680SERBSF10,638

680SERBSF10,638

Site Name (Subject):	SPRAGUE ELECTRIC COMPANY
Site ID (Document ID):	NCD003167780
Document Name (DocType):	Correspondence (C)
Report Segment:	
Description:	General Correspondence, 1980 - 2003
Date of Document:	11/25/2003
Date Received:	
Box: *Enter SF and # with no spaces*	SF10,638
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**

SPRAGUE ALUMINUM

NCD 003 167 780

(a.k.a., Sprague Electric Co.)

Folders

1. General Correspondence file, 1980—
2. FIT folder

Bound Reports

1. Photographs
2. **FIT** Report—Screening Site Inspection, Phase I: April 1990
3. **FIT** Report—**Final** Report, Site Inspection: September 1991
4. **Final** Site Inspection Prioritization: October 1992
5. Report of Phase II Sampling: February 1994
6. Field Notebook— Expanded Site Inspection: October 2001
7. Expanded Site Inspection, Vol. I—Text: March 2002
8. Expanded Site Inspection, Vol. II—References: March 2002
9. Site Re-Assessment Report: May 2000

File

MEMORANDUM

To: File
cc: James Bateson
From: Stuart F. Parker, Hydrogeologist/Project Manager
Date: November 25, 2003
Subject: Sprague Aluminum Co. ESI
EPA Data Validation revision

On 11/18/03, the EPA SESD issued a memorandum to the NC Superfund Section, stating that a policy revision had been made regarding validation of Arsenic data. This revision affected Arsenic results for two ESI samples collected in late 2001 at the above referenced site, changing them from "non-detect" to "detected but not useable" data. SFP examined the sample data revisions to determine whether the changes would potentially affect the site's HRS score, and therefore its disposition under CERCLA.

The data points (EPA Lab #s 900 and 901) were subsurface samples of source area sludge and background soil, respectively. Because background was a positive detection, and the reported sludge and background soil concentrations fell into a narrow range (3.9 to 4.3 mg/kg), the revised data did not indicate that arsenic concentrations in the source sludge exceeded that of ambient soil. Therefore, the change in data validation had no impact on the site's NFRAP disposition under CERCLA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Science and Ecosystem Support Division
Office of Quality Assurance and Data Integration
980 College Station Road
Athens, Georgia 30605
11/18/2003

RECEIVED
2003
SUPERFUND
SECTION

MEMORANDUM

SUBJECT: Sprague Aluminum Company
Re-evaluation of Metals Data
Project: 02-0107

FROM: Denise Goddard
Office of Quality Assurance and
Data Integration

TO: Jennifer Wendel, RPM
Waste Management Division

cc: Dan LaMontagne
NCDENR

Recently, the Office of Quality Assurance and Data Integration (OQADI) undertook the task of re-evaluating our data validation policy concerning the treatment of arsenic, selenium and thallium analytical data reported as potential false negatives or positives by laboratories contracted to EPA. The policy was officially revised in February 2002 and at that time it was decided that a select number of 2001 projects would be revisited to determine whether the change in data validation policy would result in changes to the flags originally assigned to the arsenic, selenium and/or thallium data during the validation process. The above mentioned project was one of many selected for re-evaluation of the reported arsenic, selenium and thallium data.

The "U" flags were removed from the arsenic data for samples 900 and 901 indicating that arsenic was actually detected in these samples at the concentrations originally reported by the laboratory however, an "R" flag was assigned to the arsenic data for sample 900 denoting that this data is rejected and considered unusable for its intended purpose.

If you have any questions, please feel free to contact me at the following extension 8568.

September 12, 2003

INORGANIC DATA QUALIFIERS REPORT

Case Number: 29923
Project Number: 02-0107
Site: Sprague Aluminum Co., Lansing, NC

Sample No.	Element	Flag	Reason
889	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
890	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
891	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
892	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
893	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
894	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
895	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
896	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
897	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
898	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
899	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
900	As	R	Analyte reported as potential false positive
	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
901	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
902	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Ca	U	Positives in cal and blind blanks
	Zn	U	Positives in cal and blind blanks

Sample 888 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: BB011TBW / MD No: 12D7 Inorg Contractor: CHEMED

Media: TRIP BLANK - WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 12:00

Ending:

RESULTS	UNITS	ANALYTE
35	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
2.5 U	UG/L	Barium
1.6	UG/L	Beryllium
0.80 U	UG/L	Cadmium
19	UG/L	Calcium
1.8 U	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
40 U	UG/L	Iron
2.4 U	UG/L	Lead
28 U	UG/L	Magnesium
0.50 U	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
62 U	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
280 U	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
27	UG/L	Zinc
NA	UG/L	Cyanide

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 889 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC
Program: SF Case No: 29923
Id/Station: SA005SW / MD No: 12D8 Inorg Contractor: CHEMED
Media: SURFACE WATER

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 14:02
Ending:

RESULTS	UNITS	ANALYTE
55 U	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
24	UG/L	Barium
1.6 U	UG/L	Beryllium
0.80 U	UG/L	Cadmium
5400	UG/L	Calcium
4.7	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
170	UG/L	Iron
2.4 U	UG/L	Lead
2000	UG/L	Magnesium
8.6	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
960	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
2600	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
25 U	UG/L	Zinc
NA	UG/L	Cyanide

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 890 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC
Program: SF Case No: 29923
Id/Station: SA005SD / MD No: 12D9 Inorg Contractor: CHEMED
Media: SEDIMENT

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 14:12
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
14000	MG/KG	Aluminum
3.5 U	MG/KG	Antimony
2.8 U	MG/KG	Arsenic
200	MG/KG	Barium
0.69 U	MG/KG	Beryllium
0.30 U	MG/KG	Cadmium
2300	MG/KG	Calcium
41	MG/KG	Chromium
19	MG/KG	Cobalt
42	MG/KG	Copper
26000	MG/KG	Iron
13	MG/KG	Lead
4600	MG/KG	Magnesium
430	MG/KG	Manganese
0.18 U	MG/KG	Total Mercury
19	MG/KG	Nickel
2300 J	MG/KG	Potassium
1.9 U	MG/KG	Selenium
2.2 U	MG/KG	Silver
500	MG/KG	Sodium
2.7 U	MG/KG	Thallium
68	MG/KG	Vanadium
95	MG/KG	Zinc
NA	MG/KG	Cyanide
48	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 891 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC
Program: SF Case No: 29923
Id/Station: SA004SW / MD No: 12E0 Inorg Contractor: CHEMED
Media: SURFACE WATER

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 14:28
Ending:

RESULTS	UNITS	ANALYTE
76 U	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
26	UG/L	Barium
1.7 U	UG/L	Beryllium
0.80 U	UG/L	Cadmium
5800	UG/L	Calcium
1.8 U	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
180	UG/L	Iron
2.4 U	UG/L	Lead
2200	UG/L	Magnesium
13	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
1100	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
3000	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
34 U	UG/L	Zinc
NA	UG/L	Cyanide

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 892 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA004SD / MD No: 12E1 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 14:37
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5400	MG/KG	Aluminum
2.4 U	MG/KG	Antimony
2.0 U	MG/KG	Arsenic
73	MG/KG	Barium
0.29 U	MG/KG	Beryllium
0.21 U	MG/KG	Cadmium
1300	MG/KG	Calcium
16	MG/KG	Chromium
7.8	MG/KG	Cobalt
16	MG/KG	Copper
11000	MG/KG	Iron
5.5	MG/KG	Lead
2000	MG/KG	Magnesium
210	MG/KG	Manganese
0.13 U	MG/KG	Total Mercury
6.9	MG/KG	Nickel
1000 J	MG/KG	Potassium
1.3 U	MG/KG	Selenium
1.5 U	MG/KG	Silver
440	MG/KG	Sodium
1.9 U	MG/KG	Thallium
27	MG/KG	Vanadium
35	MG/KG	Zinc
NA	MG/KG	Cyanide
25	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 893 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA003SW / MD No: 12E2 Inorg Contractor: CHEMED

Media: SURFACE WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:01

Ending:

RESULTS	UNITS	ANALYTE
71 U	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
26	UG/L	Barium
1.7 U	UG/L	Beryllium
0.80 U	UG/L	Cadmium
5800	UG/L	Calcium
1.8 U	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
150	UG/L	Iron
2.4 U	UG/L	Lead
2200	UG/L	Magnesium
9.1	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
1100	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
2700	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
22 U	UG/L	Zinc
NA	UG/L	Cyanide

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 894 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA003SD / MD No: 12E3 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:04

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4600	MG/KG	Aluminum
2.2 U	MG/KG	Antimony
1.8 U	MG/KG	Arsenic
67	MG/KG	Barium
0.32 U	MG/KG	Beryllium
0.20 U	MG/KG	Cadmium
980	MG/KG	Calcium
16	MG/KG	Chromium
7.5	MG/KG	Cobalt
12	MG/KG	Copper
11000	MG/KG	Iron
5.9	MG/KG	Lead
1600	MG/KG	Magnesium
250	MG/KG	Manganese
0.12 U	MG/KG	Total Mercury
6.3	MG/KG	Nickel
900 J	MG/KG	Potassium
1.2 U	MG/KG	Selenium
1.4 U	MG/KG	Silver
360	MG/KG	Sodium
1.8 U	MG/KG	Thallium
26	MG/KG	Vanadium
35	MG/KG	Zinc
NA	MG/KG	Cyanide
18	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 895 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC
Program: SF Case No: 29923
Id/Station: SA001SW / MD No: 12E4 Inorg Contractor: CHEMED
Media: SURFACE WATER

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 15:40
Ending:

RESULTS	UNITS	ANALYTE
57 U	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
21	UG/L	Barium
1.8 U	UG/L	Beryllium
0.80 U	UG/L	Cadmium
4900	UG/L	Calcium
1.8 U	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
130	UG/L	Iron
2.4 U	UG/L	Lead
1800	UG/L	Magnesium
8.0	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
870	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
2200	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
26 U	UG/L	Zinc
NA	UG/L	Cyanide

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 896 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA001SD / MD No: 12E5 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:59

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
12000	MG/KG	Aluminum
2.8 U	MG/KG	Antimony
2.2 U	MG/KG	Arsenic
200	MG/KG	Barium
0.68 U	MG/KG	Beryllium
0.24 U	MG/KG	Cadmium
2400	MG/KG	Calcium
36	MG/KG	Chromium
18	MG/KG	Cobalt
28	MG/KG	Copper
25000	MG/KG	Iron
13	MG/KG	Lead
4400	MG/KG	Magnesium
510	MG/KG	Manganese
0.15 U	MG/KG	Total Mercury
17	MG/KG	Nickel
2600 J	MG/KG	Potassium
1.5 U	MG/KG	Selenium
1.8 U	MG/KG	Silver
370	MG/KG	Sodium
2.2 U	MG/KG	Thallium
73	MG/KG	Vanadium
79	MG/KG	Zinc
NA	MG/KG	Cyanide
34	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 897 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA002SD / MD No: 12E6 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 16:12

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
11000	MG/KG	Aluminum
2.6 U	MG/KG	Antimony
2.1 U	MG/KG	Arsenic
160	MG/KG	Barium
0.49 U	MG/KG	Beryllium
0.22 U	MG/KG	Cadmium
2300	MG/KG	Calcium
29	MG/KG	Chromium
15	MG/KG	Cobalt
26	MG/KG	Copper
22000	MG/KG	Iron
8.1	MG/KG	Lead
4200	MG/KG	Magnesium
340	MG/KG	Manganese
0.14 U	MG/KG	Total Mercury
13	MG/KG	Nickel
2400 J	MG/KG	Potassium
1.4 U	MG/KG	Selenium
1.6 U	MG/KG	Silver
540	MG/KG	Sodium
2.0 U	MG/KG	Thallium
59	MG/KG	Vanadium
66	MG/KG	Zinc
NA	MG/KG	Cyanide
29	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 898 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA102SD / MD No: 12E7 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 16:12
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
11000	MG/KG	Aluminum
2.7 U	MG/KG	Antimony
2.2 U	MG/KG	Arsenic
160	MG/KG	Barium
0.55 U	MG/KG	Beryllium
0.23 U	MG/KG	Cadmium
2000	MG/KG	Calcium
29	MG/KG	Chromium
14	MG/KG	Cobalt
23	MG/KG	Copper
21000	MG/KG	Iron
9.3	MG/KG	Lead
3800	MG/KG	Magnesium
300	MG/KG	Manganese
0.15 U	MG/KG	Total Mercury
13	MG/KG	Nickel
2400 J	MG/KG	Potassium
1.5 U	MG/KG	Selenium
1.7 U	MG/KG	Silver
470	MG/KG	Sodium
2.1 U	MG/KG	Thallium
60	MG/KG	Vanadium
62	MG/KG	Zinc
NA	MG/KG	Cyanide
32	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 899 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA010SL / MD No: 12E8 Inorg Contractor: CHEMED

Media: SURFACE SOIL (0" - 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 17:50

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
200000	MG/KG	Aluminum
4.9 U	MG/KG	Antimony
4.0 U	MG/KG	Arsenic
60	MG/KG	Barium
0.53 U	MG/KG	Beryllium
0.42 U	MG/KG	Cadmium
1300	MG/KG	Calcium
13	MG/KG	Chromium
3.5	MG/KG	Cobalt
88	MG/KG	Copper
4800	MG/KG	Iron
6.1 U	MG/KG	Lead
940	MG/KG	Magnesium
220	MG/KG	Manganese
0.26 U	MG/KG	Total Mercury
15	MG/KG	Nickel
880 J	MG/KG	Potassium
2.7 U	MG/KG	Selenium
3.1 U	MG/KG	Silver
2100	MG/KG	Sodium
3.8 U	MG/KG	Thallium
12	MG/KG	Vanadium
32	MG/KG	Zinc
NA	MG/KG	Cyanide
63	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 900 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA011SL / MD No: 12E9 Inorg Contractor: CHEMED

Media: SURFACE SOIL (0" - 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/30/2001 10:00

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
65000	MG/KG	Aluminum
3.8 U	MG/KG	Antimony
3.9 R	MG/KG	Arsenic
220	MG/KG	Barium
1.1 U	MG/KG	Beryllium
0.33 U	MG/KG	Cadmium
2600	MG/KG	Calcium
89	MG/KG	Chromium
18	MG/KG	Cobalt
120	MG/KG	Copper
37000	MG/KG	Iron
15	MG/KG	Lead
2700	MG/KG	Magnesium
460	MG/KG	Manganese
26	MG/KG	Total Mercury
20	MG/KG	Nickel
2000 J	MG/KG	Potassium
2.1 U	MG/KG	Selenium
2.4 U	MG/KG	Silver
1600	MG/KG	Sodium
3.0 U	MG/KG	Thallium
120	MG/KG	Vanadium
55	MG/KG	Zinc
NA	MG/KG	Cyanide
52	%	% Moisture

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 901 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA009SB / MD No: 12F0 Inorg Contractor: CHEMED

Media: SUBSURFACE SOIL (> 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/30/2001 10:00

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
22000	MG/KG	Aluminum
2.1 U	MG/KG	Antimony
4.3	MG/KG	Arsenic
470	MG/KG	Barium
0.97 U	MG/KG	Beryllium
0.18 U	MG/KG	Cadmium
2000	MG/KG	Calcium
72	MG/KG	Chromium
26	MG/KG	Cobalt
34	MG/KG	Copper
37000	MG/KG	Iron
10	MG/KG	Lead
10000	MG/KG	Magnesium
790	MG/KG	Manganese
0.12 U	MG/KG	Total Mercury
23	MG/KG	Nickel
7200 J	MG/KG	Potassium
1.1 U	MG/KG	Selenium
1.3 U	MG/KG	Silver
220	MG/KG	Sodium
1.6 U	MG/KG	Thallium
87	MG/KG	Vanadium
85	MG/KG	Zinc
NA	MG/KG	Cyanide
14	%	% Moisture

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

Sample 902 FY 2002 Project: 02-0107

Metals Scan

Facility: Sprague Aluminum Co. Lansing, NC
Program: SF Case No: 29923
Id/Station: SA007PB / MD No: 12F1 Inorg Contractor: CHEMED
Media: PRESERVATIVE BLANK

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/31/2001 12:00
Ending:

RESULTS	UNITS	ANALYTE
47 U	UG/L	Aluminum
9.2 U	UG/L	Antimony
7.5 U	UG/L	Arsenic
2.5 U	UG/L	Barium
1.9 U	UG/L	Beryllium
0.80 U	UG/L	Cadmium
20 U	UG/L	Calcium
1.8 U	UG/L	Chromium
3.1 U	UG/L	Cobalt
2.4 U	UG/L	Copper
40 U	UG/L	Iron
2.4 U	UG/L	Lead
28 U	UG/L	Magnesium
0.50 U	UG/L	Manganese
0.20 U	UG/L	Total Mercury
3.5 U	UG/L	Nickel
62 U	UG/L	Potassium
5.0 U	UG/L	Selenium
5.9 U	UG/L	Silver
280 U	UG/L	Sodium
7.2 U	UG/L	Thallium
2.6 U	UG/L	Vanadium
26 U	UG/L	Zinc
NA	UG/L	Cyanide

CYANIDE ANALYSIS NOT REQUESTED

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

MICHAEL F. EASLEY, GOVERNOR
WILLIAM G. ROSS, JR., SECRETARY
DEXTER R. MATTHEWS, DIRECTOR

NCDENR

May 16, 2002

Ms. Jennifer Wendel
NC Site Management Section
US EPA Region IV Waste Division
61 Forsythe Street, 11th Floor
Atlanta, Georgia 30303

Subject: ESI Follow-up
Sprague Aluminum Co.
Lansing, Ashe County, NC
NCD 003 167 780

Dear Ms. Wendel:

During the above-mentioned Expanded Site Inspection, the NC Superfund Section visited the NC Public Water Supply Section in Raleigh, in order to conduct a file search for sample analytical data from the United Chemi-con production well. This well supplies drinking water to 450 employees at the former Sprague Electric Co. capacitor plant and is in relative proximity to the ESI site. However, the Public Water Supply file for this well contained no analytical results for mercury, which ESI sampling confirmed to be a source contaminant.

Based on the potential for mercury contamination in the well, the NC Superfund Section contacted the NC Groundwater Section, NCDENR Winston-Salem Regional Office, and recommended that the well be sampled for mercury and other inorganics as soon as possible. In response, Ms. Sherri Knight reported that their office files contained inorganic data from periodic sampling of the well during the late 1990s. These sample results indicated that concentrations of mercury and other tested metals were less than their respective Maximum Contaminant Levels (MCLs). These data were forwarded to our attention and are attached.

Based on these results, this groundwater supply well has not been affected by the source, and our recommendation for no further federal action at this site remains unchanged. If you have any questions, please contact me at (919) 733-2801, Ext. 280.

Sincerely,

Stuart F. Parker, Hydrogeologist
NC Superfund Section

Attachments
cc: James Bateson
Federal File

1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1646
401 OBERLIN ROAD, SUITE 150, RALEIGH, NC 27605
PHONE: 919-733-4996 \ FAX: 919-715-3605
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED/10% POST-CONSUMER PAPER

SA08 05/14/02 PUBLIC WATER SUPPLY SYSTEM INQUIRE/UPDATE
PROD INORGANIC CHEMICALS MAINTENANCE 15.05.59
LAB ID 37747 1-800-9-ANALYSIS INC. DATE RECEIVED 11 / 01 / 95
PWS ID 0105441 UNITED CHEMI-CON SPECIMEN NBR M 032844
SAMPLE TYPE E (E=ENTRY POINT, S=SPECIAL, W=SOURCE FLUORIDE)
COLLECTION DATE 10 / 18 / 95 TIME 10 : 00 A M (HH:MM A/PM)
LOC WHERE CLCTD A05-FORMATION
LOCATION CODE A05 COLLECTED BY LESLIE HOVERMALE

DEL	CTMT	NAME	MTH	S	RESULTS	ALLOW LIMIT	R	T
_	1035	MERCURY	119	L	. 0004	.002		
_	1036	NICKEL	___	_	____ . ____	.100		
_	1045	SELENIUM	___	_	____ . ____	.050		
_	1052	SODIUM	169	_	9 . 8600	.000		
_	1055	SULFATE	___	_	____ . ____	.000		
_	1074	ANTIMONY	___	_	____ . ____	.006		
_	1075	BERYLLIUM	___	_	____ . ____	.004		
_	1085	THALLIUM	___	_	____ . ____	.002		

SMPL UNSAT _ DT ANLYS BEGUN 10 / 19 / 95 TM 10 : 40 A M HOLD TIME RVED _
COMMENTS DT ANLYS CMPLT 10 / 25 / 95 TM 05 : 00 P M LIM RVD _ DEL _
LAB NOT CERT FOR SULFATE

PF3=EXIT PF4=DATA ENTRY PF5=INQUIRE/CHANGE PF07=BACK PF08=FORW PF12=MAIN MENU

RECEIVED
MAY 16 2002
SUPERFUND SECTION

SA08 05/14/02 PUBLIC WATER SUPPLY SYSTEM INQUIRE/UPDATE
PROD INORGANIC CHEMICALS MAINTENANCE 15.05.42
LAB ID 37733 HYDRO ANALYTICAL LABS DATE RECEIVED 08 / 03 / 98
PWS ID 0105441 UNITED CHEMI-CON SPECIMEN NBR M 043753
SAMPLE TYPE E (E=ENTRY POINT, S=SPECIAL, W=SOURCE FLUORIDE)
COLLECTION DATE 06 / 17 / 98 TIME 07 : 30 A M (HH:MM A/PM)
LOC WHERE CLCTD ENTRY POINT WELL LINE
LOCATION CODE W01 COLLECTED BY BILL MILLER

DEL	CTMT	NAME	MTH	S	RESULTS	ALLOW LIMIT	R	T
_	1035	MERCURY	103	L	. 0002	.002		
_	1036	NICKEL	125	L	. 0100	.000		
_	1045	SELENIUM	125	L	. 0050	.050		
_	1052	SODIUM	101	_	5 . 0500	.000		
_	1055	SULFATE	173	_	12 . 0000	.000		
_	1074	ANTIMONY	___	_	____ . ____	.006		
_	1075	BERYLLIUM	125	L	. 0010	.004		
_	1085	THALLIUM	___	_	____ . ____	.002		

SMPL UNSAT _ DT ANLYS BEGUN 06 / 18 / 98 TM 08 : 00 A M HOLD TIME RVED _
COMMENTS DT ANLYS CMPLT 07 / 18 / 98 TM 05 : 00 P M LIM RVD _ DEL _

PF3=EXIT PF4=DATA ENTRY PF5=INQUIRE/CHANGE PF07=BACK PF08=FORW PF12=MAIN MENU

SA08 05/14/02 PUBLIC WATER SUPPLY SYSTEM INQUIRE/UPDATE
PROD INORGANIC CHEMICALS MAINTENANCE 15.05.07
LAB ID 37733 HYDRO ANALYTICAL LABS DATE RECEIVED 11 / 30 / 99
PWS ID 0105441 UNITED CHEMI-CON SPECIMEN NBR M 046666
SAMPLE TYPE E (E=ENTRY POINT, S=SPECIAL, W=SOURCE FLUORIDE)
COLLECTION DATE 10 / 13 / 99 TIME 09 : 30 A M (HH:MM A/PM)
LOC WHERE CLCTD ENTRY POINT WELL LINE
LOCATION CODE W01 COLLECTED BY EVERETT ADAMS

DEL	CTMT	NAME	MTH	S	RESULTS	ALLOW LIMIT	R	T
_	1035	MERCURY	103	L	. 0002	.002		
_	1036	NICKEL	125	L	. 0100	.000		
_	1045	SELENIUM	125	L	. 0005	.050		
_	1052	SODIUM	101	L	10 . 0000	.000		
_	1055	SULFATE	173	_	12 . 0000	.000		
_	1074	ANTIMONY	___	_	____ . ____	.006		
_	1075	BERYLLIUM	125	L	. 0010	.004		
_	1085	THALLIUM	___	_	____ . ____	.002		

SMPL UNSAT _ DT ANLYS BEGUN 10 / 19 / 99 TM 03 : 30 P M HOLD TIME RVED _
COMMENTS DT ANLYS CMPLT 10 / 29 / 99 TM 02 : 45 P M LIM RVD _ DEL _

PF3=EXIT PF4=DATA ENTRY PF5=INQUIRE/CHANGE PF07=BACK PF08=FORW PF12=MAIN MENU

MEMO

DATE: _____

TO: _____

Delta Environmental Consultants, Inc.

