Silver	
✓ Barium	0.33	Barium		Sulfates	
✓ Cadmium	<0.08	Cadmium		Zinc	
✓ Chromium	<0.20	Chloride		Ph	
✓ Lead	<1.00	Chromium		Conductivity	
✓ Mercury	<0.02	Copper		TDS	
✓ Selenium	<0.005	Fluoride		TOC	
✓ Silver	<0.20	Iron			
✓ Cyanide	<0.5	Lead			
		Manganese			
		Mercury			
		Nitrate			
		Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
P&T:GC/MS		EDB		Methoxychlor	
Acid:B/N Ext.		PCB's		Toxaphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

e Received ___ Date Reported 15 April 88

e Extracted ___ Date Analyzed ___

orted By ___ Lab Number 003098 [illegible]

3191 (Revised 7/85)

35

N. C[illegible] ARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

RECEIVED JUN 25 1987 HAZARDOUS & SOLID WASTE MANAGEMENT BRANCH

Site Number NCD024895864 Field Sample Number 600[illegible]
Name of Site Stewart Warner Borg Sack Site Location Indiana Ave. Winston-Salem
Collected By S. Phillips ID# 08 Date Collected 6-29-87 Time 3:15 p.m.

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	✓ Solid	Sample collected after spillage of
___ Surface Water	___ Liquid	wastewater from pretreatment
✓ Soil	___ Sludge	system
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables Parameter	Results mg/l	Total Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	0.03	✓ Arsenic	8.0	___ Chloride	
✓ Barium	0.2	✓ Barium	57	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	2.9	___ Copper	
✓ Chromium	0.19	✓ Chromium	214	___ Fluoride	
✓ Lead	<0.1	✓ Lead	106	___ Iron	
✓ Mercury	<0.02	✓ Mercury	<0.1	___ Manganese	
✓ Selenium	0.03	✓ Selenium	8.0	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.4	___ pH	
				___ Sulfates	
				___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported 18 June 87
Date Extracted ___ Date Analyzed ___
Reported By ___ Lab Number 011874 JUN 88

DHS 3191 (Revised 2/84)
Solid and Hazardous Waste

N. C[illegible]RTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

JUN 22 1987

te Number _____ Field Sample Number 6[illegible]892

me of Site Stewart Warner Bassick Sack Inc. Site Location Indiana Ave. Winston-Salem

llected By S. Phibbs ID# 08 Date Collected 6/22/87 Time 3:15 p.m.

pe of Sample:

Environmental	Concentrate	Comments
___ Groundwater	✓ Solid	Sample collected after rainfall flow
___ Surface Water	___ Liquid	and dilute pollutant effluent
✓ Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	0.04	✓ Arsenic	17	___ Chloride	
✓ Barium	0.2	✓ Barium	68	___ Conductivity	
✓ Cadmium	0.08	✓ Cadmium	6.3	___ Copper	
✓ Chromium	0.24	✓ Chromium	228	___ Fluoride	
✓ Lead	<0.1	✓ Lead	246	___ Iron	
✓ Mercury	<0.02	✓ Mercury	<0.1	___ Manganese	
✓ Selenium	0.066	✓ Selenium	13	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.4	___ pH	
				___ Sulfates	
				___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received _____ Date Reported 18 June 87

Date Extracted _____ Date Analyzed _____

Reported By _____ Lab Number 011875 JUN 88?

DHS 3191 (Revised 2/84)
Solid and Hazardous Waste

STEWART-WARNER CORPORATION
SYMBOL OF SW EXCELLENCE
Bassick·Sack Division
2941 INDIANA AVENUE · WINSTON-SALEM, NORTH CAROLINA 27105 · 919/725-1331

June 8, 1987

RECEIVED
JUN 11 1987
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

Mr. Jerry Rhodes
Assistant Branch Head
North Carolina Dept. of Human Resources
Division of Health Services
P. O. Box 2091
Raleigh, North Carolina 27602-2091

Re: Plating Solution Spill (Cyanide) NCD 024 895 864 and Pre-treatment Waste Water Overflow May 29, 1987.

Dear Mr. Rhodes:

Per your request of May 21, 1987, enclosed is a copy of the sampling/analysis plan required by the North Carolina Solid and Hazardous Waste Management Branch.

If you have any questions, please contact me at (919) 725-1331. With your approval, we will implement the plan.

Sincerely,

Isaac D. Blakley

IDB/jhb

cc: C. Butler
W. Kiley
M. Lipscomb
S. Phibbs

enclosure

CERCLA

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

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

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

30

Mr. Ike Blakely
Bassick-Sack Division of
Stewart-Warner Corp.
2941 Indiana Avenue
Winston-Salem, North Carolina 27105

Date: 4-7-86

Re: Facility ID No. NCD024895864

Dear Mr. Blakely:

Based on information supplied by you, we have processed and accepted at the State level your request for the facility identified with the above ID number to receive the indicated change in classification under RCRA:

Add As	Delete As	
____	____	generator
____	____	transporter
____	x	treater
____	x	storer
____	____	disposer
____	____	small generator

ENTERED APR 7 1986 DATA PROCESSING

We are advising the EPA of the change in your status. Please notify us if there is any further change in your operations which would again affect your status.

Your EPA ID NO. is ____ being cancelled

is not x being cancelled.

ENTERED APR 7 1986 DATA PROCESSING

Cordially,

Keith Lawson

Keith Lawson, Environmental Chemist
Solid & Hazardous Waste Management Branch
Environmental Health Section

cc: Doug McCurry, EPA Region IV
Emil Breckling
M.B. Lipscomb, Bassick-Sack
Steve Phibbs
Forsyth County Health Department

PUBLIC NOTICE

The Solid and Hazardous Waste Management Branch, Department of Human Resources, proposes to deny a permit and terminate the interim status of the Bassick-Sack Division of Stewart-Warner Corporation, located at 2941 Indiana Avenue, Winston-Salem 27105. Termination of interim status means that this plant will no longer be permitted to store its hazardous waste on its premises for longer than 90 days.

The Branch proposes to take this action at the express wish of the Bassick-Sack Division. Bassick -Sack has closed its storage facility in conformity with a plan which has been approved by the Branch, and proper closure has been certified by a professional engineer.

A comment period of 45 days is allowed before final action is taken. If any person objects to this denial and termination, he/she should make known the objection and the reasons for it, and submit any other pertinent material, in writing, to Mr. William L. Meyer, Head, Solid and Hazardous Waste Management Branch, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina 27602, by May 15, 1986. If a sufficient number of objections is made, a public hearing will be held on this matter, but not otherwise. In particular, if no significant objections are raised, denial and termination will be carried out without further notice.

The public should take note that this action is the result of a voluntary change in its waste management practices by Bassick-Sack, and is not to be interpreted as an adverse comment on the company in any way. The Department of Human Resources believes this action is in the best interest of both the company and the State of North Carolina.

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

December 13, 1984

20

Mr. Dennis Solt
Bassick-Sack Division
Stewart Warner Corporation
Post Office Box 4152
Winston Salem, NC 27105

Dear Mr. Solt:

Thank you for sending our office a copy of the letter from the City of Winston Salem in which the city agrees to accept the wastewater from pre-treatment of your cyanide-containing waste.

Since this operation amounts to treatment in a tank, where the effluent goes to the local POTW (which has agreed to accept it) and the sludge will be handled as a hazardous waste, it does not differ in principle from your present mode of pre-treatment.

Our Branch has therefore decided that no emergency permit is required. We approve your proposed method of destroying residual cyanide in your stored sludge, and you may proceed with it as part of your closure operations.

By this letter, this office also approves the modified closure plan which you have submitted.