Stephen A. Zbur, P.G.
Senior Project Manager

4068 Mt. Royal Boulevard
Suite 115-Gamma
Allison Park, PA 15101
412/487-7700
FAX 412/487-9785

UNITED CHEMI-CON

BS EN ISO 9002
Certificate No: 5359

THEODORE W. FISCHER, PE
VICE PRESIDENT
GENERAL MANAGER

185 McNEIL ROAD
PHONE (910) 384-2551

UNITED CHEMI-CON, INC.
LANSING, NC 28643-8301
FAX (910) 384-3721

AMERICAN ANNUITY GROUP, INC.

John P. Gruber
Director of Properties

250 EAST FIFTH STREET CINCINNATI, OH 45202 Phone: (513) 333-5311
P.O. Box 120, Cincinnati, OH 45201 Fax: (513) 357-3397

North Carolina Department of Environment, Health, and Natural Resources

Printed on Recycled Paper

TRIP NOTIFICATION AND AUTHORIZATION FORM

Program:

- [X] CERCLA Site Assessment
- [ ] State
- [ ] NPL/DOD
- [ ] Brownfields
- [ ] MGP
- [ ] Dry Cleaners

Site Name:	Sprague Aluminum
ID Number:	NCD 003 167 780
Street Address:	Highway 194
City:	Lansing
County:	Ashe

Date(s) of Trip	Trip Canceled:	Trip Rescheduled (Date):
April 17-18,2002		

Reason For Trip: Expanded Site Inspection - Sampling

(if sampling, check appropriate boxes below)

- [ ] Surface Soil
- [ ] Subsurface Soil
- [ ] Using Augers/Shovels to collect soil
- [ ] Using Little Beaver to collect soil
- [X] Groundwater (from tap)
- [ ] Groundwater (bailers)
- [ ] Groundwater (pumps)
- [ ] Surface Water
- [ ] Sediment

Project Team Leader	Assistant	Assistant	Assistant
Stuart Parker	Kyle Hagen	Serafino Franch	

Authorized By: _____

Industrial Hygienist Signature

Office Use Only

County Health Department Official Contact: John Alley

Title: Env. Health Supervisor

Phone Number: (828) 264 - 4995

Health Department Official Contacted: John Alley

Back Up Letter Required?: Yes _ No ✓

Notes: Notified Mr. Alley via voice mail 3-27-02 (DBL)

TRIP NOTIFICATION AND AUTHORIZATION FORM

Program:

- [X] CERCLA Site Assessment
- [ ] State
- [ ] NPL/DOD
- [ ] Brownfields
- [ ] MGP
- [ ] Dry Cleaners

Site Name:	Sprague Aluminum
ID Number:	NCD 003 167 780
Street Address:	Highway 194
City:	Lansing
County:	Ashe

Date(s) of Trip	Trip Canceled:	Trip Rescheduled (Date):
	March 28, 2002	

Reason For Trip: Expanded Site Inspection - Sampling

(if sampling, check appropriate boxes below)

- [ ] Surface Soil
- [ ] Subsurface Soil
- [ ] Using Augers/Shovels to collect soil
- [ ] Using Little Beaver to collect soil
- [X] Groundwater (from tap)
- [ ] Groundwater (bailers)
- [ ] Groundwater (pumps)
- [ ] Surface Water
- [ ] Sediment

Project Team Leader	Assistant	Assistant	Assistant
Stuart Parker	Kyle Hagen	Serafino Franch	

Authorized By: _____

Industrial Hygienist Signature

Office Use Only

County Health Department Official Contact: John Alley

Title:

Phone Number: (828) 264 - 4995

Health Department Official Contacted: Back Up Letter Required?: Yes _ No ✓

Notes: Notified Mr. Alley via voice mail 3-28-02 (DBC)

Subject: Sprague Aluminum
Date: Tue, 14 May 2002 15:19:25 -0400
From: Sherri Knight <sherri.knight@ncmail.net>
Organization: NC DENR Ground Water
To: STUART PARKER <STUART.PARKER@ncmail.net>

I talked with our local public water supply office about your March 28 letter. They have data from 1995, 1998 and 1999 for the facility for mercury and some other metals. I can forward a copy by courier if you like. Thanks, Sherri

--
Sherri V. Knight
Groundwater Section Supervisor
NC Department of Environment and Natural Resources
Winston-Salem Regional Office
Voice: (336) 771-4608 ext. 322 Fax: (336) 771-4632

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

MICHAEL F. EASLEY, GOVERNOR
WILLIAM G. ROSS, JR., SECRETARY
DEXTER R. MATTHEWS, DIRECTOR

March 28, 2002

NCDENR Winston-Salem Regional Office (WSRO)
Attn: Sherri Knight, Regional Groundwater Supervisor
585 Waughton Street
Winston-Salem, NC 27107

Dear Ms Knight:

The NC Superfund Section recently conducted a site assessment at a portion of the former Sprague Aluminum (a.k.a., Sprague Electric) Co. capacitor plant near Lansing, Ashe County, NC. The capacitor plant is now operated by United Chemi-con (UC). The project site lies along the UC property's present northeast border, separating it from the North Fork New River.

The project site contained several unlined surface impoundments which the Sprague plant historically used to separate aluminum oxide from its process wastewater. The impoundments, which contained metalliferous sludges, were filled and covered with compacted soil during the mid 1990s. The primary purpose of the most recent investigation was to evaluate the likely impact of the impoundment sludges on the nearby North Fork New River. The concern was that mercury and other metals in the sludges could potentially migrate to the river via shallow groundwater. The river is a fishery and contains rare plant and animal species.

The NC Superfund Section conducted on-site sampling operations on October 29-30, 2001. Superfund personnel collected two subsurface sludge samples by hand auger, collected surface water and sediment samples at several river locations, and installed two temporary monitoring wells at locations between the impoundments and the river.

Samples were analyzed for metals at a federal contract laboratory. One of the sludge samples contained mercury (26 mg/kg). However, sampling results did not indicate metals contamination in the river. The NC Superfund Section's power drilling equipment met with refusal above the zone of saturation, and no groundwater samples were obtained. The potential therefore remains for groundwater contamination beneath the project site.

The UC facility's production well supplies up to 450 plant employees with drinking water. This well is located adjacent to the river, at a location 0.2 mile west, and 0.5 mile upstream, from the project site. The production well draws from fractured bedrock, and therefore could potentially intercept groundwater contaminants beneath the project site.

1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1646
401 OBERLIN ROAD, SUITE 150, RALEIGH, NC 27605
PHONE: 919-733-4996 \ FAX: 919-715-3605
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED/10% POST-CONSUMER PAPER

At the time of the October 2001 sampling event, the Superfund Section anticipated that metals data for the UC production well would be on file at the NC Public Water Supply Section. In addition, extensive groundwater sampling had been conducted at UC in 1993 and summarized in two 1999 Comprehensive Site Assessment (CSA) reports. However, a subsequent review of these sources indicated that the production well had been tested repeatedly for lead and copper, but not for mercury or other metals.

Based on the October 2001 surface water and sediment results, the NC Superfund Section recommended that the EPA designate the project site for no further remedial action under CERCLA. However, the NC Superfund Section strongly recommends that the UC production well be tested for mercury and other RCRA metals as soon as possible, in order to address potential drinking water contamination. If you have any questions, please call me at (919) 733-2801.

Sincerely,

Stuart F. Parker, Hydrogeologist
NC Superfund Section

cc: file

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #2

LI USING ENGINEER'S SCALE (1/60)

SITE NAME: Sprague Aluminum CERCLIS #: NCD 003 167 780

AKA: Sprague Electric SSID: 402619

ADDRESS: NA

CITY: Lansing STATE: NC ZIP CODE: 28643

SITE REFERENCE POINT: Center

USGS QUAD MAP NAME: Warrensville, NC TOWNSHIP: - N/S RANGE: - E/W

SCALE: 1 : 24,000 MAP DATE: 1966 SECTION: - 1/4 - 1/4 - 1/4

MAP DATUM [1927] [1983] (CIRCLE ONE) MERIDIAN: -

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy)

LONGITUDE: 81 ° 30 ' 0.00 " LATITUDE: 36 ° 22 ' 30.00 "

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:

LONGITUDE: 81 ° 30 ' 0.00 " LATITUDE: 36 ° 27 ' 30.00 "

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM LATITUDE GRID LINE TO SITE REF POINT: 229

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A X 0.3304 = 75.66 "

C) EXPRESS IN MINUTES AND SECONDS (1' = 60") : 1 ' 15.66 "

D) ADD TO STARTING LATITUDE: 36 ° 27 ' 30.00 " + 1 ' 15.66 "

SITE LATITUDE: 36 ° 28 ' 45.66 "

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM RIGHT LONGITUDE LINE TO SITE REF POINT: 28

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A X 0.3304 = 9.25 "

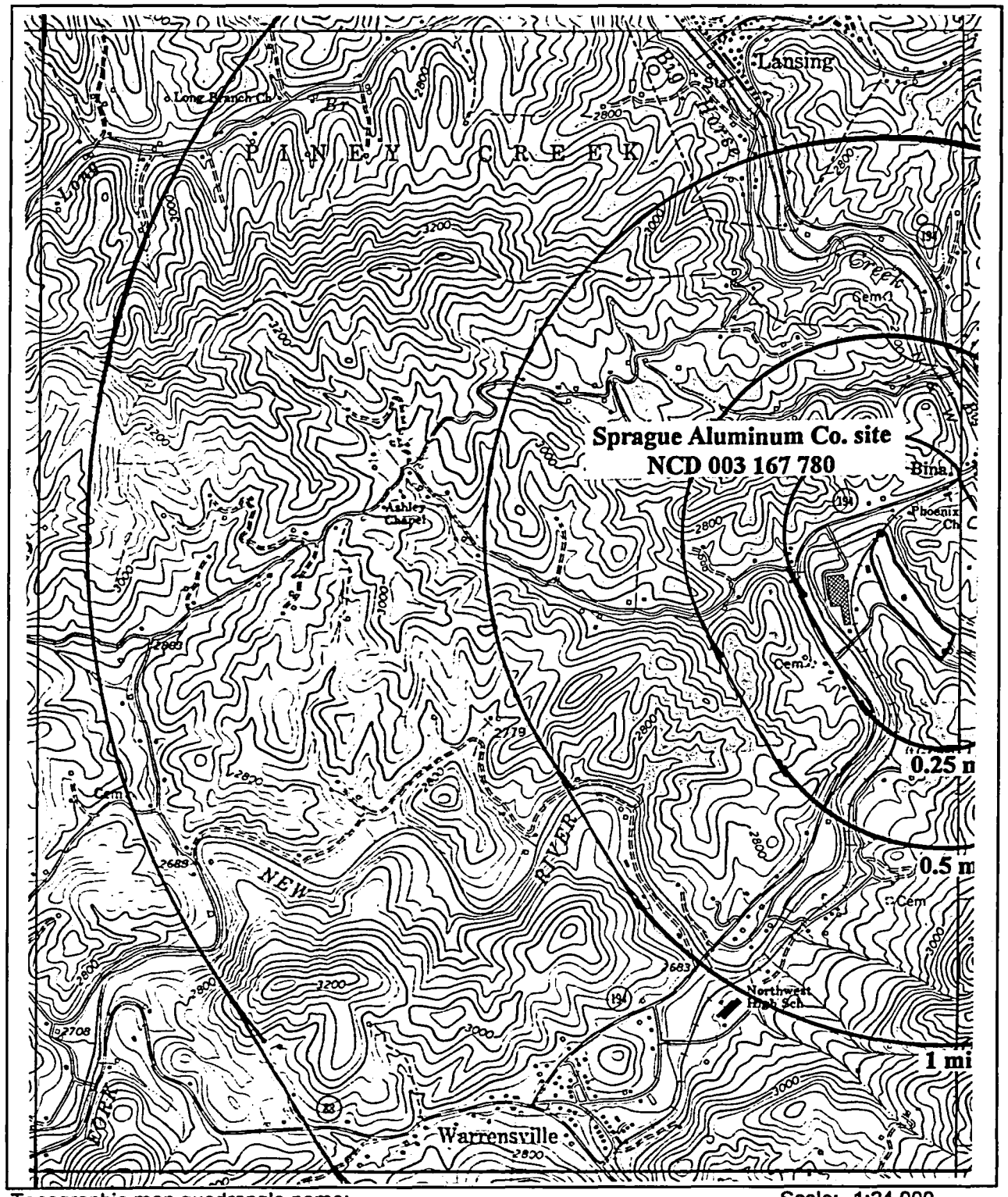
C) EXPRESS IN MINUTES AND SECONDS (1' = 60") : 0 ' 9.25 "

D) ADD TO STARTING LATITUDE: 81 ° 30 ' 0.00 " + 0 ' 9.25 "

SITE LONGITUDE: 81 ° 30 ' 9.25 "

INVESTIGATOR: [signature] DATE: 2/18/02

Site Name: SPRAGUE ALUMINUM CO. Number: NCD 003 167 780



Topographic map quadrangle name: _____ Scale: 1:24,000

Coordinates of lower right corner of 2.5' topographic grid:

Latitude: 36° 27' 30" Longitude: 81° 30' 00"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4

Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720

NASHVILLE ENVIRONMENTAL ASSISTANCE CENTER
RECEIVED
JAN - 3 2002
TENNESSEE DEPT. OF ENVIRONMENTAL & CONSERVATION

MEMORANDUM

Date: 12/21/2001

Subject: Results of METALS Sample Analysis
02-0107 Sprague Aluminum Co.
Lansing, NC

From: Goddard, Denise

To: Wendel, Jennifer

CC: ~~Dan LaMontagne~~ Jim Bateson
NCDENR

Thru: QA Office

Attached are the results of analysis of samples collected as part of the subject project. If you have any questions, please contact me.

RECEIVED
FEB 26 2002

ATTACHMENT

December 11, 2001

INORGANIC DATA QUALIFIERS REPORT

Case Number: 29923
Project Number: 02-0107
Site: Sprague Aluminum Co., Lansing, NC

Sample No.	Element	Flag	Reason
889	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
890	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
891	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
892	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
893	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
894	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
895	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Zn	U	Positives in cal and blind blanks
896	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
897	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
898	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
899	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
900	As	U	% RSD > 20% for ICP multiple exposures and result > IDL, but < CRDL
	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%
901	As	U	Quantitation limit raised due to lack of sensitivity of instrumentation
	Be	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 25.3%

December 11, 2001

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 29923
Project Number: 02-0107
Site: Sprague Aluminum Co., Lansing, NC

Sample No.	Element	Flag	Reason
902	Al	U	Positives in cal, prep, and blind blanks
	Be	U	Baseline instability in cal, prep, and blind blanks
	Ca	U	Positives in cal and blind blanks
	Zn	U	Positives in cal and blind blanks

METALS SAMPLE ANALYSIS EPA - REGION IV SESD, ATHENS, GA **Production Date: 12/21/2001 10:07**

Sample 888 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: BB011TBW / MD No: 12D7 Inorg Contractor: CHEMED

Media: TRIP BLANK - WATER

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 12:00
Ending:

RESULTS	UNITS	ANALYTE
35	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
2.5U	UG/L	BARIUM
1.6	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
19	UG/L	CALCIUM
1.8U	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
40U	UG/L	IRON
2.4U	UG/L	LEAD
28U	UG/L	MAGNESIUM
0.50U	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
62U	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
280U	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
27	UG/L	ZINC
NA	UG/L	CYANIDE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS

EPA - REGION IV SESD, ATHENS, GA

Production Date: 12/21/2001 10:07

Sample 889 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA005SW / MD No: 12D8 Inorg Contractor: CHEMED

Media: SURFACE WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 14:02

Ending:

RESULTS	UNITS	ANALYTE
55U	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
24	UG/L	BARIUM
1.6U	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
5400	UG/L	CALCIUM
4.7	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
170	UG/L	IRON
2.4U	UG/L	LEAD
2000	UG/L	MAGNESIUM
8.6	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
960	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
2600	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
25U	UG/L	ZINC
NA	UG/L	CYANIDE

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS | EPA - REGION IV SESD, ATHENS, GA | Production Date: 12/21/2001 10:07

Sample 890 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA005SD / MD No: 12D9 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 14:12

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
14000	MG/KG	ALUMINUM
3.5U	MG/KG	ANTIMONY
2.8U	MG/KG	ARSENIC
200	MG/KG	BARIUM
0.69U	MG/KG	BERYLLIUM
0.30U	MG/KG	CADMIUM
2300	MG/KG	CALCIUM
41	MG/KG	CHROMIUM
19	MG/KG	COBALT
42	MG/KG	COPPER
26000	MG/KG	IRON
13	MG/KG	LEAD
4600	MG/KG	MAGNESIUM
430	MG/KG	MANGANESE
0.18U	MG/KG	TOTAL MERCURY
19	MG/KG	NICKEL
2300J	MG/KG	POTASSIUM
1.9U	MG/KG	SELENIUM
2.2U	MG/KG	SILVER
500	MG/KG	SODIUM
2.7U	MG/KG	THALLIUM
68	MG/KG	VANADIUM
95	MG/KG	ZINC
NA	MG/KG	CYANIDE
48	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS

EPA - REGION IV SESD, ATHENS, GA

Production Date: 12/21/2001 10:07

Sample 891 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA004SW / MD No: 12E0 Inorg Contractor: CHEMED

Media: SURFACE WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 14:28

Ending:

RESULTS	UNITS	ANALYTE
76U	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
26	UG/L	BARIUM
1.7U	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
5800	UG/L	CALCIUM
1.8U	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
180	UG/L	IRON
2.4U	UG/L	LEAD
2200	UG/L	MAGNESIUM
13	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
1100	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
3000	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
34U	UG/L	ZINC
NA	UG/L	CYANIDE

YANIDE ANALYSIS NOT REQUESTED

-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 892 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA004SD / MD No: 12E1 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 14:37

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5400	MG/KG	ALUMINUM
2.4U	MG/KG	ANTIMONY
2.0U	MG/KG	ARSENIC
73	MG/KG	BARIUM
0.29U	MG/KG	BERYLLIUM
0.21U	MG/KG	CADMIUM
1300	MG/KG	CALCIUM
16	MG/KG	CHROMIUM
7.8	MG/KG	COBALT
16	MG/KG	COPPER
11000	MG/KG	IRON
5.5	MG/KG	LEAD
2000	MG/KG	MAGNESIUM
210	MG/KG	MANGANESE
0.13U	MG/KG	TOTAL MERCURY
6.9	MG/KG	NICKEL
1000J	MG/KG	POTASSIUM
1.3U	MG/KG	SELENIUM
1.5U	MG/KG	SILVER
440	MG/KG	SODIUM
1.9U	MG/KG	THALLIUM
27	MG/KG	VANADIUM
35	MG/KG	ZINC
NA	MG/KG	CYANIDE
25	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 893 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA003SW / MD No: 12E2 Inorg Contractor: CHEMED

Media: SURFACE WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:01

Ending:

RESULTS	UNITS	ANALYTE
71U	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
26	UG/L	BARIUM
1.7U	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
5800	UG/L	CALCIUM
1.8U	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
150	UG/L	IRON
2.4U	UG/L	LEAD
2200	UG/L	MAGNESIUM
9.1	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
1100	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
2700	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
22U	UG/L	ZINC
NA	UG/L	CYANIDE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS | EPA - REGION IV SESD, ATHENS, GA | Production Date: 12/21/2001 10:07

Sample 894 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA003SD / MD No: 12E3 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:04

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4600	MG/KG	ALUMINUM
2.2U	MG/KG	ANTIMONY
1.8U	MG/KG	ARSENIC
67	MG/KG	BARIUM
0.32U	MG/KG	BERYLLIUM
0.20U	MG/KG	CADMIUM
980	MG/KG	CALCIUM
16	MG/KG	CHROMIUM
7.5	MG/KG	COBALT
12	MG/KG	COPPER
11000	MG/KG	IRON
5.9	MG/KG	LEAD
1600	MG/KG	MAGNESIUM
250	MG/KG	MANGANESE
0.12U	MG/KG	TOTAL MERCURY
6.3	MG/KG	NICKEL
900J	MG/KG	POTASSIUM
1.2U	MG/KG	SELENIUM
1.4U	MG/KG	SILVER
360	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
26	MG/KG	VANADIUM
35	MG/KG	ZINC
NA	MG/KG	CYANIDE
18	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 895 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA001SW / MD No: 12E4 Inorg Contractor: CHEMED

Media: SURFACE WATER

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 15:40

Ending:

RESULTS	UNITS	ANALYTE
57U	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
21	UG/L	BARIUM
1.8U	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
4900	UG/L	CALCIUM
1.8U	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
130	UG/L	IRON
2.4U	UG/L	LEAD
1800	UG/L	MAGNESIUM
8.0	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
870	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
2200	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
26U	UG/L	ZINC
NA	UG/L	CYANIDE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 896 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA001SD / MD No: 12E5 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise
Requestor:
Project Leader: JWENDEL
Beginning: 10/29/2001 15:59
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
12000	MG/KG	ALUMINUM
2.8U	MG/KG	ANTIMONY
2.2U	MG/KG	ARSENIC
200	MG/KG	BARIUM
0.68U	MG/KG	BERYLLIUM
0.24U	MG/KG	CADMIUM
2400	MG/KG	CALCIUM
36	MG/KG	CHROMIUM
18	MG/KG	COBALT
28	MG/KG	COPPER
25000	MG/KG	IRON
13	MG/KG	LEAD
4400	MG/KG	MAGNESIUM
510	MG/KG	MANGANESE
0.15U	MG/KG	TOTAL MERCURY
17	MG/KG	NICKEL
2600J	MG/KG	POTASSIUM
1.5U	MG/KG	SELENIUM
1.8U	MG/KG	SILVER
370	MG/KG	SODIUM
2.2U	MG/KG	THALLIUM
73	MG/KG	VANADIUM
79	MG/KG	ZINC
NA	MG/KG	CYANIDE
34	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 897 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA002SD / MD No: 12E6 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 16:12

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
11000	MG/KG	ALUMINUM
2.6U	MG/KG	ANTIMONY
2.1U	MG/KG	ARSENIC
160	MG/KG	BARIUM
0.49U	MG/KG	BERYLLIUM
0.22U	MG/KG	CADMIUM
2300	MG/KG	CALCIUM
29	MG/KG	CHROMIUM
15	MG/KG	COBALT
26	MG/KG	COPPER
22000	MG/KG	IRON
8.1	MG/KG	LEAD
4200	MG/KG	MAGNESIUM
340	MG/KG	MANGANESE
0.14U	MG/KG	TOTAL MERCURY
13	MG/KG	NICKEL
2400J	MG/KG	POTASSIUM
1.4U	MG/KG	SELENIUM
1.6U	MG/KG	SILVER
540	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
59	MG/KG	VANADIUM
66	MG/KG	ZINC
NA	MG/KG	CYANIDE
29	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS

EPA - REGION IV SESD, ATHENS, GA

Production Date: 12/21/2001 10:07

Sample 898 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA102SD / MD No: 12E7 Inorg Contractor: CHEMED

Media: SEDIMENT

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 16:12

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
11000	MG/KG	ALUMINUM
2.7U	MG/KG	ANTIMONY
2.2U	MG/KG	ARSENIC
160	MG/KG	BARIUM
0.55U	MG/KG	BERYLLIUM
0.23U	MG/KG	CADMIUM
2000	MG/KG	CALCIUM
29	MG/KG	CHROMIUM
14	MG/KG	COBALT
23	MG/KG	COPPER
21000	MG/KG	IRON
9.3	MG/KG	LEAD
3800	MG/KG	MAGNESIUM
300	MG/KG	MANGANESE
0.15U	MG/KG	TOTAL MERCURY
13	MG/KG	NICKEL
2400J	MG/KG	POTASSIUM
1.5U	MG/KG	SELENIUM
1.7U	MG/KG	SILVER
470	MG/KG	SODIUM
2.1U	MG/KG	THALLIUM
60	MG/KG	VANADIUM
62	MG/KG	ZINC
NA	MG/KG	CYANIDE
32	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

METALS SAMPLE ANALYSIS | EPA - REGION IV SESD, ATHENS, GA | Production Date: 12/21/2001 10:07

Sample 899 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA010SL / MD No: 12E8 Inorg Contractor: CHEMED

Media: SURFACE SOIL (0" - 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/29/2001 17:50

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
200000	MG/KG	ALUMINUM
4.9U	MG/KG	ANTIMONY
4.0U	MG/KG	ARSENIC
60	MG/KG	BARIUM
0.53U	MG/KG	BERYLLIUM
0.42U	MG/KG	CADMIUM
1300	MG/KG	CALCIUM
13	MG/KG	CHROMIUM
3.5	MG/KG	COBALT
88	MG/KG	COPPER
4800	MG/KG	IRON
6.1U	MG/KG	LEAD
940	MG/KG	MAGNESIUM
220	MG/KG	MANGANESE
0.26U	MG/KG	TOTAL MERCURY
15	MG/KG	NICKEL
880J	MG/KG	POTASSIUM
2.7U	MG/KG	SELENIUM
3.1U	MG/KG	SILVER
2100	MG/KG	SODIUM
3.8U	MG/KG	THALLIUM
12	MG/KG	VANADIUM
32	MG/KG	ZINC
NA	MG/KG	CYANIDE
63	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 900 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA011SL / MD No: 12E9 Inorg Contractor: CHEMED

Media: SURFACE SOIL (0" - 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/30/2001 10:00

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
65000	MG/KG	ALUMINUM
3.8U	MG/KG	ANTIMONY
3.9U	MG/KG	ARSENIC
220	MG/KG	BARIUM
1.1U	MG/KG	BERYLLIUM
0.33U	MG/KG	CADMIUM
2600	MG/KG	CALCIUM
89	MG/KG	CHROMIUM
18	MG/KG	COBALT
120	MG/KG	COPPER
37000	MG/KG	IRON
15	MG/KG	LEAD
2700	MG/KG	MAGNESIUM
460	MG/KG	MANGANESE
26	MG/KG	TOTAL MERCURY
20	MG/KG	NICKEL
2000J	MG/KG	POTASSIUM
2.1U	MG/KG	SELENIUM
2.4U	MG/KG	SILVER
1600	MG/KG	SODIUM
3.0U	MG/KG	THALLIUM
120	MG/KG	VANADIUM
55	MG/KG	ZINC
NA	MG/KG	CYANIDE
52	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 901 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA009SB / MD No: 12F0 Inorg Contractor: CHEMED

Media: SUBSURFACE SOIL (> 12")

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/30/2001 10:00

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
22000	MG/KG	ALUMINUM
2.1U	MG/KG	ANTIMONY
4.3U	MG/KG	ARSENIC
470	MG/KG	BARIUM
0.97U	MG/KG	BERYLLIUM
0.18U	MG/KG	CADMIUM
2000	MG/KG	CALCIUM
72	MG/KG	CHROMIUM
26	MG/KG	COBALT
34	MG/KG	COPPER
37000	MG/KG	IRON
10	MG/KG	LEAD
10000	MG/KG	MAGNESIUM
790	MG/KG	MANGANESE
0.12U	MG/KG	TOTAL MERCURY
23	MG/KG	NICKEL
7200J	MG/KG	POTASSIUM
1.1U	MG/KG	SELENIUM
1.3U	MG/KG	SILVER
220	MG/KG	SODIUM
1.6U	MG/KG	THALLIUM
87	MG/KG	VANADIUM
85	MG/KG	ZINC
NA	MG/KG	CYANIDE
14	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 902 FY 2002 Project: 02-0107

METALS SCAN

Facility: Sprague Aluminum Co. Lansing, NC

Program: SF Case No: 29923

Id/Station: SA007PB / MD No: 12F1 Inorg Contractor: CHEMED

Media: PRESERVATIVE BLANK

Produced by: Goddard, Denise

Requestor:

Project Leader: JWENDEL

Beginning: 10/31/2001 12:00

Ending:

RESULTS	UNITS	ANALYTE
47U	UG/L	ALUMINUM
9.2U	UG/L	ANTIMONY
7.5U	UG/L	ARSENIC
2.5U	UG/L	BARIUM
1.9U	UG/L	BERYLLIUM
0.80U	UG/L	CADMIUM
20U	UG/L	CALCIUM
1.8U	UG/L	CHROMIUM
3.1U	UG/L	COBALT
2.4U	UG/L	COPPER
40U	UG/L	IRON
2.4U	UG/L	LEAD
28U	UG/L	MAGNESIUM
0.50U	UG/L	MANGANESE
0.20U	UG/L	TOTAL MERCURY
3.5U	UG/L	NICKEL
62U	UG/L	POTASSIUM
5.0U	UG/L	SELENIUM
5.9U	UG/L	SILVER
280U	UG/L	SODIUM
7.2U	UG/L	THALLIUM
2.6U	UG/L	VANADIUM
26U	UG/L	ZINC
NA	UG/L	CYANIDE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29923

1. Project Code: 02-0107	2. Account Code:	3. Region No.: 4	Sampling Co.: NC Superfund	5. Date Shipped:	Carrier: Federal Express
Regional Information: NCD 003167780		Sampler (Name): Stuart Parker		Airbill Number: 1650080073	
Non-Superfund Program		Sampler Signature		6. Ship To: Chemtech Consulting Group, 284 Sheffield St., Mountainside, NJ 07092	
Site Name: Sprague Aluminum Co		4. Purpose* Lead: SF, PRP, ST, FED; Early Action: CLEM, PA, REM, RI, SI, ESI; Long-Term Action: FS, RD, RA, O&M, NPLD		ATTN:	
City, State: Lansing, NC	Site Spill ID				

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MD12D7	1	L	G	2		✓						SF-4087	BB-011-TBW	10/29/01/1200	—		B
MD12D8	1	L	G	2		✓						SF-4088	SA-005-SW	10/29/01/1402	—		
MD12D9	5	L	G	6		✓						SF-4089	SA-005-SD	10/29/01/1412	—		
MD12E0	1	L	G	2		✓						SF-4090	SA-004-SW	10/29/01 1428	—		
MD12E1	5	L	G	6		✓						SF-4091	SA-004-SD	10/29/01 1437	—		
MD12E2	1	L	G	2		✓						SF-4092	SA-003-SW	10/29/01 1501	—		
MD12E3	5	L	G	6		✓						SF-4093	SA-003-SD	10/29/01 1504	—		
MD12E4	1	L	G	2		✓						SF-4094	SA-001-SW	10/29/01 1540	—		
MD12E5	5	L	G	6		✓						SF-4095	SA-001-SD	10/29/01 1559	—		
MD12E6	5	L	G	6		✓						SF-4096	SA-002-SD	10/29/01 1612	—		

Shipment for Case Complete? (Y/N)	Page 1 of 2	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
		MD12E6 / MD12E4		

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

397549

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29923

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
02-0107		4	NC Superfund		Federal Express

Regional Information: NCD 003 167 780
Sampler (Name): Stuart Parker
Airbill Number: 1650080073
Non-Superfund Program
Sampler Signature
6. Ship To: Chemtech Consulting Group, 284 Sheffield St, Mountainside, NJ 07092
ATTN:
Site Name: Sprague Aluminum
City/State: Lansing, NC
Site Spill ID

4. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI, [X] ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

7. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

8. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MD12E7	5	L	G	6		✓						SF-4097	SA-102-SD	10/29/01/1612	—		D
MD12E8	5	L	G	6		✓						SF-4098	SA-010-SL	10/29/01/1750	—		
MD12E9	5	L	G	6		✓						SF-4099	SA-011-SL	10/30/01 1000	—		
MD12FD	5	L	G	6		✓						SF-4100	SA-009-SB	10/30/01 1000	—		
MD12F1	4	L	G	2		✓						SF-4101	SA-007-PB	10/31/01 1200	—		B
~~MD12F2~~																	

Shipment for Case Complete? (Y/N) Y
Page 2 of 2
Sample(s) to be Used for Laboratory QC: MD12E6/MD12E4
Additional Sampler Signatures
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

397550

Attn: Debbie Colquitt RSCC Region: 4

LABORATORY SCHEDULING SHIPWEEK: 10/29/01

Case # 29923

Site: SPRAGUE ALUMINUM CO.

Sampler: Dan LaMontagne, North Carolina Dept. Health & Natural Resources

Program	Lab Address
Multi Inorganics	CHEMTECH CONSULTING GROUP (CHEMED) 284 Sheffield Street Mountainside, NJ 07092 (908) 789- 8900 Contact: Sunny Patel

Samples Scheduled:	Turnaround Time
10 LS TM	21
10 LW TM	21

SOLID WASTE MANAGEMENT DIVISION

Receipt for Samples

Name of Firm: DELTA ENVIRONMENTAL CONSULTANTS

Firm Address: 6201 CARMEL ROAD SUITE 303 CHARLOTTE NC 28226

Firm Owner, Operator, or Agent Title: SAM WATSON STAFF HYDROGEOLOGIST

SAMPLE NUMBER	COLLECTED DATE	COLLECTED TIME	SAMPLE TYPE WATER	SAMPLE TYPE SOIL	SAMPLE TYPE OTHER	DUPLICATE SAMPLE OFRD	DUPLICATE SAMPLE ACPT	DUPLICATE SAMPLE RJCTD	SAMPLE LOCATION ONSITE	SAMPLE LOCATION OFFSITE
SA 005 SW	10/25/01	14:02	X			✓	✓			✓
SA 005 SD	↓	14:12			SEDIMENT	✓	✓			✓
SA 004 SW		14:28	X			✓	✓			✓
SA 004 SD		14:37			SEDIMENT	✓	✓			✓
SA 003 SW SA 003 SD		15:01 1504	X		SEDIMENT	✓	✓			✓ ✓
SA 001 SW SA 001 SD		15:40 1559	X		SEDIMENT	✓	✓			✓ ✓
SA 002 SD SA 102 SD		16:12			SEDIMENT	✓	✓			✓ ✓
SA 010 SL	↓	17:50			SLUDGE	✓	✓		✓	
SA 010 SL	10/30/01	10:00			SLUDGE	✓	✓		✓	
SA 009 SB		10:00				✓	✓		✓	
~~SA MW~~	VFP									
~~SA MW~~	VFP									
~~SA MW~~	VFP									

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

Stuart Parker

Signature of Inspector

Hydrogeologist, NC Superfund Section

Title

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

Samuel P. Watson

Signature of Firm Owner, Operator, or Agent

Staff Hydrogeologist.

Title

Comments:

A:\COCR.FRM)

Region 4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
SAM NUNN ATLANTA FEDERAL CENTER
61 FORYSTH STREET
ATLANTA, GEORGIA 30303

FACSIMILE TRANSMISSION SHEET

DATE: 10/24/01 NUMBER OF PAGES: 2 (Includes Cover Sheet)

TO: Stuart Parker PHONE NUMBER:

ADDRESS: NCDENR FAX NUMBER: 919-733-4811

FROM: Jon K. Bornholm PHONE #: (404) 562-8820
EPA/Region 4/WD/NSMB FAX #: (404) 562-8788

Special Instructions or Notes:

Approved Sprague Aluminum
ESI SAP

Historical sampling detected no organic contaminants in either the source area sludges or the surface water pathway, and during re-assessment the site was scored using metals contamination of the surface water pathway. Therefore, ESI sample collection and analysis will be limited to inorganic parameters. Sample locations are described in Table 1 and illustrated in Figure 2.

This SAP/QAPP has been developed, and sampling will be performed, in accordance with the NC Superfund Section Quality Assurance Program Plan (Program Plan) and the Quality Assurance Standard Operating Procedures (QASOP). The QASOP adopts by reference the Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996, USEPA Region IV. The Program Plan is derived directly from the EPA-approved NC Department of Environment and Natural Resources QA Plan for Data, 1999.

If you have any questions regarding this SAP/QAPP, please contact me at (919) 733-2801, Ext. 280.

Sincerely,

Stuart F. Parker,
Hydrogeologist
NC Superfund Section

Dan LaMontagne, Head
Site Evaluation and Removal Branch
NC Superfund Section

Approved: Irene Williams, Date: 10/5/01
Irene Williams
Quality Assurance Officer
NC Superfund Section

Approved: Jon Bond for, Date: 10/24/01
Jennifer Wendel
NC Site Management Section
Region IV EPA

Attachments

cc: File

John and Jennifer,

A. Regarding site differentiation: The May 2000 Site Re-Assessment specifically recommended that the ESI be focused on the closed impoundment portion of the site. This recommendation was made because:

1) The impoundments were the source area which scored the site.

2) NCDENR, Winston-Salem Regional Office was concurrently overseeing voluntary assessment and remediation of organic and inorganic contamination at the active plant property by its current owner, United Chemicon. This was confirmed during a visit to the regional office, where I reviewed two recent assessment reports on the areas of concern at UC.

The ESI is being conducted primarily to evaluate the impoundment property's groundwater-to-surface-water pathway. Note, however, that surface water pathway samples will be collected both upstream and downstream from both respective properties.

B. Regarding sampling for cyanide: Site investigations to date listed aluminum foil as one of Sprague's raw materials, along with nitric and tartaric acid, calcium and sodium hydroxides, sodium chloride and dimethylformamide. The foil was etched in an acid electrochemical bath, then rinsed repeatedly in de-ionized water. Aluminum oxides which accumulated in the wastewater impoundments were mined and sold to other companies. Wastes reportedly generated on site included D001 and D002 (ignitable, corrosive). K054 waste was also reported, however, a review of current and historical 40 CFR 302 did not identify this latter waste category. None of the F006-F012 or F019 cyanide wastes were reported at the site.

Historically, cyanide was detected in 2 surface soil samples (0.86-0.89 mg/kg) within the manufacturing plant, and in a sludge sample from one of the ponds (1.7 mg/kg). These concentrations are considerably less than cyanide's soil exposure benchmark, soil remediation goal or groundwater protection standard. Sludge samples collected prior to closure of the impoundments apparently were not analyzed for cyanide. However, historical site investigations reported no alumina reduction, aluminum manufacturing, metal plating or other on-site activities that were likely to use cyanide. Furthermore, sampling to date has not detected cyanide in the surface water pathway. In any case, a release of cyanide to the surface water pathway would not score the site above 28.5 points.

Based on the above considerations, I believe that it is not necessary to expand the present ESI scope to analyze for cyanide.

Sincerely,
Stuart F. Parker
NC Superfund Section

TRIP NOTIFICATION AND AUTHORIZATION FORM

Program:

- [X] CERCLA Site Assessment
- [ ] State
- [ ] NPL/DOD
- [ ] Brownfields
- [ ] MGP
- [ ] Dry Cleaners

Site Name:	Sprague Aluminum
ID Number:	NCD 003 167 780
Street Address:	Hwy 194
City:	Lansing
County:	Ashe

Date(s) of Trip	Trip Canceled:	Trip Rescheduled (Date):
		9/26/01

Reason For Trip: Expanded Site Inspection Reconnaissance

(if sampling, check appropriate boxes below)

- [ ] Surface Soil
- [ ] Subsurface Soil
- [X] Using Augers/Shovels to collect soil
- [ ] Using Little Beaver to collect soil
- [ ] Groundwater (from tap)
- [ ] Groundwater (bailers)
- [ ] Groundwater (pumps)
- [ ] Surface Water
- [ ] Sediment

Project Team Leader	Assistant	Assistant	Assistant
Stuart F. Parker	Harry Zinn		

Authorized By: [signature]

Industrial Hygienist Signature

Office Use Only

County Health Department Official Contact: John Alley

Title: Env. Health Supervisor

Phone Number: (828) 264-4995

Health Department Official Contacted: Mr. Alley

Back Up Letter Required?: Yes _ No ✓

Notes: Notified Mr. Alley 9-24-01 (PBL)

TRIP NOTIFICATION AND AUTHORIZATION FORM

Program:

- [X] CERCLA Site Assessment
- [ ] State
- [ ] NPL/DOD
- [ ] Brownfields
- [ ] MGP
- [ ] Dry Cleaners

Site Name:	Sprague Aluminum
ID Number:	NCD 003 167 780
Street Address:	Hwy 194
City:	Lansing
County:	Ashe

Date(s) of Trip	Trip Canceled:	Trip Rescheduled (Date):
	August 24, 2001	TBR early September

Reason For Trip: Expanded Site Inspection Reconnaissance

(if sampling, check appropriate boxes below)

- [ ] Surface Soil
- [ ] Subsurface Soil
- [X] Using Augers/Shovels to collect soil
- [ ] Using Little Beaver to collect soil
- [ ] Groundwater (from tap)
- [ ] Groundwater (bailers)
- [ ] Groundwater (pumps)
- [ ] Surface Water
- [ ] Sediment

Project Team Leader	Assistant	Assistant	Assistant
Stuart F. Parker	Harry Zinn		

Authorized By: _____

Industrial Hygienist Signature

Office Use Only

County Health Department Official Contact: John Alley

Title:

Phone Number: (828) 264 - 4995

Health Department Official Contacted: John Alley's VM

Back Up Letter Required?: Yes __ No ✓

Notes: Notified Mr. Alleyura. Voice mail 8-27-01 (DRL)

TRIP NOTIFICATION AND AUTHORIZATION FORM

Program:

- [X] CERCLA Site Assessment
- [ ] State
- [ ] NPL/DOD
- [ ] Brownfields
- [ ] MGP
- [ ] Dry Cleaners

Site Name:	Sprague Aluminum
ID Number:	NCD 003 167 780
Street Address:	Highway 194
City:	Lansing NC
County:	Ashe

Date(s) of Trip	Trip Canceled:	Trip Rescheduled (Date):
August 29, 2001		

Reason For Trip: Expanded Site Inspection

(if sampling, check appropriate boxes below)

- [ ] Surface Soil
- [X] Subsurface Soil
- [X] Using Augers/Shovels to collect soil
- [ ] Using Little Beaver to collect soil
- [ ] Groundwater (from tap)
- [ ] Groundwater (bailers)
- [ ] Groundwater (pumps)
- [ ] Surface Water
- [ ] Sediment

Project Team Leader	Assistant	Assistant	Assistant
Stuart Parker	Harry Zinn		

Authorized By: [signature]

Industrial Hygienist Signature

Office Use Only

County Health Department Official Contact: John Alley

Title: Env. Health Supervisor

Phone Number: (828) 264 - 4995

Health Department Official Contacted: John Alley

Back Up Letter Required?: Yes _ No ✓

Notes: Notified Mr. Alley via voice mail 8-21-01 (DBL)

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

MICHAEL F. EASLEY, GOVERNOR
WILLIAM G. ROSS, JR., SECRETARY
DEXTER R. MATTHEWS, INTERIM DIRECTOR

NCDENR

October 5, 2001

file

Ms. Jennifer Wendel
NC Site Management Section
US EPA Region IV Waste Division
61 Forsyth Street, 11th Floor
Atlanta, Georgia 30303

Subject: Expanded Site Inspection Sampling & Analysis Plan/
Quality Assurance Project (SAP/QAPP)
Sprague Aluminum Co.
NCD 003 167 780
Lansing, Ashe County, North Carolina
Sampling Dates: October 29-30, 2001

Dear Ms. Wendel:

The following is a description of proposed sampling for the Expanded Site Inspection (ESI) of the Sprague Aluminum Co. (a.k.a., Sprague Electric Co.) near Lansing, Ashe County, North Carolina. This sampling plan is based on a review of the 1990 Screening Site Inspection (SSI), the 1991 Final Site Inspection, the 1993 Site Inspection Prioritization, and the 2000 Site Re-Assessment completed for the US EPA Region IV. The NC Superfund Section also reviewed two Comprehensive Site Assessment reports completed in 1999 by Delta Environmental Consultants, Inc.