Very truly yours,

William E. Meyer

William E. Meyer
Environmental Engineer III

WEM/KL/jad

cc: Tom Karnoski
Keith Lawson
William Paige

STEWART-WARNER CORPORATION
SYMBOL OF EXCELLENCE
Bassick·Sack Division
2941 INDIANA AVENUE · WINSTON-SALEM, NORTH CAROLINA 27105 · 919/725-1331

RECEIVED NOV 5 1984 HAZARDOUS WASTE MANAGEMENT BRANCH

October 30, 1984

M. B. (MIKE) LIPSCOMB
GENERAL MANAGER

Mr. William Paige
Solid and Hazardous Waste
Management Branch
Division of Health Services
P. O. Box 2091
Raleigh, North Carolina 27602-2091

15

Dear Mr. Paige:

This letter is official notification of withdrawal of Part A application and termination of interim status under RCRA for the Bassick-Sack Division of Stewart-Warner Corporation (I.D. #NCD024895864). Described in this letter are our methods of closure, present waste inventory, and schedule for complete closure as a storage facility.

Bassick-Sack generates five different hazardous wastes. The first waste generated is a (1) degreasing sludge (F001). At the present time, we do not have any of this waste at the facility. The second and third wastes we generate are (2) wastewater treatment sludge (F006) and (3) foundry baghouse dust containing lead (D008). These two wastes are combined and stored in a protected tank. The present inventory of this combined waste is approximately 25,000 lbs. SCA Services of South Carolina will dispose of this by January 31, 1985, and will haul it every 90 days, or less, after January 31. The tank we presently store this waste in will still be used to accumulate the waste. (4) The fourth waste generated is waste paint (D001). We presently have four drums of this waste paint on hand. This will be incinerated by SCA Services or Caldwell Systems by January 31, 1985 and we will ship all new waste generated within 90 days of its generation.

The last waste we generate is (5) electro-plating bath sludges containing cyanide (F008). We presently are storing 62 drums, and two tanks containing approximately 300 gallons each of this material. This waste has accumulated over the past several years. We have the capacity to process this material through our wastewater pretreatment system. If we were to treat this material at our facility, we would liquify the material, chlorinate it to destroy all of the cyanide, and precipitate the metals which would then become wastewater treatment sludge (F006). After speaking with you on October 26, 1984, you were unsure if we would be allowed to treat this waste at our facility. We are requesting that you consult with your attorneys and Mr. Strickland, and advise us on this matter as soon as possible. If the state approves this, we can have all of the material treated by February 28, 1985.

Bassick-Sack is fully aware that after withdrawal of our interim status we will no longer be allowed to hold hazardous waste at our facility longer than 90 days. We are also aware that we must follow all provisions of 40 CFR

part 262 as a generator of hazardous waste. For our records and protection, I would appreciate a letter from the state confirming approval of our schedule for disposal of our present waste inventory and methods of disposal.

Sincerely,

M. B. Lipscomb

MBL/jhb

cc: Stephen E. Phibbs
N. C. Division of Health Services

Chris Jackson
Stewart-Warner Corporation

W. Kiley
B. Weesner
D. Solt
I. Blakley
L. O'Neill

PUBLIC WORKS
DEPARTMENT

City of Winston-Salem

RECEIVED
DEC 7
HAZARDOUS WASTE MANAGEMENT BRANCH

November 29, 1984

19

Mr. Dennis Solt
Bassick Sack Division
Stewart Warner Corporation
P. O. Box 4152
Winston-Salem, NC 27105

Dear Mr. Solt:

This letter is in response to Bassick Sack's verbal request to treat accumulated cyanide waste in the Bassick Sack wastewater pretreatment plant and discharge the treated water to the Archie Elledge Treatment Plant.

The Archie Elledge Treatment Plant understands that this treatment will take place on a shift separate from the normal production shifts in order to prevent overloading the system.

Since the cyanide waste Bassick Sack proposed to treat is basically the same as the cyanide wastewater which they presently treat, the Archie Elledge Wastewater Treatment Plant will allow Bassick Sack to treat this waste and will accept the discharge water from Bassick Sack's wastewater pretreatment plant.

Sincerely,

Crystal Couch

Crystal Couch
Senior Industrial Waste Control Chemist

CC/tp

Box 2511, Winston-Salem, North Carolina 27102