Previous investigations involved the entire Sprague Aluminum Co. plant, identifying several areas of potential soil or water contamination. However the active plant's current owner, United Chemicon, is presently undertaking remedial investigation with oversight by the NCDENR Winston-Salem Regional Office, Groundwater Section. Therefore, the current ESI will be limited in scope to the inactive eastern portion of the site.

Site Description and History

The original Sprague Aluminum Co. Property consisted of approximately 60 acres of land located off NC Highway 194, approximately one mile south-southeast of Lansing, NC. Geographic coordinates are 36° 28' 48" N latitude and 81° 30' 10" W longitude. The property is surrounded on the west, north and east by a meander of the North Fork New River (Fig. 1).

Sprague Aluminum Co. operated on site as Sprague Electric Co. from the mid 1950s until 1991, when United Chemicon purchased the facility. However, American Annuity Group (a.k.a., Great American Financial Resources), Sprague's successor-in-interest, retains approximately 12.5 acres along the northeast side of the property. This 12.5-acre property is the subject of the ESI.

1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1646
401 OBERLIN ROAD, SUITE 150, RALEIGH, NC 27605
PHONE: 919-733-4996 \ FAX: 919-715-3605
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED/10% POST-CONSUMER PAPER

Operational History and Waste Characteristics

Prior to 1991, Sprague Electric manufactured aluminum electrical capacitors, using an acid electrochemical bath to etch the aluminum. Raw materials reportedly used at Sprague included: aluminum foil; nitric, tartaric and sulfuric acids; sodium and calcium hydroxides; sodium chloride; and dimethyl formamide (DMF). The acids and DMF were reportedly kept on site in aboveground storage tanks. Waste DMF was stored on site in 55-gallon drums and then shipped off site. DMF is not listed in CERCLIS. Other waste reportedly generated included D002 corrosive waste with a pH of 3 to 4. During the early to mid 1980s, Sprague requested deletion from status as a Treatment, Storage & Disposal Facility under RCRA. The NC Division of Health Services granted their request, and also downgraded Sprague from Large Quantity Generator to Small Quantity Generator status.

Waste aluminum oxides from metal etching were recovered using a series of settling ponds located within the 12.5 acre parcel. Oxides were periodically mined from the ponds and sold to other manufacturers. None of the ponds operated under permit. The unlined pond basins ranged from 4 to 8 feet in total depth, but were filled with wastewater to depths of 2 to 6 feet. Most of the ponds were elevated 10 to 20 feet above the adjacent New River floodplain. Locally, mean annual precipitation is 49 inches and mean annual lake evaporation is 33 inches, therefore net precipitation averages 16 inches per year. Wastewater in the ponds reportedly infiltrated to the subsurface, with no overland discharge.

After the 1991 purchase, United Chemicon reportedly discontinued aluminum etching at the site, instead purchasing etched aluminum components from off-site vendors. In approximately 1995, American Annuities Group (AAG) contractors closed out the settling ponds with oversight by the NCDENR Groundwater Section, Winston-Salem Regional Office (WSRO). Under a one-time NPDES permit AAG contractors used one of United Chemicon's outfalls to pump approximately 2.2 million gallons of pond water to the New River. Although the wastewater was D002 Corrosive, samples of pond sludge did not exceed hazardous waste criteria (See next section). The ponds were subsequently backfilled with locally-mined clay soil and compacted. The area is presently an elongated open field, lightly to moderately vegetated with grass and weeds and surrounded by a locked, 6-foot chain-link fence.

Historical Site Investigations

Sprague Aluminum Capacitor Plant

In 1990 and 1991, EPA Region IV's Field Investigation Team (FIT) completed a Phase I Screening Site Inspection report on Sprague Electric Co., followed by a Phase II Site Inspection . During the Phase II SI, the FIT collected sixteen environmental samples at the site. Surface and subsurface soil samples were collected at the facility's aboveground storage tank area, at the facility's drum storage area and at background locations south of the facility. Surface water and sediment samples were collected upstream, adjacent to, and downstream from the site on the New River.

Site Inspection sampling at the facility's drum storage area detected elevated concentrations of mercury (0.40 mg/kg), nickel (190 mg/kg) and zinc (260 mg/kg) in surface soil. The mercury concentration was estimated. Elevated beryllium (1.6 mg/kg) was reported in subsurface soil from the same location. An elevated lead concentration, also estimated (40 mg/kg), was detected in surface soil at the facility's aboveground storage tank area. Cyanide (0.86 to 0.89 mg/kg) was also reported there. None of the surface soil results exceed current federal soil exposure benchmarks or state soil remediation goals.

Elevated copper (29 ug/l) was detected in surface water on the west side of the Sprague Facility site, but not farther downstream. Elevated iron (800 ug/l) and manganese (100 ug/l) were reported in surface water downstream from the site. None of these results exceeded federal surface water benchmarks or NC freshwater quality standards. No elevated contaminants were detected in New River Sediment. However, the Final SI report recommended further federal action due to the presence of metals at the site. A Site Inspection Prioritization (SIP), completed for the EPA one year later, recommended further action based on the release to the New River.

In April 1999, two on-site investigations were completed for American Annuity Group and submitted to the NCDENR Winston-Salem Regional Office. These Comprehensive Site Assessment (CSA) reports characterized soil, groundwater and surface water conditions at the site's former Aluminum Etchant Area, and at the Containment Dike area beneath a former dimethyl formamide (DMF) aboveground storage tank. The Etchant Area was located at the northeast end of the plant's main building, and the Containment Dike Area was located at its northwest end.

The Etchant Area CSA reported that during the early 1990s aluminum had been detected at concentrations up to 74 mg/l in on-site monitoring wells, and at 3 mg/l in the facility's supply well. These levels did not exceed state or federal groundwater limits. No other contaminants were detected in the drinking water well. In an Etchant Area monitoring well, isolated detections of barium and cadmium exceeded NCAC 2L standards. Total chromium concentrations exceeded the 2L standard in several monitoring wells in and to the north of the Etchant area. Groundwater pH was reduced to less than 4.0 at the center of the plume.

During the early 1990s, sampling at the Containment Dike Area detected tetrachloroethene (PCE), acetone and methyl ethyl ketone (MEK) in soil, and toluene, ethylbenzene and xylene in groundwater. In 1998, installation and sampling of additional monitoring wells revealed groundwater plumes of PCE and TCE, originating beneath the containment dike area and extending north toward the New River. TCE and PCE concentrations approached 200 ug/l in shallow groundwater wells, and reached maxima of 70 ug/l and 5 ug/l, respectively, in on-site bedrock wells. Sampling also detected localized groundwater contamination by naphthalene and 2-methyl naphthalene. According to the CSA chlorinated solvents had been stored on site in 55 gallon drums, and used to clean plant equipment in an on-site vapor degreaser during the mid 1970s.

In monitoring wells close to the river, TCE and PCE concentrations were on the order of 1-10 ug/l. Upon reviewing the CSAs , the WSRO concurred that groundwater contamination had been defined at the site, and supported monitored natural attenuation as a potential Corrective Action. The WSRO Groundwater Section continues to oversee the investigation and remediation of these areas.

Settling Pond Property

The June 1990 SI included collection of a sediment sample and a water sample from one of the settling ponds. The settling pond sediment sample contained aluminum (290,000 mg/kg) and mercury (0.8 mg/kg). The mercury concentration was estimated. SI sampling also detected manganese (120 ug/l) in water at the settling pond. No organic compounds were detected.

During 1992, Laidlaw Environmental Consultants collected six sludge samples from the site's settling ponds, and five soil samples from the pond walls above the water lines. No organic contaminants exceeded their quantitation limits in the samples. None of the inorganics that were detectable in background soil exceeded three times their background concentrations in the sludges.

Arsenic, mercury and selenium were below quantitation limits in the background soil sample. Arsenic and mercury concentrations exceeded detection limits in one sludge sample each, and selenium exceeded its background detection limit in two samples. Antimony, beryllium, boron, copper, manganese, nickel, vanadium and zinc each were present in at least one sludge sample, however, no background data were available for comparison.

None of the settling pond sludge results exceeded NC Soil Remediation Goals. Arsenic, copper, manganese, mercury, nickel and selenium concentrations exceeded 20x their respective NC groundwater standards, the factor used for groundwater protection. Note, however, that the background sample quantitation limits for arsenic, mercury and selenium also exceeded the groundwater protection factors.

In May 2000, the NC Superfund Section completed a Site Re-assessment (SRA) of the Sprague Aluminum site, focusing on the 12.5 acre parcel containing the settling ponds. Citing the site's history of groundwater contamination, its potential for surface water contamination and the lack of groundwater data downgradient of the settling ponds, the SRA recommended an Expanded Site Inspection.

Groundwater Pathway

The site is located in the Appalachian Mountain physiographic province and in the Blue Ridge geologic belt. Site soil is mapped as Braddock/Urban Complex, which reportedly consists of gravelly loam surface soil, underlain by clay loam, clay and gravelly loam, and sandy loam saprolite to 7 feet. However, on-site monitoring well logs reported mixed micaceous clay and silt saprolite, overlying weathered bedrock at depths ranging from 20 to 40 feet. Coarse to fine alluvium is present in the river and adjacent floodplain, where bedrock is anticipated to be nearer to the surface .

Bedrock beneath the site is mapped as middle-Proterozoic biotite granitic gneiss. The fractured bedrock and saprolite are anticipated to behave as a single unconfined aquifer. Depth to groundwater exceeds 30 feet beneath most of the site. However, the water table and land surface are expected to converge within the floodplain, along the northeast margins of the property.

United Chemicon's bedrock well supplies 450 employees at the facility, and is located 0.2 mile west of the site. Two municipal wells, located 1.1 and 1.5 miles north of the site, supply drinking water to 200 residents in Lansing, NC. Three additional community/public wells supply 1050 people at public facilities. None of Jefferson, NC's municipal wells are less than 4 miles from the site. An estimated 4127 people in the study area use private domestic wells or springs to obtain drinking water. The site's total groundwater population is therefore approximately 5827 people.

Groundwater beneath the settling pond property is expected to migrate to the northeast and discharge to the North Fork New River. The nearest residential wells to the site are located across the river and upgradient from its floodplain. Being the study area's primary surface drainage, the river is typically a groundwater discharge boundary between aquifers on opposite sides. The resulting opposite hydraulic gradient is expected to minimize the likelihood of site contaminants migrating to the wells. Groundwater contamination at the active United Chemicon facility is being addressed with the oversight of the NCDENR, Winston Salem Regional Office. However, no groundwater sampling has been conducted beneath the former evaporation ponds or downgradient of them. Therefore, groundwater characterization at the present ESI site remains incomplete.

Surface Water Pathway

The site is located west of North America's Eastern Continental Divide. The North Fork New River flows northwest, northeast and then southeast around the site (Fig. 2). Four NPDES discharge points reportedly exist along the former Sprague Aluminum riverfront. Based on surface topography and on-site groundwater measurements, the site's surface runoff and groundwater are both anticipated to discharge to the river. Locally, the river's mean annual discharge is 274 cfs.

No surface water intakes for public supply exist within the 15-mile surface water pathway. The entire pathway is a fishery and is classified as Class C Trout water. National Wetland Inventory maps indicate CERCLA-recognized wetland frontage directly downstream from the site. However, visual inspection of the elevated floodplain, conducted during the September 26, 2001 ESI Reconnaissance, did not confirm the presence of wetlands. Approximately 0.3 mile of additional wetland frontage is mapped at intervals within the remainder of the surface water pathway.

The NC Natural Heritage Program has identified one NC Endangered animal species (Lasmigona subdividis) 14.5 miles downstream from the site. In addition, a plant species (Saxifraga caroliniana) located 0.2 mile downstream from the site is a Candidate for listing as either Threatened or Endangered in NC.

Surface water pathway sampling to date has detected elevated copper in New River water, adjacent to United Chemicon but upstream from the settling ponds. Elevated iron and manganese have been detected downstream from the settling ponds. The potential remains for mercury or another inorganic contaminants to migrate from the source to the river via groundwater.

Soil and Air Pathways

The settling pond property is vacant and the ponds were backfilled with clay and compacted. The source is surrounded by a 6-foot high fence. The adjacent United Chemicon property is industrial, with approximately 450 employees. The nearest school is located one mile south of the site. The nearest sensitive environment is located 0.2 mile to the southeast. Due to backfilling of the source area(s), soil and air pathway sampling is not indicated .

Sample Locations

Contamination in the North Fork New River would be required for the site's HRS score to exceed 28.5 points. No overland flow pathway was observed at the source areas. A release to groundwater is insufficient to score the groundwater-to-surface-water pathway. Therefore ESI sampling activities will include source resampling for metals, installation and sampling of downgradient temporary monitoring wells, and surface water and sediment sampling in the North Fork New River.

Historical sampling detected no organic contaminants in either the source area sludges or the surface water pathway, and during re-assessment the site was scored using metals contamination of the surface water pathway. Therefore, ESI sample collection and analysis will be limited to inorganic parameters. Sample locations are described in Table 1 and illustrated in Figure 2.

This SAP/QAPP has been developed, and sampling will be performed, in accordance with the NC Superfund Section Quality Assurance Program Plan (Program Plan) and the Quality Assurance Standard Operating Procedures (QASOP). The QASOP adopts by reference the Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996, USEPA Region IV. The Program Plan is derived directly from the EPA-approved NC Department of Environment and Natural Resources QA Plan for Data, 1999.

If you have any questions regarding this SAP/QAPP, please contact me at (919) 733-2801, Ext. 280.

Sincerely,

Stuart F. Parker,
Hydrogeologist
NC Superfund Section

Dan LaMontagne, Head
Site Evaluation and Removal Branch
NC Superfund Section

Approved: _____, Date: 10/5/01
Irene Williams
Quality Assurance Officer
NC Superfund Section

Approved: _____, Date: _____
Jennifer Wendel
NC Site Management Section
Region IV EPA

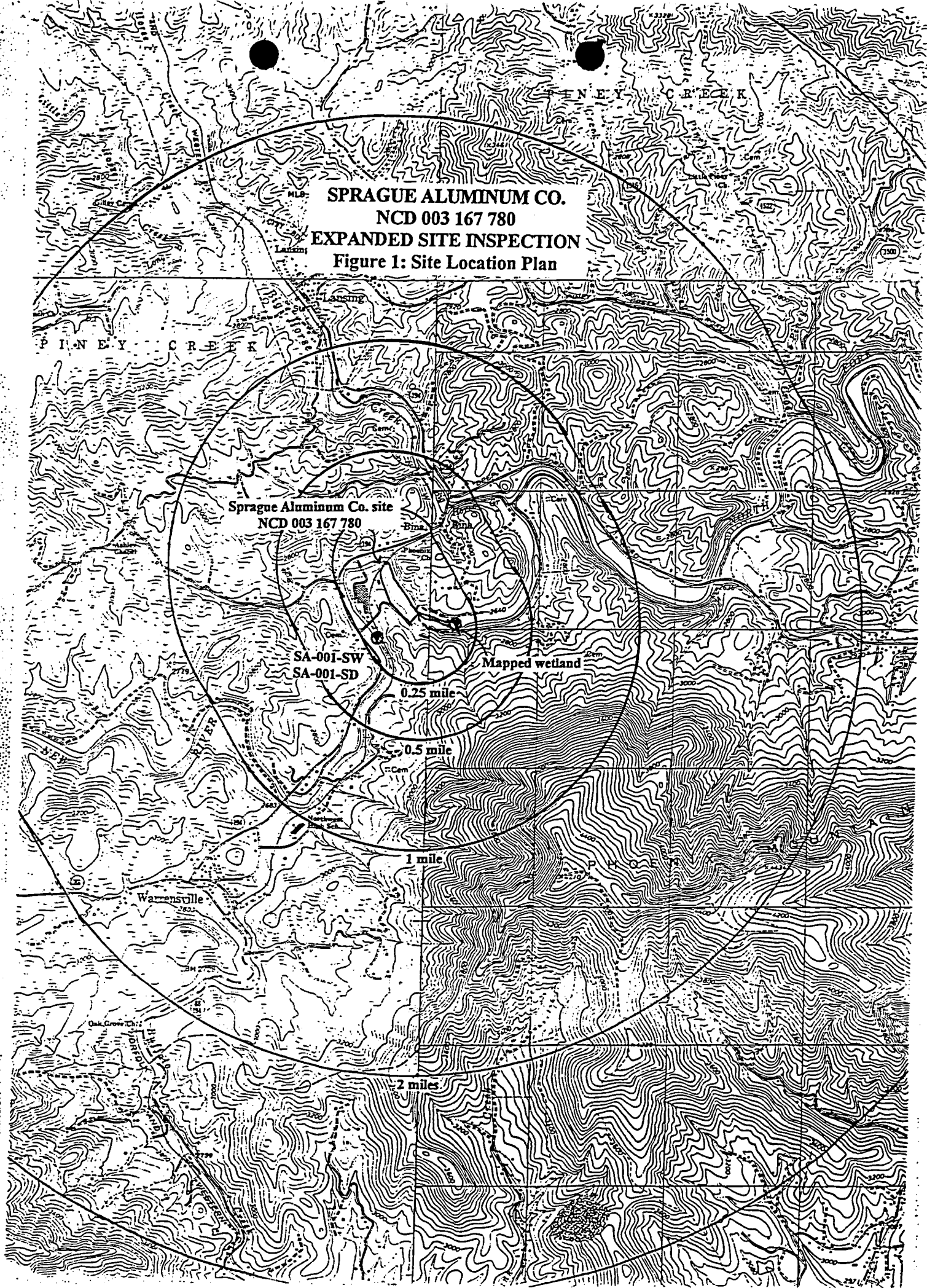
Attachments

cc: File

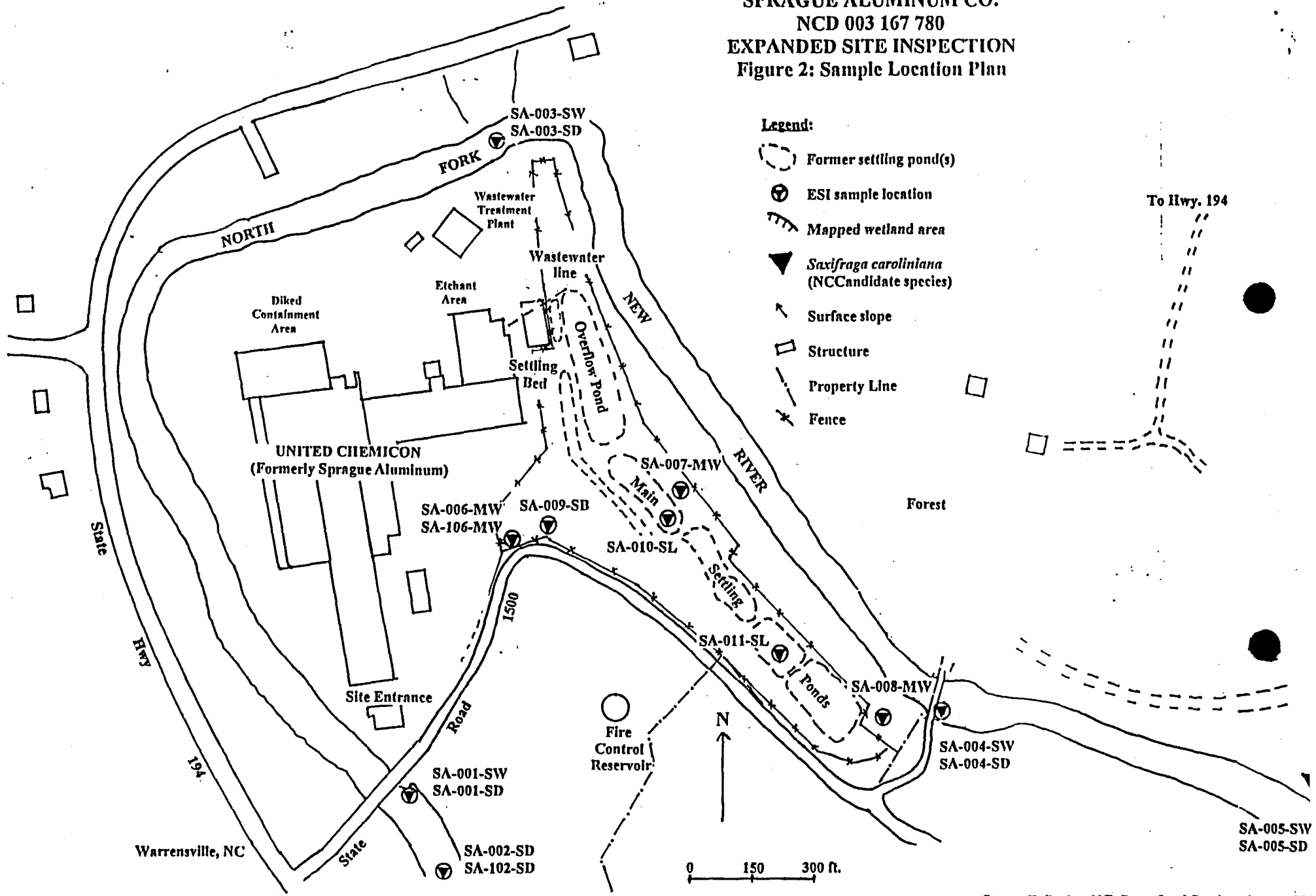
Table 1
Sprague Aluminum Company
NCD 003 167 780
Expanded Site Inspection (2001)
Sampling Locations

Sample:	Location:	Analysis:	Rationale/Comment:
SA-001-SW SA-001-SD	North Fork New River (NFNR) S of United Chemicon (UC).	TAL	Background surface water pathway sample.
SA-002-SD SA-102-SD	Similar to SA-002	TAL	Second background location with duplicate sample, MS/MSD.
SA-003-SW SA-003-SD	NFNR at United Chemicon/ ESI site property line.	TAL	Site background/Chemicon release sample.
SA-004-SW SA-004-SD	NFNR downstream from former settling ponds..	TAL	Surface water pathway PPE release and fishery target sample.
SA-005-SW SA-005-SD	NFNR, 1000 ft downstream from south site property line.	TAL	Fishery/rare species target sample.
SA-006-MW SA-106-MW	UC Monitoring Well, between SR 1500 and ponds.	TAL	Background GW/SW pathway sample.
SA-007-MW	Temporary MW between settling pond(s) and river.	TAL	MW/SW pathway release sample.
SA-008-MW	Temporary MW between settling pond(s) and river	TAL	MW/SW pathway release sample.
SA-009-SB	Soil (subsurface) near SA-006.	TAL	Background soil. MS/MSD.
SA-010-SL	Pond sludge (subsurface).	TAL	Release sample.
SA-011-SL	Pond sludge (subsurface).	TAL	Release sample.
Pres Blank	Aqueous	TAL	QA/QC.

SW = Surface Water; SD = Sediment; MW = Groundwater; SD = Subsurface Soil; SL = Sludge.
TCL = Target Compound List; TAL = Target Analyte List; MW = Monitoring well.


SPRAGUE ALUMINUM CO.
NCD 003 167 780
EXPANDED SITE INSPECTION
Figure 1: Site Location Plan
PINEY CREEK
Lansing
Sprague Aluminum Co. site
NCD 003 167 780
SA-001-SW
SA-001-SD
Mapped wetland
0.25 mile
0.5 mile
1 mile
2 miles
Warrensville
NEW RIVER

SPRAGUE ALUMINUM CO.
NCD 003 167 780
EXPANDED SITE INSPECTION
Figure 2: Sample Location Plan



Stuart F. Parker NC, Superfund Section, August 2001

MEMO

DATE: May 23, 2000
TO: File
FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section
SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I calculated the mean annual discharge of the North Fork of the New River at the Sprague Electric Co. by using the mean annual runoff multiplied by the drainage area and divided by 13.58. The mean annual runoff was determined by accessing the Map of the Mean Annual Runoff for the Northeastern, Southeastern, and Mid-Atlantic United States, Water Years 1951-1980, USGS, Water Resources Investigations Report 88-4094, 1990; and Drainage Areas of Selected Sites on Streams in North Carolina, USGS Open-File Report 83-211, 1983 (all attached).

$(143 \times 26) / 13.58 = 274$ cfs

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DRAINAGE AREAS OF SELECTED SITES ON STREAMS IN NORTH CAROLINA

By Robert L. Meikle

Open-File Report 83-211

Prepared in cooperation with the
NORTH CAROLINA DEPARTMENT OF NATURAL
RESOURCES AND COMMUNITY DEVELOPMENT

Raleigh, North Carolina
1983

STATION NUMBER	STATION NAME	DRAINAGE AREA (SQ MI)	SITE TYPE	LAT	LONG	QUAD NAME	COUNTY CODE
0316208900	L BUFFALO C AT SMETHPORT	6.47	02	362559	813039	WARRENSVILLE	009
0316211000	BUFFALO C AT WARRENSVILLE	21.8	03	362722	813051	WARRENSVILLE	009
0316218400	N F NEW R AT SPRAGUE ELECTRIC CO AT BINA	143.	11	362852	813020	WARRENSVILLE	009
0316218800	N F NEW R AT SR 1644 AT BINA	144.	20	362906	812938	JEFFERSON	009
0316219150	BIG HORSE C AT NWRR NR WHITEOAK	10.1	20	363512	813623	PARK	009
0316219400	RIPSHIN B AT MTH NR NELLA HUSK	2.91	20	363440	813548	PARK	009
0316219500	BIG HORSE C BL RIPSHIN B NR NELLA	14.9	20	363453	813527	PARK	009
0316219650	BIG HORSE C AT NWRR NR NELLA	17.5	20	363434	813414	PARK	009
0316219750	BIG HORSE C AT SR 1362 AT NELLA	20.3	20	363420	813336	PARK	009
0316219900	BIG HORSE C AT HUSK	21.9	20	363404	813248	PARK	009
0316220150	BIG HORSE C AT NWRR NR TUCKERDALE	24.5	20	363254	813225	PARK	009
0316220450	BIG WINDFALL B AT MTH AT TUCKERDALE	2.54	20	363147	813203	PARK	009
0316220500	BIG HORSE C NR BRANDON	30.0	20	363112	813123	PARK	009
0316220550	L HORSE C HEADWATERS NR WHITEOAK	2.36	20	363251	813621	PARK	009
0316220600	M F LITTLE HORSE C NR WHITEOAK	3.84	20	363153	813633	PARK	009
0316220650	M F L HORSE TRIB AT APPLE GROVE	1.68	20	363139	813548	PARK	009
0316220700	L HORSE C BL MIDDLE F AT WHITEOAK	11.3	20	363153	813441	PARK	009
0316220750	OLD FIELD B AT BRANDON	1.27	20	363129	813027	PARK	009
0316220800	L HORSE C NR TUCKERDALE	13.4	02	363045	813237	PARK	009
0316220900	GREER B AT SR 1333 NR WHITEOAK	2.73	20	363051	813421	PARK	009
0316221000	OLD FIELD B AT MTH AT LANSING	3.02	20	362956	813044	WARRENSVILLE	009
0316221200	S F L HORSE C NR LANSING	4.14	02	363033	813247	PARK	009
0316221400	L HORSE C AR LONG B AT LANSING	19.1	20	363010	813114	PARK	009
0316221500	BIG HORSE C AT SR 1347 AT LANSING	55.3	20	362947	813034	WARRENSVILLE	009
0316222000	HORSE C AT BINA	56.4	02	362907	812956	JEFFERSON	009
0316223250	N F NEW R BL LITTLE PINEY C NR BINA	203.	20	362925	812318	JEFFERSON	009
0316223275	PINEY C HEADWATERS NR BINA	1.77	20	362953	812851	JEFFERSON	009
0316223600	PINEY C AT MTH NR BINA	3.84	20	362926	812817	JEFFERSON	009
0316224000	LITTLE PHOENIX C AT SR 1573 NR SHATLEY SPRINGS	4.11	20	362814	812621	JEFFERSON	009
0316228000	N F NEW R AT 1639 NR SHATLEY SPRINGS	214.	20	362843	812626	JEFFERSON	009
0316240600	SILAS C HEADWATERS NR STURGILLS	1.98	20	363124	812808	GRASSY CREEK	009
0316240800	SILAS C AT SR 1544 NR CRUMPLER	4.20	20	363005	812635	GRASSY CREEK	009
0316241000	LONG SHOALS SPRINGS AT SR 1573 NR SHATLEY SPRINGS	2.40	20	362930	812521	JEFFERSON	009
0316241200	N F NEW R NR CRUMPLER	224.	20	363021	812522	GRASSY CREEK	009
0316241400	OLD FIELD C AT MTH NR CRUMPLER	2.08	20	363058	812519	GRASSY CREEK	009
0316241600	HELTON C AT NC VA STATE LINE NR STURGILL	17.5	20	363449	813105	PARK	009
0316241700	FEES B AT SR 1372 NR STURGILL	1.40	20	363412	813032	PARK	009
0316241800	HELTON C NR STURGILL	20.4	20	363340	813016	PARK	009
0316242000	HELTON C AT STURGILLS	22.7	20	363319	812941	GRASSY CREEK	009
0316242050	HELTON C TRIB AT MTH NR HELTON	2.12	20	363308	812903	GRASSY CREEK	009
0316242550	L HELTON C HEADWATERS NR HELTON	4.93	20	363419	812752	GRASSY CREEK	009
0316243050	L HELTON C AT NC 194 NR HELTON	8.11	20	363408	812733	GRASSY CREEK	009
0316243550	LONG B AT SR 1529 NR SUSSEX	2.76	20	363309	812637	GRASSY CREEK	009
0316244050	L HELTON C AT MTH NR HELTON	13.0	20	363254	812626	GRASSY CREEK	009
0316244095	HELTON C AT SR 1536 NR HELTON	41.3	20	363317	812617	GRASSY CREEK	009
0316246000	HELTON C NR HELTON	43.7	03	363205	812517	GRASSY CREEK	009
0316246100	HELTON C NR CRUMPLER	45.0	02	363111	812437	GRASSY CREEK	009
0316250000	N F NEW R AT CRUMPLER	277.	01	363014	812325	GRASSY CREEK	009
0316252000	N F NEW R TRIB AT MTH NR CRUMPLER	0.82	20	363032	812310	GRASSY CREEK	009
0316253518	N F NEW R NR CHESTNUT HILL	282.	20	363140	812216	MOUTH OF WILSON	009
0316254614	N F NEW R TRIB AT WEAVERSFORD	1.55	20	363244	812223	MOUTH OF WILSON	009
0316260800	NEW R AT WEAVERSFORD	615.	20	363245	812112	MOUTH OF WILSON	009
0316261000	GRASSY C AT NC VA STATE LINE NR GRASSY CREEK	5.00	20	363432	812353	GRASSY CREEK	009
0316261200	GRASSY C TRIB AT MTH AT GRASSY CREEK	2.00	20	363428	812354	GRASSY CREEK	009
0316261400	GRASSY C AT SR 1311 NR WEAVERSFORD	10.6	20	363308	812122	MOUTH OF WILSON	009
0316261650	NEW R 2 MI BL NC-VA LINE NR PINEY CREEK	628.	20	363314	811938	MOUTH OF WILSON	005
0316261676	NEW R AT NC-VA LINE NR PINEY CREEK	632.	20	363329	811925	MOUTH OF WILSON	005
0316270910	POTATO C HEADWATERS NR PINEY CREEK	2.48	20	363226	811610	MOUTH OF WILSON	005
0316270920	POTATO C TRIB AT SR 1319 NR PINEY CREEK	1.42	20	363251	811544	MOUTH OF WILSON	005
0316270930	POTATO C 2 MI AB MTH NR PINEY CREEK	6.48	20	363230	811616	MOUTH OF WILSON	005
0316270940	POTATO C AT NC-VA LINE NR PINEY CREEK	7.79	20	363426	811618	MOUTH OF WILSON	005
0316279985	PINEY C AT NC 93 NR PINEY CREEK	1.92	20	363401	811821	MOUTH OF WILSON	005
0316283960	ELK C NR STRATFORD	2.71	20	363016	811354	SPARTA WEST	005
0316283975	ELK C TRIB NR STRATFORD	1.92	20	362940	811257	WHITEHEAD	005
0316283980	ELK C TRIB AT STRATFORD	3.99	20	363123	811306	SPARTA WEST	005
0316283990	ELK C TRIB AT US 221 AT STRATFORD	2.65	20	363106	811258	SPARTA WEST	005
0316284000	ELK C NR STRATFORD	12.5	11	363137	811310	SPARTA WEST	005
0316284030	ELK C AT AMELIA	15.4	20	363237	811248	SPARTA WEST	005
0316284065	ELK C AT SR 1341 NR AMELIA	17.4	20	363327	811301	SPARTA WEST	005
0316284200	ELK C AT MTH NR AMELIA	20.9	20	363404	811210	SPARTA WEST	005
0316284700	ROCK C NR TWIN OAKS	1.25	11	363123	811104	SPARTA WEST	005
0316284950	ROCK C AT MTH AT AMELIA	4.84	20	363305	811058	SPARTA WEST	005
0316285000	NEW R AT AMELIA	823.	11	363308	811100	SPARTA WEST	005
0316285100	NEW R NR AMELIA	833.	11	363431	810937	SPARTA WEST	077
0316285130	NEW R TRIB AT US 21 NR NEW HAVEN	1.82	20	363301	810901	SPARTA WEST	005
0316285165	NEW R TRIB AT MTH NR NEW HAVEN	4.00	20	363404	810902	SPARTA WEST	005
0316285199	NEW R TRIB AT SR 1402 NR SPARTA	1.90	20	363407	810640	SPARTA EAST	005
0316285251	LITTLE R BL EVANS B NR WHITEHEAD	1.80	20	362706	811126	WHITEHEAD	005
0316285276	CREEK B AT MTH AT HWY 18 NR WHITEHEAD	1.54	20	362732	811042	WHITEHEAD	005
0316285301	LITTLE R TRIB AT WHITEHEAD	1.80	20	362804	810932	WHITEHEAD	005
0316285326	WATERFALLS C HEADWATERS NR WHITEHEAD	2.27	20	362642	810857	WHITEHEAD	005
0316285351	WATERFALLS C AT MTH AT WHITEHEAD	4.04	20	362751	810912	WHITEHEAD	005
0316285376	NO HEAD B AT SR 1133 AT WHITEHEAD	12.8	20	362740	810840	WHITEHEAD	005
0316286000	LITTLE R NR SPARTA	17.6	20	362834	810704	GLADE VALLEY	005
0316286450	PINE SWP C HEADWATERS NR SPARTA	2.55	20	362656	810622	GLADE VALLEY	005

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

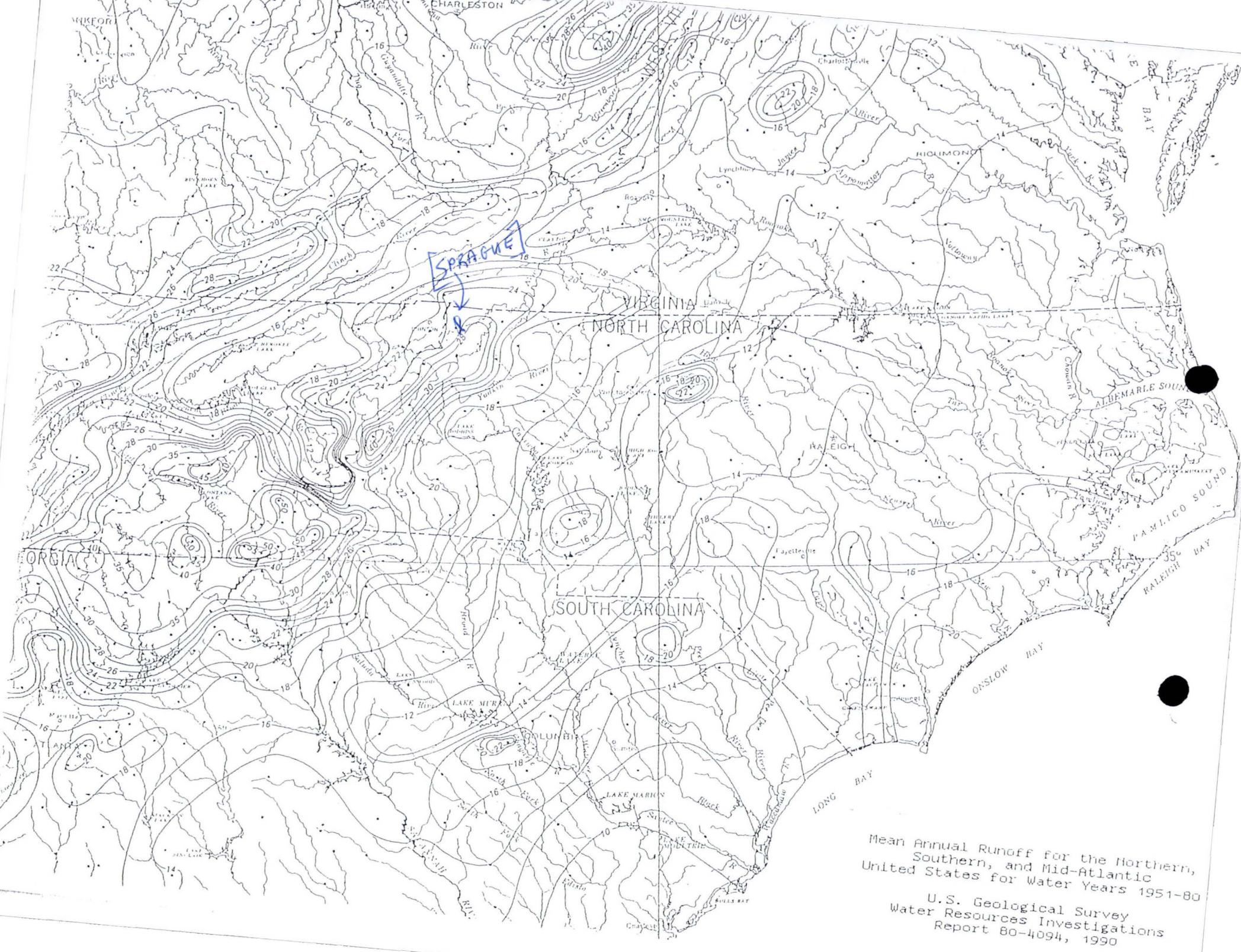
By
William R. Krug, Warren A. Gebert, David J. Graczyk, U.S. Geological Survey;
Donald L. Stevens, Jr., Eastern Oregon State College;
Barry P. Rochelle, Northrop Services, Inc.;
and M. Robbins Church, U.S. Environmental Protection Agency

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 88–4094

Prepared in cooperation with the
U.S. ENVIRONMENTAL PROTECTION AGENCY

Madison, Wisconsin
1990



Mean Annual Runoff for the Northern, Southern, and Mid-Atlantic United States for Water Years 1951-80

U.S. Geological Survey
Water Resources Investigations
Report 80-4094, 1990

MEMO

DATE: May 24, 2000
TO: File
FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section
SITE: Sprague Aluminum (aka Sprague Electric Co.)
NCD 003 167 780
Lansing, Ashe County, NC

Today, I talked with Donald Geddes, Winston-Salem Regional Office (WSRO) (336) 771-4600. He reported that the consultant to United Chemi-con and American Annuity had submitted the Comprehensive Site Assessment (CSA) to WSRO in April 1999. Mr. Geddes reported that this is similar to a Remedial Investigation conducted under Superfund. A Remedial Action Plan has not yet been approved for the site. This CSA was conducted on the portion of the site purchased by United Chemi-con. United Chemi-con continues to operate the facility.

No additional studies have been conducted on the former lagoon property. Mr. Geddes reported that the former lagoon ownership and status has remained unchanged since the lagoons were closed.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem
Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: LANSING County: ASHE
   185 MCNEIL ROAD
   (Road, Community, or Subdivision and Lot No.)
2. OWNER UNITED CHEMI-CON MANUFACTURING
   ADDRESS 185 MCNEIL ROAD
   (Street or Route No.)
   LANSING NC 28643
   City or Town State Zip Code
3. DATE DRILLED 9-23-97 USE OF WELL MONITOR
4. TOTAL DEPTH 71.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES |__| NO |X|
7. STATIC WATER LEVEL Below Top of Casing: ____ FT
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	66.0		2 INCH	SCH 40	PVC
	0.0	61.0		61/4 INCH	.188	GALVANIZED

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	0.0	60.0		PORTLAND BENTONITE	SLURRY
	0.0	61.0		PORTLAND BENTONITE	SLURRY

14. SCREEN:

Depth From	Depth To	Ft.	Diameter	in.	Slot Size	in.	Material
66.0	71.0		2.0		.010		PVC

15. SAND/GRAVEL PACK:

Depth From	Depth To	Ft.	Size	Material
64.0	71.0		8-20	FINE SILICA SAND

16. REMARKS: DW-1 BENTONITE SEAL FROM 60.0 TO 64.0 FEET

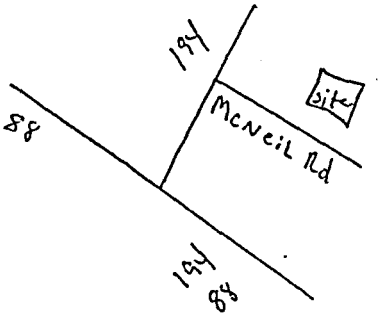
DEPTH / DRILLING LOG

From	To	Formation Description
0.0'	20.0'	RED CLAY SILT
20.0'	33.0'	BROWN CLAYEY SILT
33.0	50.0'	BROWN WEATHERED ROCK
50.0'	65.0'	GRAY BROWN ROCK
65.0'	68.0'	BROWN GRANITE WITH GRAY
68.0'	71.0'	GRAY GRANITE

If additional space is needed use back of form

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem
Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-23-97 USE OF WELL MONITOR
4. TOTAL DEPTH 71.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES |__| NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	66.0		2 INCH	SCH 40	PVC
	0.0	61.0		61/4 INCH	.188	GALVANIZED

13. GROUT:

Depth From	Depth To	Ft.	Material	Method
0.0	60.0		PORTLAND BENTONITE	SLURRY
0.0	61.0		PORTLAND BENTONITE	SLURRY

14. SCREEN:

Depth From	Depth To	Ft.	Diameter	Slot Size	Material
66.0	71.0		2.0 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

Depth From	Depth To	Ft.	Size	Material
64.0	71.0		8-20	FINE SILICA SAND

16. REMARKS: DW-1 BENTONITE SEAL FROM 60.0 TO 64.0 FEET

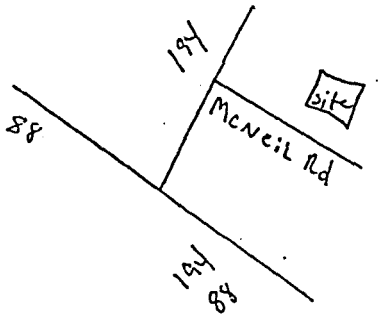
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	20.0'	RED CLAY SILT
20.0'	33.0'	BROWN CLAYEY SILT
33.0	50.0'	BROWN WEATHERED ROCK
50.0'	65.0'	GRAY BROWN ROCK
65.0'	68.0'	BROWN GRANITE WITH GRAY
68.0'	71.0'	GRAY GRANITE

If additional space is needed use back of form

REC'D 97 NOV 10 PM 4:24

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Gr[illegible]water Section
P.O. Box 29535 - Raleigh, N.C. [illegible]-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR [illegible]ICE USE ONLY 103159
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem Regional Office

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: LANSING County: ASHE
185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)
2. OWNER UNITED CHEMI-CON MANUFACTURING
ADDRESS 185 MCNEIL ROAD
(Street or Route No.)
LANSING NC 28643
City or Town State Zip Code
3. DATE DRILLED 9-24-97 USE OF WELL MONITOR
4. TOTAL DEPTH 61.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES |__| NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance
is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

DEPTH From	DEPTH To	Formation Description
0.0'	2.0'	GRAVEL
2.0'	22.0'	BROWN SILT WITH PEBBLES
22.0	27.0'	BROWN WEATHERED ROCK
27.0'	55.0'	GRAY BROWN GNEISS
55.0'	61.0'	GRAY ROCK

If additional space is needed use back of form

97 NOV 10 PM 1:04 RECEIVED/EHNR WATER SEC.

12. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	56.0	2 INCH	SCH 40	PVC
	0.0	50.0	61/4 INCH	.188	GALVANIZED

13. GROUT:

	Depth From	Depth To	Material	Method
	0.0	49.0	PORTLAND BENTONITE	SLURRY
	0.0	50.0	PORTLAND BENTONITE	SLURRY

14. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	56.0	61.0	2.0 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

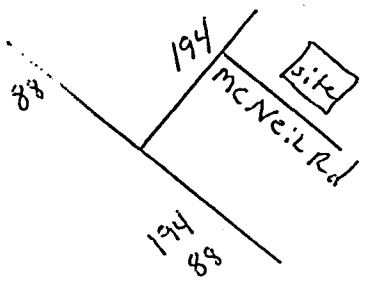
15. SAND/GRAVEL PACK:

	Depth From	Depth To	Size	Material
	54.0	61.0	20-40	FINE SILICA SAND

16. REMARKS: DW-2 BENTONITE SEAL FROM 49.0 TO 54.0 FEET

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charlie Williard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 7[illegible]-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR [illegible]ICE USE ONLY 13159
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem Regional Office

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: LANSING County: ASHE
185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)
2. OWNER UNITED CHEMI-CON MANUFACTURING
ADDRESS 185 MCNEIL ROAD
(Street or Route No.)
LANSING NC 28643
City or Town State Zip Code
3. DATE DRILLED 9-24-97 USE OF WELL MONITOR
4. TOTAL DEPTH 61.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES |__| NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

DEPTH From	DEPTH To	Formation Description
0.0'	2.0'	GRAVEL
2.0'	22.0'	BROWN SILT WITH PEBBLES
22.0	27.0'	BROWN WEATHERED ROCK
27.0'	55.0'	GRAY BROWN GNEISS
55.0'	61.0'	GRAY ROCK

If additional space is needed use back of form

RECEIVED/EHNR
97 NOV 10 AM 1:04
GEOLOGICAL WATER SEC.

12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	56.0	Ft.	2 INCH	SCH 40	PVC
	0.0	50.0	Ft.	61/4 INCH	.188	GALVANIZED
			Ft.			

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	0.0	49.0	Ft.	PORTLAND BENTONITE	SLURRY
	0.0	50.0	Ft.	PORTLAND BENTONITE	SLURRY

14. SCREEN:

	Depth From	Depth To	Ft.	Diameter	Slot Size	Material
	56.0	61.0	Ft.	2.0 in.	.010 in.	PVC
			Ft.	in.	in.	
			Ft.	in.	in.	

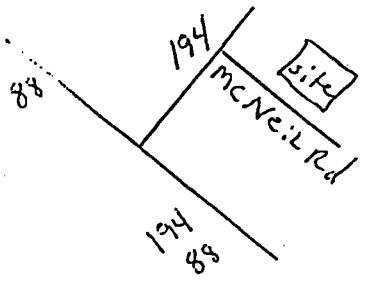
15. SAND/GRAVEL PACK:

Depth From	Depth To	Ft.	Size	Material
54.0	61.0	Ft.	20-40	FINE SILICA SAND
		Ft.		

16. REMARKS: DW-2 BENTONITE SEAL FROM 49.0 TO 54.0 FEET

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charlie Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY 19-1-50
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____
RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem
Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-29-97 USE OF WELL MONITOR
4. TOTAL DEPTH 72.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 3.0 FT Above Land Surface*

*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
0.0	62.0	2 INCH	SCH 40	PVC

13. GROUT:

Depth From	Depth To	Material	Method
0.0	56.0	PORTLAND BENTONITE	SLURRY

14. SCREEN:

Depth From	Depth To	Diameter	Slot Size	Material
62.0	72.0	2.0 in.	.010 in.	PVC
		in.	in.	
		in.	in.	

15. SAND/GRAVEL PACK:

Depth From	Depth To	Size	Material
60.0	72.0	8-20	FINE SILICA SAND

DEPTH / DRILLING LOG

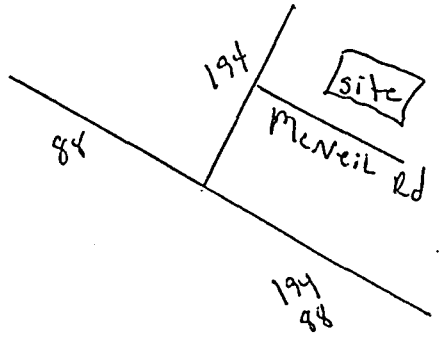
From	To	Formation Description
0.0'	10.0'	RED CLAY SILT
10.0'	28.0'	TAN ORANGE SILT
28.0'	58.0'	BROWN GRAY WEATHER SILT
58.0'	72.0'	GRAY ROCK

If additional space is needed use back of form

RECEIVED/EHNR
97 NOV 10 PM 1:04
GRD. WATER SEC.

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-14 BENTONITE SEAL FROM 56.0 TO 60.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY 13-150
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-29-97 USE OF WELL MONITOR
4. TOTAL DEPTH 72.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 3.0 FT Above Land Surface*

*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

DEPTH From	DEPTH To	Formation Description
0.0'	10.0'	RED CLAY SILT
10.0'	28.0'	TAN ORANGE SILT
28.0'	58.0'	BROWN GRAY WEATHER SILT
58.0'	72.0'	GRAY ROCK

If additional space is needed use back of form

12. CASING:

Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
0.0	62.0 Ft.	2 INCH	SCH 40	PVC
	Ft.			
	Ft.			

13. GROUT:

Depth From	Depth To	Material	Method
0.0	56.0 Ft.	PORTLAND BENTONITE	SLURRY
	Ft.		

14. SCREEN:

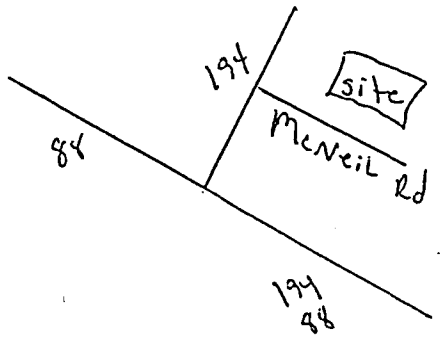
Depth From	Depth To	Diameter	Slot Size	Material
62.0	72.0 Ft.	2.0 in.	.010 in.	PVC
	Ft.	in.	in.	
	Ft.	in.	in.	

15. SAND/GRAVEL PACK:

Depth From	Depth To	Size	Material
60.0	72.0 Ft.	8-20	FINE SILICA SAND
	Ft.		

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-14 BENTONITE SEAL FROM 56.0 TO 60.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Wallard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

RECEIVED/DWR
97 NOV 10 PM 1:04
DIV. OF ENVIRONMENTAL MANAGEMENT

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY	
QUAD NO	SERIAL NO
Lat	Long RO
Minor Basin	
Basin Code	
Header Ent	GW-1 Ent

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION

DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER:

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Water Quality
Regional Office

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-25-97 USE OF WELL MONITOR
4. TOTAL DEPTH 25.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES |__| NO |X|
7: STATIC WATER LEVEL Below Top of Casing: _____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0.0	To 10.0	Ft.	2 INCH	SCH 40	PVC
From	To	Ft.			
From	To	Ft.			

13. GROUT:

	Depth		Material	Method
From 0.0	To 6.0	Ft.	PORTLAND BENTONITE	SLURRY
From	To	Ft.		

14. SCREEN:

	Depth		Diameter		Slot Size		Material
From 10.0	To 25.0	Ft.	2.0	in.	.010	in.	PVC
From	To	Ft.		in.		in.	
From	To	Ft.		in.		in.	

15. SAND/GRAVEL PACK:

	Depth		Size	Material
From 8.0	To 25.0	Ft.	8-20	FINE SILICA SAND
From	To	Ft.		

DEPTH / DRILLING LOG

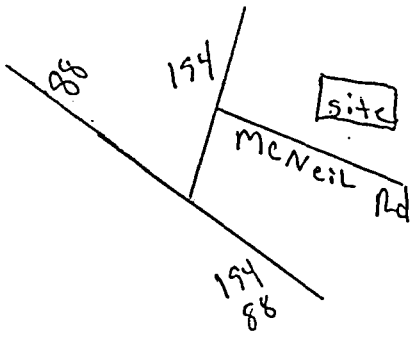
From	To	Formation Description
0.0'	15.0'	ORANGE SILTY CLAY
15.0'	21.0'	TAN SILTY CLAY
21.0'	25.0'	WEATHER ROCK

If additional space is needed use back of form

RECEIVED
97 NOV 10 PM 1:04
ENVIRONMENTAL MANAGEMENT

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-15 BENTONITE SEAL FROM 6.0 TO 8.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Gro[illegible]ater Section
P.O. Box 29535 - Raleigh, N.C. 2[illegible]-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR O[illegible]CE USE ONLY
QUAD NO ____ SERIAL NO 1[illegible]
Lat ____ Long ____ RO 1[illegible]
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-25-97 USE OF WELL MONITOR
4. TOTAL DEPTH 25.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7. STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*

*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To		Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	10.0	Ft.	2 INCH	SCH 40	PVC
			Ft.			
			Ft.			

13. GROUT:

	Depth From	Depth To		Material	Method
	0.0	6.0	Ft.	PORTLAND BENTONITE	SLURRY
			Ft.		

14. SCREEN:

	Depth From	Depth To		Diameter		Slot Size		Material
	10.0	25.0	Ft.	2.0	in.	.010	in.	PVC
			Ft.		in.		in.	
			Ft.		in.		in.	

15. SAND/GRAVEL PACK:

	Depth From	Depth To		Size	Material
	8.0	25.0	Ft.	8-20	FINE SILICA SAND
			Ft.		

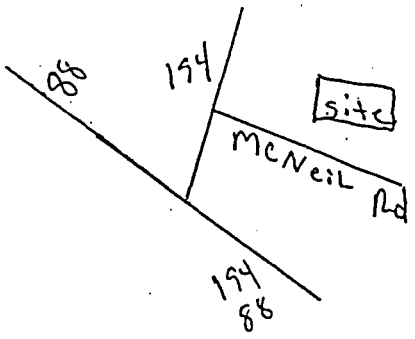
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	15.0'	ORANGE SILTY CLAY
15.0'	21.0'	TAN SILTY CLAY
21.0'	25.0'	WEATHER ROCK

If additional space is needed use back of form

RECEIVED/WQ
97 NOV 10 PM 1:04
DEM-WQ-WINSTON-SALEM

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-15 BENTONITE SEAL FROM 6.0 TO 8.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

G[illegible] REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Ground Water Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY 182162
QUAD NO ____ SERIAL NO ____
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem
Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: ____

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: LANSING County: ASHE
   185 MCNEIL ROAD
   (Road, Community, or Subdivision and Lot No.)
2. OWNER UNITED CHEMI-CON MANUFACTURING
   ADDRESS 185 MCNEIL ROAD
   (Street or Route No.)
   LANSING NC 28643
   City or Town State Zip Code
3. DATE DRILLED 9-25-97 USE OF WELL MONITOR
4. TOTAL DEPTH 27.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7. STATIC WATER LEVEL Below Top of Casing: ____ FT
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	12.0		2 INCH	SCH 40	PVC

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	0.0	8.0		PORTLAND BENTONITE	SLURRY

14. SCREEN:

	Depth From	Depth To	Ft.	Diameter	in.	Slot Size	in.	Material
	12.0	27.0		2.0		.010		PVC

15. SAND/GRAVEL PACK:

	Depth From	Depth To	Ft.	Size	Material
	10.0	27.0		8-20	FINE SILICA SAND

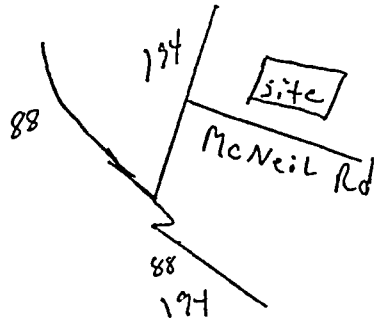
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	20.0'	TAN ORANGE SILTY CLAY
20.0'	25.0'	TAN ORANGE WEATHER ROCK

If additional space is needed use back of form

97 NOV 10 PM 1:04
ENGINEERING
GROUND WATER SEC.

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-16 BENTONITE SEAL FROM 8.0 TO 10.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charlie Wilhard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Ground Water Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY 182162
QUAD NO. SERIAL NO.
Lat Long RO
Minor Basin
Basin Code
Header Ent GW-1 Ent

RECEIVED
N.C. Dept. of EHNR
DEC - 4 1997
Winston-Salem
Regional Office

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER:

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-25-97 USE OF WELL MONITOR
4. TOTAL DEPTH 27.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7: STATIC WATER LEVEL Below Top of Casing: FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	12.0	2 INCH	SCH 40	PVC

13. GROUT:

	Depth From	Depth To	Material	Method
	0.0	8.0	PORTLAND BENTONITE	SLURRY

14. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	12.0	27.0	2.0 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

	Depth From	Depth To	Size	Material
	10.0	27.0	8-20	FINE SILICA SAND

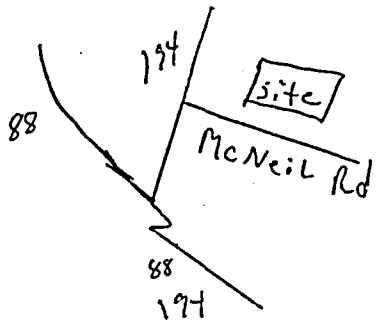
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	20.0'	TAN ORANGE SILTY CLAY
20.0'	25.0'	TAN ORANGE WEATHER ROCK

If additional space is needed use back of form

RECEIVED/WQ
97 NOV 10 PM 1:06
GROUND WATER SEC.

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-16 BENTONITE SEAL FROM 8.0 TO 10.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Wallard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Ground Water Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY
QUAD NO ____ SERIAL NO 132163
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION
DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: N.C. Dept. of EHNR

RECEIVED
DEC - 4 1997
Winston-Salem Regional Office

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: LANSING County: ASHE
185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)
2. OWNER UNITED CHEMI-CON MANUFACTURING
ADDRESS 185 MCNEIL ROAD
(Street or Route No.)
LANSING NC 28643
City or Town State Zip Code
3. DATE DRILLED 9-26-97 USE OF WELL MONITOR
4. TOTAL DEPTH 25.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*
*Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

Depth From	Depth To		Diameter	Wall Thickness or Weight/Ft.	Material
0.0	10.0	Ft.	2 INCH	SCH 40	PVC
		Ft.			
		Ft.			

13. GROUT:

Depth From	Depth To		Material	Method
0.0	6.0	Ft.	PORTLAND BENTONITE	SLURRY
		Ft.		

14. SCREEN:

Depth From	Depth To		Diameter		Slot Size		Material
10.0	25.0	Ft.	2.0	in.	.010	in.	PVC
		Ft.		in.		in.	
		Ft.		in.		in.	

15. SAND/GRAVEL PACK:

Depth From	Depth To		Size	Material
8.0	25.0	Ft.	8-20	FINE SILICA SAND
		Ft.		

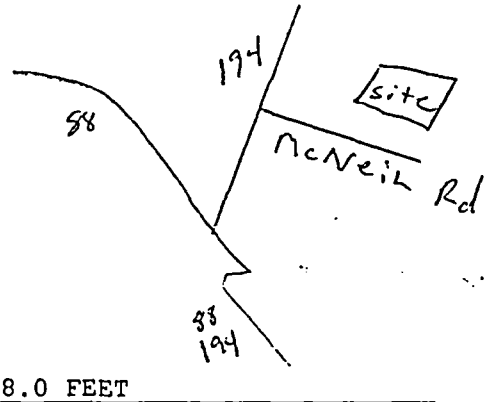
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	20.0'	ORANGE SILTY CLAY
20.0'	25.0'	ORANGE WEATHER ROCK

If additional space is needed use back of form

RECEIVED
97 NOV 10 PM 1:04
DEHNR

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-17 BENTONITE SEAL FROM 6.0 TO 8.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY
QUAD NO ____ SERIAL NO 132163
Lat ____ Long ____ RO ____
Minor Basin ____
Basin Code ____
Header Ent ____ GW-1 Ent ____

DRILLING CONTRACTOR: Geologic Exploration, Inc.

STATE WELL CONSTRUCTION

DRILLER REGISTRATION NUMBER: 1175 PERMIT NUMBER: N.C. Dept. of EHNR

RECEIVED
DEC - 4 1997
Winston-Salem Regional Office

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: LANSING County: ASHE

185 MCNEIL ROAD
(Road, Community, or Subdivision and Lot No.)

2. OWNER UNITED CHEMI-CON MANUFACTURING

ADDRESS 185 MCNEIL ROAD
(Street or Route No.)

LANSING NC 28643
City or Town State Zip Code

3. DATE DRILLED 9-26-97 USE OF WELL MONITOR
4. TOTAL DEPTH 25.0 FEET
5. CUTTINGS COLLECTED YES |X| NO | |
6. DOES WELL REPLACE EXISTING WELL? YES | | NO |X|
7: STATIC WATER LEVEL Below Top of Casing: ____ FT
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0.0 FT Above Land Surface*

***Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118**

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type N/A Amount N/A
12. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	10.0	2 INCH	SCH 40	PVC

13. GROUT:

	Depth From	Depth To	Material	Method
	0.0	6.0	PORTLAND BENTONITE	SLURRY

14. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	10.0	25.0	2.0 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

	Depth From	Depth To	Size	Material
	8.0	25.0	8-20	FINE SILICA SAND

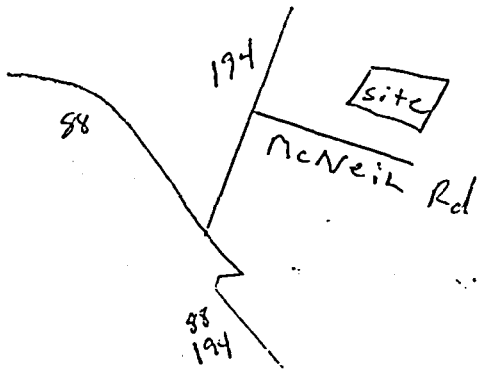
DEPTH From	DEPTH To	DRILLING LOG Formation Description
0.0'	20.0'	ORANGE SILTY CLAY
20.0'	25.0'	ORANGE WEATHER ROCK

If additional space is needed use back of form

RECEIVED/EHNR
97 NOV 10 PM 1:04
REG. GROUNDWATER SEC.

LOCATION OF SKETCH

(Show direction and distance from at least two State Roads, or othe map reference points.)



16. REMARKS: MW-17 BENTONITE SEAL FROM 6.0 TO 8.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles Willard 10-17-97
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

MEMO

DATE: December 31, 1996

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I spoke with George Smith, NC Division of Water Quality, Water Quality Section (910) 771-4600 about the pond property associated with the Sprague site. He said that Sprague Electric does own the 12.5-acre property.

MEMO

DATE: December 27, 1996

TO: File

FROM: Jeanette Stanley, Environmental Chemist, NC Superfund Section

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I have again reviewed the Sprague Aluminum Company data from previous reports. The United Chemi-con facility is in operation and is being regulated by the NC Division of Water Quality. The adjacent old pond property is still owned by the Sprague company and is the only portion of the property that would be a CERCLA concern.

The old ponds have been drained. The sludges were tested, determined to not be hazardous waste and left in place. The ponds were then backfilled. I have reviewed the data from the pond sludges to determine if there are any remaining CERCLA concerns on the drained pond property.

The attached table shows the level of metals found in the sludges and these numbers are compared to the soil remediation goals for these metals found in the March 1996 "Inactive Hazardous Sites Program Guidelines for Responsible Party Voluntary Site Remedial Action". These soil remediation goals shown in the table are required clean up levels for both scenarios -- when groundwater has been contaminated and when it has not. Since these ponds have been backfilled, there is no longer a soil exposure risk.

There is no groundwater data for the groundwater under the ponds. However, since the operating facility previously conducted the activities that resulted in the deposition of the wastes into the ponds, it is appropriate to assume that if contaminants are found in the groundwater under the ponds, they are likely to be the same contaminants found under the operating facility. Chromium, cadmium, and barium were detected in the groundwater under the operating facility. The levels of these contaminants in the pond sludge are above the Soil Remediation Goal (20 x groundwater quality standard), but none of these contaminants were found in the pond sludge at levels three times background. Background samples taken during the Site Inspection Prioritization (SIP) also show levels of chromium and barium at or above the levels of the background taken during the sludge investigation. The SIP background samples did not show any cadmium.

Other metals found in the pond sludge slightly above the soil remediation goal if groundwater contamination is found (copper, nickel, and silver) were not tested for in the background sample. Manganese was significantly higher than the soil remediation goal if groundwater contamination is found, but the background sample was also not tested for manganese. Background samples taken during the Site Inspection Prioritization (SIP) show levels of manganese, copper, and nickel at or above the levels of these metals found in the background taken for the sludge investigation. The SIP background samples were not tested for silver. None of the metals detected in the pond sludges are above Soil Remediation Goals if the groundwater is not contaminated.

Sprague Aluminum: Pond Sludge Samples and Comparison with Soil Remediation Goals

	Highest level found in six samples	Average of six samples (mg/kg)	BKG level (mg/kg)	20 x GW Quality Standard (SRG if GW is contaminated) (ppm)	SRG if no GW contamination (mg/kg)	Is average greater than 3 x BKG and greater than 20 x GW Quality Standard?	Is average above SRG if no GW contamination?
Antimony	0.82	0.37	NA	—	6.2	No	No
Arsenic	1.82	0.41	<1.3	1	4.6	No	No
Barium	87.56	31	NA	40	none	No	No
Boron	602	229	NA	—	none	No GW Quality Standard	No
Cadmium	1.34	0.29	2.2	0.1	7.8	Not 3 x BKG*	No
Chromium	33.42	10.7	80	1	15,600 (Cr III) 78 (Cr VI)	Not 3 x BKG*	No
Copper	52	29.2	NA	20	620	BKG not tested for copper*	No
Lead	4.68	1.5	7.5	0.3	400	Not 3 x BKG*	No
Manganese	82.82	35.44	NA	1	none	BKG not tested for manganese*	No
Mercury	0.07	0.02	<0.065	0.022	4.6	No	No
Nickel	34.8	7.7	NA	2	320	BKG not tested for nickel*	No
Selenium	2.36	0.8	<1.3	1	78	No	No
Silver	1.54	0.54	<2.6	0.36	78	Yes	No
Vanadium	31.2	12.7	NA	—	140	No GW Quality Standard	No
Zinc	13.5	9.16	NA	40.2	4600	No	No

NA = Not analyzed; SRG = Soil Remediation Goal; GW = Groundwater; BKG = Background

* These contaminants are above the 20 x GW Quality Standard (SRG if there is GW contamination); however, either background levels were above the level detected in the sludge or the background sample was not analyzed for the metal. None of the metals in the average of the sludge sample were above the SRG if there is not groundwater contamination.

MEMO

DATE: December 5, 1996

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I have reviewed recent information on the Sprague Aluminum site. I have communicated with Donald Geddes of the Winston-Salem Regional Office (WSRO). He has provided maps and additional information. I have combined these in order to show the operating United Chemi-con facility and the old lagoons on the same map. This map and a map showing the approximate outfall locations are attached.

GROUNDWATER

The attached map shows the 14 monitoring wells on the United Chemi-con facility. There are no monitoring wells between the old lagoons and the river. There is groundwater contamination on the United Chemi-con site.

- In 1995, wells ET-3 and MW-8 (in the vicinity of the old etching area) contained aluminum at levels ranging from 6,200 ug/L to 51,000 ug/L and had a pH around 3.

- In 1993, these wells also contained levels of barium, cadmium and chromium above the NC DEM's action levels. No volatile or semivolatile compounds above groundwater standards have been detected in the groundwater. I have not reviewed all of the data to determine if all groundwater samples have been non-detect for all organic compounds.

- United Chemi-con is still in the assessment phase of the groundwater contamination. WSRO will be requiring remediation of this contaminated groundwater on the United Chemi-con site.

- There is a water supply well on the northwest corner of the property, near the New River. It serves 450 people and is 900' deep. It is tested per NC Public Water Supply requirements. No contaminants above drinking water standards have been detected.

- The WSRO has requested that United Chemi-con conduct a survey of other drinking water wells within 1/4 mile of the facility but this survey has not yet been received. WSRO will be investigating the liklihood of contamination of these wells and/or proof from United Chemi-con that these wells will not be contaminated.

SURFACE WATER

- In May 1996, the Winston-Salem Regional Office requested sampling in the New River to determine if any contaminants are discharging to the River. This sampling has not yet been conducted.

- There are four NPDES-permitted outfalls from the facility into the New River. The approximate locations are marked on the attached map. One permitted outfall has no limits for copper although monitoring for copper was required monthly for one year. Copper in the outfall was 37 ug/L in the first sample. A surface water sample (taken during the SIP in the vicinity of this outfall) was 29 ug/L.

LAGOONS

- The lagoons have not been used since 1992. They were pumped out and backfilled in within the past year. Prior to backfilling, sludges were tested and found to not be a hazardous waste. Lagoon sludges contained arsenic (0 - 1.82 ppm), mercury (0.005 - 0.07 ppm), and selenium (2.36 ppm) at levels more than three times background. Lead, cadmium, and chromium levels were all lower than the background sample. Sludges were also tested for antimony (0 - 0.82 ppm), boron (0 - 602 ppm), copper (12 - 52 ppm), nickel (1.7 - 34.8 ppm), silver (0.01 - 1.54 ppm), vanadium (4.3 - 17.7 ppm), and zinc (5.4 - 13.5 ppm), but the background sample was not tested for these inorganics. The lagoons also contain aluminum. These sludge samples did not contain volatile or semivolatile organic compounds.

- The lagoons were neither built nor operated under a NC permit. A RCRA permit was not required for their operation.

- Neither groundwater under the lagoons nor between the lagoons and the river has been tested for contamination. There are no monitoring wells in these areas. There are monitoring wells between the facility and the lagoons.

OTHER SOURCES

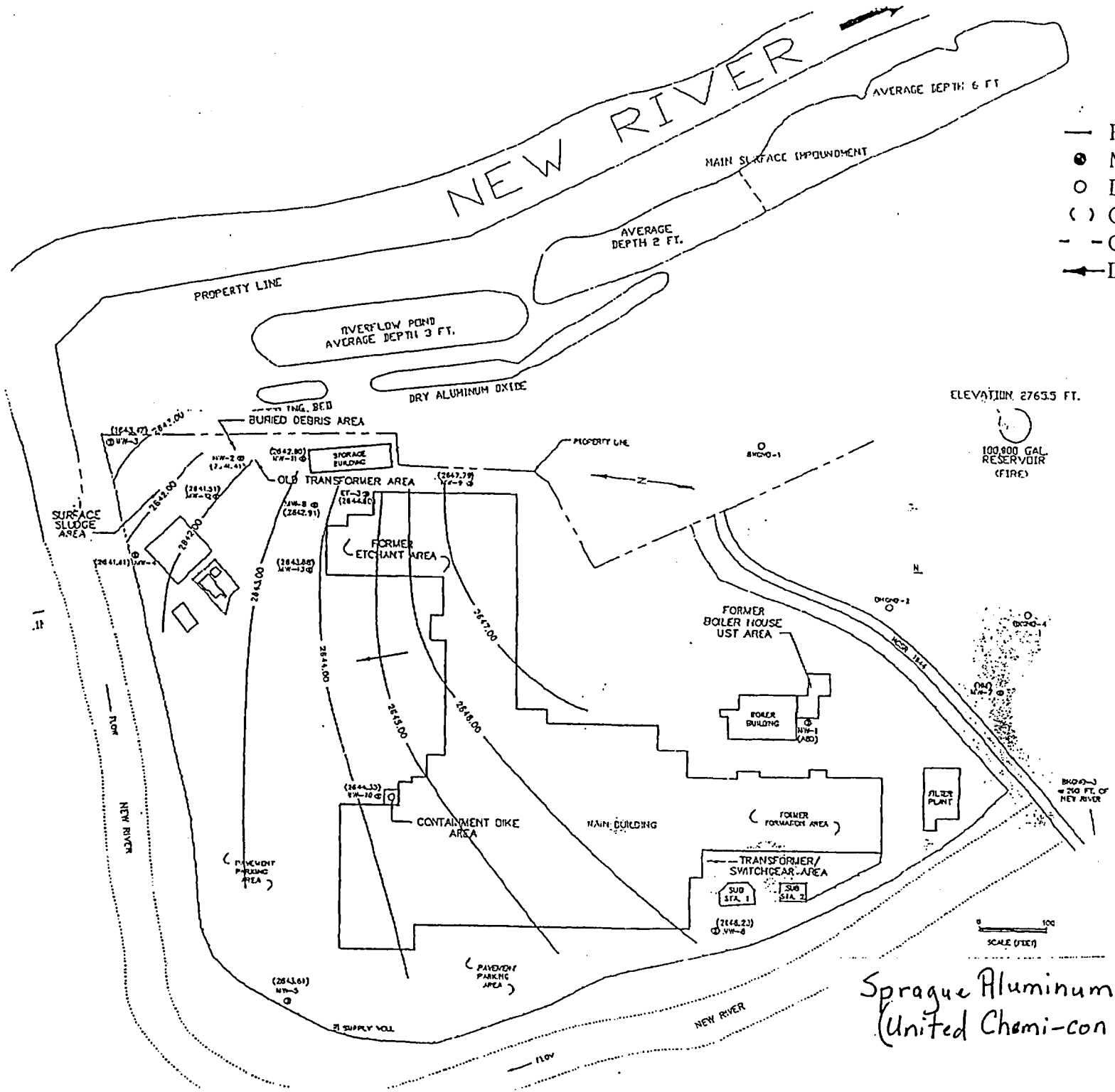
Other sources consist of contaminated soil. About 800 square feet of surface soil is in the tank area and it contains cyanaide and manganese. About 2,200 square feet of contaminated surface soil in the drum storage area contains cadmium, DDE, manganese, nickel and zinc.

VIOLATIONS

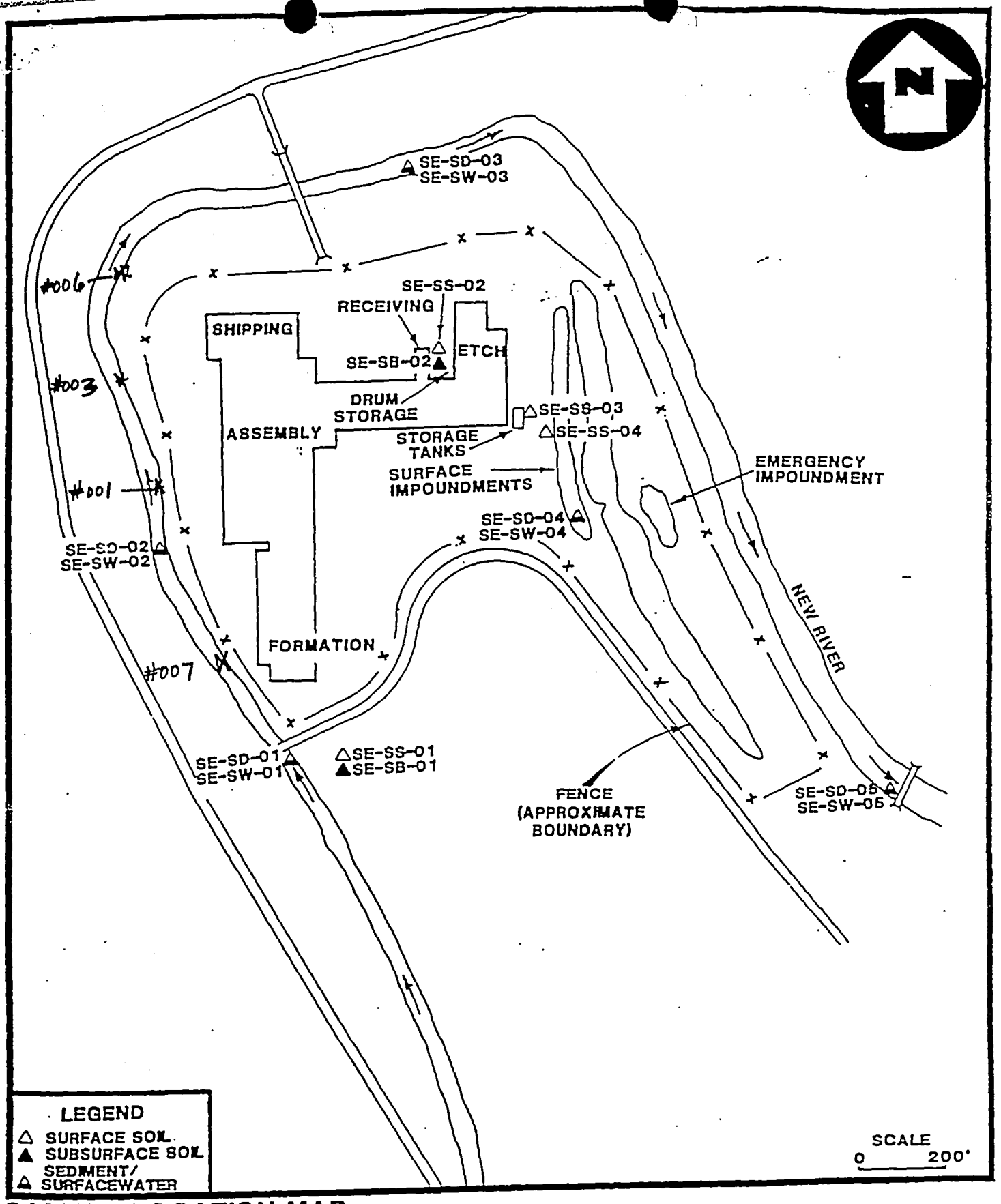
- A March 16, 1994 NOV issued by the NC DEM Water Quality Section stated that the facility was spreading residuals from the drying beds on the grounds or stored. The facility was ordered to take residuals to a landfill. Sampling of outfall #001 was in violation because the facility was doing grab samples instead of composite samples. Outfall #001 (non-contact, boiler, A/C, and assembled product rinse discharge) was required to be monitored for cadmium, chromium, copper, lead, nickel, silver, and zinc monthly for one year. Some copper (29 ug/L) and zinc (44 ug/L) were detected in one sample. Seven semivolatile and volatile organics plus seven unidentified peaks were detected in outfall #001, including 290 ug/L dimethylformamide and 6.9 ug/L tetrachloroethylene. Outfall #006 showed 16 unidentified volatile and semivolatile peaks and 1.9 ug/L 1,2-dichlorobenzene.

WSRO employees have stated that United Chemi-con is a little behind schedule but is generally cooperative and willing to clean up the site. WSRO is currently regulating the groundwater contamination and plans to order groundwater remediation. This groundwater contamination is the primary threat to human health. Even though 450 people use the onsite drinking water well, it is not contaminated.

Threats to the environment have been reduced by closing down the lagoons and backfilling these to prevent soil exposure and further migration of the contaminants to the river. While aluminum has been detected in the river, sampling conducted thus far in the river has not shown levels of highly bioaccumulative or ecotoxic contaminants that are more than three times background.



Sprague Aluminum
(United Chemi-con and Old Lagoons)



SAMPLE LOCATION MAP
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

FIGURE 3

NUS CORPORATION

From: **"Geddes, Donald" <n1eg446@wsro.ehnr.state.nc.us>**
Organization: **WSRO DEHNR**
To: **"Jeanette Stanley" <n1ns302@wastenot.ehnr.state.nc.us>**
Date sent: **Fri, 6 Dec 1996 09:11:45 +1100**
Subject: **Re: United Chemi-con**
Priority: **normal**

Again, the lagoons were closed long before Groundwater Sec. became involved at the site and I don't know yet if the groundwater is impacted below them. For these answers you'll need to contact WSRO Water Quality Section (Steve Mauney=Supervisor; George Smith or Jim Johnston=responsible staff) or Delta Environmental Consultants (Steve Zbur=Manager@412/487-7700) or the responsible parties themselves. I assume, probably incorrectly, that if they were closed without comment by Water Quality and without them contacting us about a problem, there may not be any problem. I also assume that the RP's still own the lagoon property and they paid for the closures. As for funds, since we have a company who is paying for the other issues, I'd guess they'd have to pay to assess and cleanup any problems at the lagoons as well. Let me know if you find out differently. Sorry I couldn't help you on these issues.

<><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><>

Don Geddes
N.C.D.E.H.N.R
Division of Water Quality
Groundwater Section
585 Waughtown Street
Winston-Salem, NC 27107-2241

ph: 910/771-4608 ext 298
fax: 910/771-4632
e: geddes@wsro.ehnr.state.nc.us

From: "Geddes, Donald" <n1eg446@wsro.ehnr.state.nc.us>
Organization: WSRO DEHNR
To: STANLEYJS@WASTENOT.EHNR.STATE.NC.US
Date sent: Mon, 25 Nov 1996 10:19:35 +1100
Subject: United Chemi-Con
Copies to: "NROAR04/TS19V18"@wsro.ehnr.state.nc.us
Priority: normal

Jeanette,

As you can see, Sherri asked that I try to answer your questions about the United Chemi-Con site. I haven't worked on it in a while but I've pulled the file and will see what I can do to help you. My answers follow each of your questions below. Give me a call if you need any more help. My answers/comments are marked with **.

~~~~~~

From: "Knight, Sherri" <NROAR04/TS19V18>
Organization: WSRO DEHNR
To: NROAR04/N1EG446
Date: Thu, 21 Nov 1996 11:50:21 +1100
Subject: (Fwd) United Chemi-con

Don,

If you haven't worked on this site, let me know. If you have, please try to help this person out. Thanks, Sherri

------- Forwarded Message Follows -------
From: "Jeanette Stanley" <n1ns302@wastenot.ehnr.state.nc.us>
Organization: SOLID WASTE MGMT. To: Knight@wsro.ehnr.state.nc.us Date: Thu, 21 Nov 1996 11:52:32 +1100 Subject: United Chemi-con Priority: normal

I left a voice mail message for you a few minutes ago. Since our incoming phone lines are down, thought I'd try e-mail. The question I have relates to the placement of monitoring wells and groundwater contaminants related to the United Chemi-con (aka Sprague Aluminum or Sprague Electric) site.

1. Where are the monitoring wells? Are they just around the active facility or are there also monitoring wells around the old, recently closed lagoons?
~~~~~~

**There are 14 monitor wells at the site. 9 of them are near the northeast corner of the facility near the etch house, storage building, sand filters, sludge beds, sewage treatment, surface sludge and buried debris areas. One is on the northwest corner of the property near the facility supply well, one is near the northern edge of the building, one is near the transformer area on the southwest side of the building, one is across the road to the south, and one is on the southeast side near the boiler house. Several are within 100 feet of the lagoons, but none were installed specifically for the lagoons. You may want to contact the Water Quality Section (Jim Johnston, I think) here in Winston to see if they have any other lagoon info.

2. If so, Are there monitoring wells between the old lagoons and the stream? If so, what do they contain?

**There are none between the lagoons and the river. In a meeting we had with them on May 29, 1996, we asked that they at least take stream samples to see if anything is discharging into the New River near those areas.

3. You said in 1995 that there was a high level of aluminum in at least one well. Where is this well located? Were there any other contaminants?

**In November of 1995 wells ET-3 and MW-8 had aluminum detected at levels ranging from 6200 ug/L to 51000 ug/L. These wells are immediately downgradient from the etchant area. In 1995 they were only sampled for total/dissolved metals, but showed no other contamination in 1993 when analyzed for VOC's. In 1993, they also were above our action levels for barium, cadmium and chromium. In 1995, ET-3 had a pH of 3.63 and MW-8 had a pH of 4.04, compared to an average of ~6.0 around the site. The etchant area was a nitric acid bath pit used to dissolve metals from parts. Hence the low pH and high aluminum in groundwater below the leaking pits.

4. Is there an active or planned groundwater remediation program? If so, is it in connection with the United Chemi-con facility and/or the old lagoons?

**We have received only a Site Assessment Report (May, 1996) and no remedial/corrective action reports. They are continuing assessment before proceeding with a remediation program. We would only receive

information on the facility, but would probably request any assessment done on the lagoons.

5. Do you know where the nearest off-site private drinking water well is located? Does hydrogeology indicate that this well may become contaminated?

**In our May 29 meeting, we asked that an off-site domestic well survey be performed, but we have not yet seen the results. There will certainly be supply wells within our 1500 foot action radius, but will likely be on the opposite side of the New River. The site's groundwater appears to be discharging to the river, and the volume of the river suggests that any contaminants would rapidly become diluted. The river is therefore acting as a groundwater divide and SHOULD prevent contaminants from affecting wells on the other side. However, we are still interested in proof of this, as well as any wells on the same side of the river as the facility but upgradient from the known contamination.

I have contacted the Public Water Supply folks for the most recent info on the on-site drinking water well. Left a voice mail message with Wade McDonald a few minutes ago.

**When last I spoke with Chemi-Con's consultant, he stated that no VOC's were detected in the facility's well water. This conversation took place about two weeks ago and the sample had been taken just a couple of weeks before that.

The US EPA is still interested in this site. It's time for our annual revisitation of sites that we consider borderline sites for further federal action. This depends on the extent of contamination and cleanup thus far conducted on the site. While we don't want to use federal funds if the company and DEM are addressing site contamination, we also don't want to take the chance of overlooking a site. Thanks in advance for the info.

**While they are a bit behind in their assessments and development of a remedial action plan, I think they are continuing to move forward on it. It may benefit you to have a look at the info they've already sent in, since there are so many issues at the site.

<><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><>

Don Geddes ph: 910/771-4608 ext 298
N.C.D.E.H.N.R fax: 910/771-4632

Division of Water Quality
Groundwater Section
585 Waughtown Street
Winston-Salem, NC 27107-2241

e: geddes@wsro.ehnr.state.nc.us

Pat—
Your copy

FAX

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

585 Waughtown Street
Winston-Salem, N. C. 27107

TEL: (910) 771-4600

FAX: (910) 771-4631

FROM:

NAME: George Smith

DATE: 11-22-96 **# OF PAGES (including this page)** 2

TO:

NAME Jeanette Stanley

COMPANY

ADDRESS NC Superfund Section

FAX # 919-733-4811

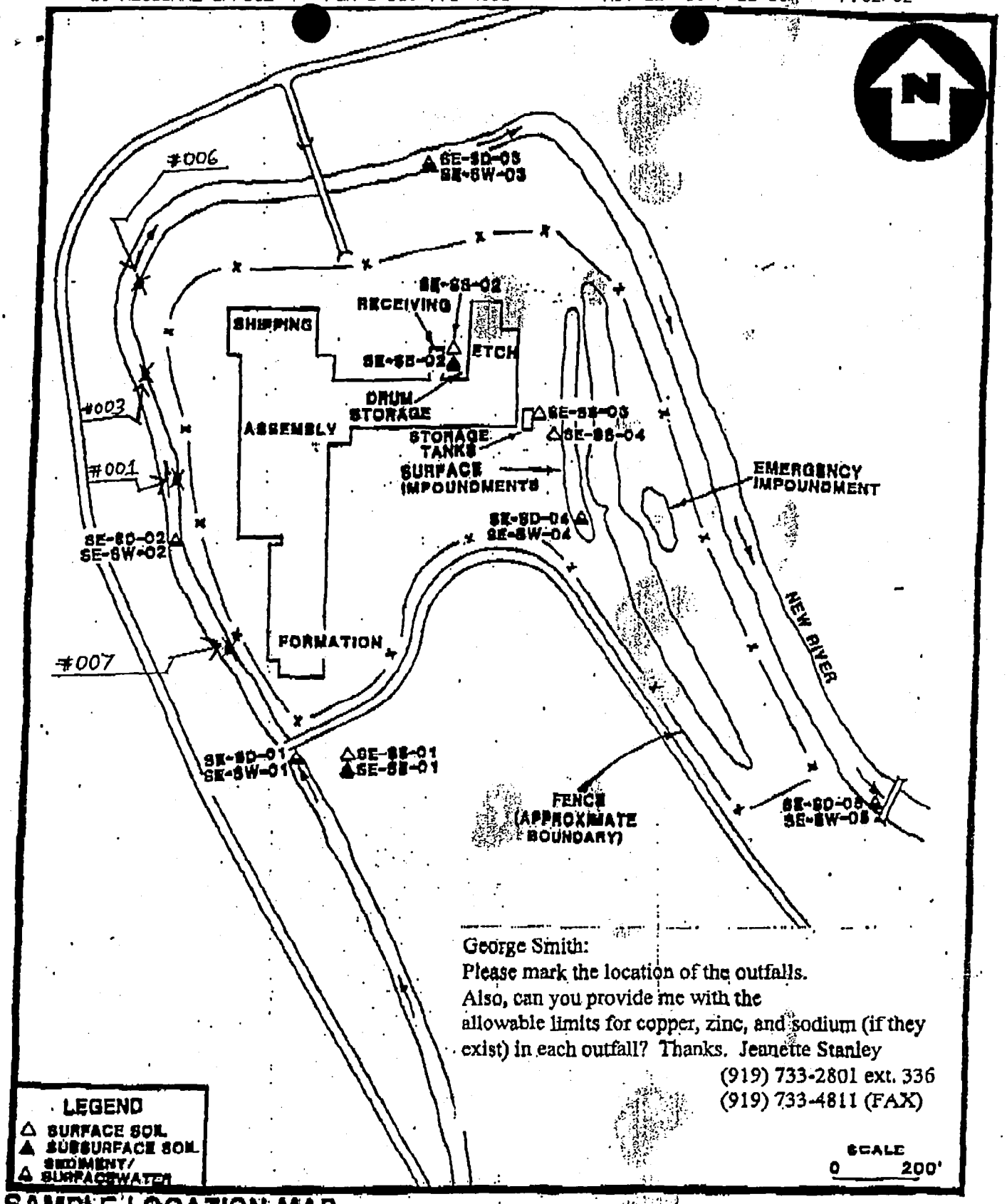
NOTE:

Per your request, approximate locations of the four outfalls at United Chem-Con into the New river.

There are not any limits for Zn, Cu, Na.

Any questions, please call.

George



George Smith:
Please mark the location of the outfalls.
Also, can you provide me with the allowable limits for copper, zinc, and sodium (if they exist) in each outfall? Thanks. Jeanette Stanley
(919) 733-2801 ext. 336
(919) 733-4811 (FAX)

SAMPLE LOCATION MAP
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

FIGURE 3

NUS CORPORATION

MEMO

DATE: November 22, 1996

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

Jeanette Stanley

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

On November 21, 1996, I spoke with Faith Abbot, Public Water Supply Section (919) 715-3217. I asked her about analytical results from the public water supply well located on the United Chemi-con property, PWS ID# 0105441. She tracks analytical results for all inorganics except lead and copper as well as radionuclides, trihalomethanes, nitrite/nitrate, asbestos and corrosivity. She said that nothing has been detected in this well. She forwarded my question to Siraj Chohan at (919) 715-3222.

He FAXED lead and copper results to me. These results show some low level hits of copper and lead, but nothing above drinking water or groundwater standards.

SA05
PROD

PUBLIC WATER SUPPLY SYSTEM
SUMMARY LIST OF ANALYSIS REPORTS
FOR PERIOD
LEAD AND COPPER

PWS ID 0105441 NAME UNITED CHEMI-CON TYPE P STATUS A
CONN 1 POP 450 SEASON / /

SEL	SPECIMEN NUMBER	LAB	DATE COMPLTED	DATE RECEIVED	DATE COLLECTD	MON	SMP	SIT	1ST	EP	LOC COD	UNS	Cu RESULTS 1022		Pb 1030
_	100244	37733	07/31/96	08/02/96	07/24/96	1	1	2	Y	N	A01		.018	L	.002
_	100245	37733	07/31/96	08/02/96	07/24/96	1	1	2	Y	N	A03		.005	L	.002
_	100246	37733	07/31/96	08/02/96	07/24/96	1	1	2	Y	N	A04		.032	L	.001
_	100247	37733	07/31/96	08/02/96	07/24/96	1	1	2	Y	N	A07		.063	L	.002
_	100248	37733	07/31/96	08/02/96	07/24/96	1	1	2	Y	N	A10		.089		.002
_	068138	37733	06/30/95	07/07/95	06/21/95	1	1	2	Y	N	A03		.034	L	.002
_	068139	37733	06/30/95	07/07/95	06/21/95	1	1	3	Y	N	A02		.087	L	.002
_	068140	37733	06/30/95	07/07/95	06/21/95	1	1	3	Y	N	A07		.078	L	.002
_	068141	37733	06/30/95	07/07/95	06/21/95	1	1	3	Y	N	A10		.016	L	.002
_	068142	37733	06/30/95	07/07/95	06/21/95	1	1	1	Y	N	A04		.159	L	.002
_	058824	37733	12/09/94	12/14/94	12/07/94	1	1	1	Y	N	A01		.102		.005

PF3=QUIT PF7=PREV SCREEN PF8=NEXT SCREEN PF12=MAIN MENU ENTER=PROCESS

Post-it™ Fax Note 7671	Date 11/22/96	# of pages ▶ 3
To Jeanette Stanley	From Sirag Chohan	
Co./Dept.	Co. DEH - PWSS	
Phone #	Phone # 715-3221	
Fax # 782-4811	Fax # 715-3242	

1022 - Cu
1030 - Pb

SA05
PROD

PUBLIC WATER SUPPLY SYSTEM
SUMMARY LIST OF ANALYSIS REPORTS
FOR PERIOD
LEAD AND COPPER

PWS ID 0105441 NAME UNITED CHEMI-CON TYPE P STATUS A
CONN 1 POP 450 SEASON / /

SEL	SPECIMEN NUMBER	LAB	DATE COMPLTED	DATE RECEIVED	DATE COLLECTD	MON	SMP	SIT	S1T	SEP	LOC COD	UNS	RESULTS 1022		RESULTS 1030
_	058825	37733	12/09/94	12/14/94	12/07/94	1	1	3	Y	N	A02		.119		.006
_	058826	37733	12/09/94	12/14/94	12/07/94	1	1	4	Y	N	A04		.184		.003
_	058827	37733	12/09/94	12/14/94	12/07/94	1	1	3	Y	N	A05		.105		.002
_	058828	37733	12/09/94	12/14/94	12/07/94	1	1	1	Y	N	A06		.125	L	.002
_	058829	37733	12/09/94	12/14/94	12/07/94	1	1	2	Y	N	A09		.193		.004
_	058830	37733	12/09/94	12/14/94	12/07/94	1	1	2	Y	N	A03		.018	L	.002
_	058831	37733	12/09/94	12/14/94	12/07/94	1	1	3	Y	N	A07		.047	L	.002
_	058832	37733	12/12/94	12/14/94	12/07/94	1	1	3	Y	N	A08		.031	L	.002
_	058833	37733	12/12/94	12/14/94	12/07/94	1	1	3	Y	N	A10		.038	L	.002
_	045305	37733	06/22/94	06/27/94	06/15/94	1	1	1	Y	N	A01		.019	L	.002
_	045306	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A02		.053	L	.002

PF3=QUIT PF7=PREV SCREEN PF8=NEXT SCREEN PF12=MAIN MENU ENTER=PROCESS

SA05
PROD

PUBLIC WATER SUPPLY SYSTEM
SUMMARY LIST OF ANALYSIS REPORTS
FOR PERIOD
LEAD AND COPPER

PWS ID 0105441 NAME UNITED CHEMI-CON TYPE P STATUS A
CONN 1 POP 450 SEASON / /

S E L	SPECIMEN NUMBER	LAB	DATE COMPLTED	DATE RECEIVED	DATE COLLECTD	MON	SMP	SITE	SEP	LOC COD	UNS	RESULTS 1022		1030
_	045307	37733	06/22/94	06/27/94	06/15/94	1	1	2	Y	N	A03	.014	L	.002
_	045308	37733	06/22/94	06/27/94	06/15/94	1	1	1	Y	N	A04	.043		.003
_	045309	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A05	.048	L	.002
_	045310	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A06	.032	L	.002
_	045311	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A07	.025	L	.002
_	045312	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A08	.048	L	.002
_	045313	37733	06/22/94	06/27/94	06/15/94	1	1	2	Y	N	A09	.030	L	.002
_	045314	37733	06/22/94	06/27/94	06/15/94	1	1	3	Y	N	A10	.013	L	.002

PF3=QUIT PF7=PREV SCREEN PF8=NEXT SCREEN PF12=MAIN MENU ENTER=PROCESS

MEMO

DATE: November 21, 1996

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

Jeanette Stanley

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I spoke with George Smith, Winston-Salem Regional Office today. He said that the lagoons have been closed out. The water was drained and the lagoons were filled in. The sludge was tested for chemical and characteristic hazardous waste parameters and it was determined that the sludges were not hazardous. The lagoons have been filled in. Mr. Smith's chief concern with the operating facility is the use of Dimethylformamide and they are phasing out the use of this chemical. The facility is currently placing wastewater into a waste holding tank and having it hauled off.

MEMO

DATE: December 27, 1995

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

SITE: Sprague Aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

On December 16, I spoke with George Smith, NC Division of Water Quality, Water Quality Section (910) 771-4600 about the pond property associated with the Sprague site. Since he is familiar with the property, I asked his professional opinion regarding any remaining environmental concerns about the ponds had not been addressed by draining the ponds, sampling the sediment and backfilling them. He said that he felt fairly confident about the cleanup. Mr. Smith said that the ponds did not discharge to the river, they were "evaporation" ponds and that the ponds did have an aerator at one time. He has some remaining concerns about the dimethylformamide (DMF) that was used by the facility, discharged by the facility to the river at one time and probably discharged to the ponds at an earlier date. Mr. Smith said that DMF is a toxic chemical.

I looked up the properties of DMF. It is toxic by skin absorption and is a strong irritant to skin and tissue. It is a moderate fire risk. It is miscible with water but not with chlorinated solvents. It is less dense than water. DMF is not listed in the Superfund Chemical Data Matrix. There is no groundwater or drinking water standard for DMF. Due to these properties and facts, it is my opinion that even if DMF was indeed discharged to the ponds, some was lost during aeration. Due to the properties of the chemical, it would not sink below the pond water and concentrate in the groundwater but would remain in solution.

Mr. Smith said that there is a small area on the pond property that appears to be wetlands, but he is not sure. He said he has been on the river down to a mile below the facility and he has not noted any areas that appear to be wetlands. The river banks are either cow pastures or steep slopes. He has conducted a macroinvertebrate study along the river and he said that the river is very healthy. He did not know of there ever being a fish kill along the river. He also said that the pond property is surrounded by a 6' high chain link fence. He is not sure if it is totally inaccessible, but it is overgrown and unattractive for any recreational use.

I asked him about who owns the property and if there were any funds available to pay for additional clean up if any was required. He said that the Sprague company has sold most of its assets and had paid for draining and backfilling the ponds but he did not believe there were additional funds available.

File

MEMO

DATE: July 7, 1995

TO: File

FROM: Jeanette Stanley
Environmental Chemist
NC Superfund Section

Jeanette Stanley

SITE: Sprague ~~Electric~~ aluminum Company
NCD 003 167 780
Lansing, Ashe County, NC

I spoke with several people in the Winston-Salem regional office of NC DEM (910) 771-4600. In the Water Quality Section, I spoke with Steve Mauney, supervisor of Water Quality Section and Jim Johnston, Environmental Chemist. Mr. Johnston has worked with the regional office for about 10 years and provided the following information on the Sprague facility:

- The lagoons are no longer in use and are waiting to be closed down. Past leachate problems with the lagoons caused pH problems and high aluminum in the river. The lagoons were drained several years ago. Rainwater may have filled the lagoons again . The current status of the lagoons is not known. Mr. Johnston has not visited the property for about two years.

- There were a number of computer-generated Notices of Violations for NPDES violations served to the facility in the past. These violations were a permitting error on the part of NC DEM as limits were too low and unattainable. Violations were for Total Suspended Solids and Oil and Grease. Once permit limits were raised to attainable levels, there were no more violations.

- A Japanese firm has purchased the plant and is now operating it. They did not purchase the lagoon portion of the property. The facility quit etching operations three to five years ago. They now purchase etched material.

I spoke with Mr. Lee Spencer, Regional Engineer in the Public Water Supply Section. He said that the company name is now United Chemi-con. The contact point is Mr. Lesley D. Hovermale, 185 McNeil Rd., Lansing, NC 28643. Mr. Spencer said that the onsite well is 900' deep and **is** used for drinking water for the workers. The system ID # is 01-05-441. There are 450 workers using this well. All tests have been in compliance with drinking water standards. One recent test was elevated in fecal coliform, but four subsequent tests have passed. A recent application was submitted by the plant for a waiver for PCBs and pesticides and testing results allowed the facility to go to a less frequent testing schedule.

My call was then transferred to Ms. Sherri Knight, the Regional Groundwater Supervisor. I asked her if there were any on-site monitoring wells. She indicated that there were several and that there had definitely been a release of contamination to groundwater. Aluminum was very elevated in at least one monitoring well. Barium and chromium were above the 2L standards, but close to background levels. The filtered/unfiltered issue was being discussed in connection with this round of testing and she was unsure at this time if there was indeed an observed release of chromium to the groundwater. She said that there were several underground storage tanks (she thinks four) recently pulled on the site. She should have more information on the results in the near future. She said that the facility is cooperating and seems willing to clean up the site. The contact with the tank pulls has been Martha Waller with Parker, Poe, the legal counsel for the facility.

I called Mr. Paul Clark at Public Water Supply (919) 715-3217 and he FAXed the results of the most recent inorganic test results on the onsite drinking water well. These are attached.

ááááááááááááááááááááááááááááááááááMacSoft VT #1ááááááááááááááááááááááááááááááááááá

PROGRAM-W30RET01 INORGANIC CHEMICAL ANALYSIS FILE-W30HF001

PUBLIC WATER SYSTEM

Water System ID Number 0105441 LAB ID 37733 HYRDO ANALYTICAL LABORATORIES

Name of System UNITED CHEMI-CON

Type of Sample E (Regular=D; Check=C; Special-S)

Collected on: Date: 122194 Time: 0950 AM (AM/PM) Location Code: 375

CONTAM	NAME	METHOD	RESULTS	CONTAM	NAME	METHOD	RESULTS
1005	ARSENIC	000	0.0000 **	1045	SELENIUM	000	
1010	BARIUM	000	0.0000 **	1050	SILVER	000	
1015	CADMIUM	000	0.0000 **	1052	SODIUM	000	
1020	CHROMIUM	000	0.0000 **	1055	SULFATE	000	
1024	CYANIDE	000	0.0000 **	1074	ANTIMONY	000	
1025	FLUORIDE	000	0.0000 **	1075	BERYLLIUM	000	
1028	IRON	000	0.0000 **	1085	THALLIUM	000	
1030	LEAD	000	0.0000 **	1925	PH	000	
1032	MANGANESE	000	0.0000 **	0000		000	
1035	MERCURY	000	0.0000 **	0000		000	
1036	NICKEL	000	0.0000 **	0000		000	
1040	NITRATE	109	0.1300 **	0000		000	
1041	NITRITE	109 <	0.0100 **	0000		000	

Date Received 010695 Date Reported 122994 Date Analyzed 122894

Laboratory Number 021837 Reported By W30 Comment FORMATION/L.D.A.

PRESS ENTER FOR NEXT RECORD; PF13 FOR UNSAT REASON 2;
PF14 FOR UNSAT REASON3; OR PRESS PF16 TO EXIT

Jeanette Stanley, 7/7/95

There is no record of inorganic monitoring for this system. This is a non-transient non-community water. They have until the end of 1995 to conduct inorganic monitoring.

Paul

TO: J. Stanley
FAX: 733-4811
FROM: P. CLARK
FAX: 715-2047

PS: Nitrate monitoring is separate from inorganic

HUNTON & WILLIAMS
P. O. BOX 109
RALEIGH, NORTH CAROLINA 27602
TELEPHONE (919) 899-3000
FACSIMILE (919) 833-6352
(919) 899-3096

ATLANTA, GEORGIA
BRUSSELS, BELGIUM
FAIRFAX, VIRGINIA
HONG KONG
KNOXVILLE, TENNESSEE

NEW YORK, NEW YORK
NORFOLK, VIRGINIA
RICHMOND, VIRGINIA
WARSAW, POLAND
WASHINGTON, D. C.

RECEIVED
MAY 22 1995
SUPERFUND SECTION

Ethan S. Naftalin

Client/Matter No.: 46984.2
Direct Dial: (919) 899-3090
Internet: enaftalin@hunton.com

May 19, 1995

Mr. William L. Meyer
Director
Division of Solid Waste Management
Post Office Box 27687
Raleigh, North Carolina 27611-7687

Re: United Chemi-Con Manufacturing Facility
Lansing, Ashe County, North Carolina

Dear Mr. Meyer:

I represent American Annuity Group (AAG), the corporate successor to Sprague Electric Company and SPELCO. Through these predecessors AAG owned and operated the above-referenced facility from 1954 through August 31, 1992, at which time AAG sold the facility to United Chemi-Con Manufacturing, Inc. (UCCM). AAG and UCCM are working cooperatively to address certain environmental concerns at the facility, including groundwater contaminants which slightly exceed the applicable State groundwater standards.

I enclose herewith a copy of the letter and enclosures I sent on December 16, 1994 to Ms. Sherri Knight of the Division of Environmental Management's Winston-Salem Regional Office (DEM/WSRO).

AAG continues to investigate (and, if necessary, will remediate) the site conditions under DEM/WSRO's supervision. Although AAG and UCCM expect to move forward with DEM/WSRO, AAG tenders this letter to comply with any reporting obligations pertaining to DSWM.

T:\ESN\02-ENVIR\FILES\AAG\950519.008

Please contact me if you have any questions concerning the foregoing or the enclosed.

Best regards,

Ethan Naftalin

Ethan S. Naftalin

Enclosures

cc: Craig A. Bromby (w/o enc.)
Charles D. Case (w/o enc.)
Thomas N. Griffin, III (w/o enc.)
John P. Gruber (w/o enc.)
Ms. Sherri Knight (w/o enc.)
Ms. Marty Waller (w/o enc.)
Stephen A. Zbur (w/o enc.)

RECEIVED
JUL 28 1995
SUPERFUND SECTION

AMERICAN ANNUITY GROUP, INC.
250 EAST FIFTH STREET
CINCINNATI, OH 45202
(513)-333-5300
MAILING ADDRESS:
P.O. BOX 120
CINCINNATI, OH 45201

February 23, 1995

Mr. Wm. Jeff Miller
County Manager - County of Ashe
P.O. Box 633
Jefferson, NC 28640

Dear Mr. Miller:

Pursuant to our telephone conversation on February 17, 1995, I am writing to confirm our agreement in principal with regard to the approximately 14 acre parcel located in Lansing, North Carolina (the "Property"). American Annuity Group, Inc. ("AAG") will sell the Property to the County of Ashe ("Purchaser") subject to the terms set forth below.

1. Purchase Price. The purchase price will be $1,000 per acre for the actual acreage contained in the Property as surveyed.

2. Survey. AAG, at Purchaser's expense, will deliver to Purchaser a survey of the property.

3. Lagoon Closure. AAG will complete whatever reasonable activities that are necessary to close the lagoons. Purchaser will assist AAG with lagoon closure activities by stockpiling soils generated during the construction of the manned dumpster site for use by AAG as backfill.

Enclosed is a memorandum from Delta Environmental Consultants, Inc. that summarizes the results of site investigation activities completed at the Property. Closure activities are expected to include removing residual surface water and backfilling the lagoons with native soil.

The transaction contemplated by this letter is expressly subject to and conditioned upon the execution of a definitive purchase contract by both parties. Unless I hear from you otherwise, I will prepare a draft purchase contract for your review.

I look forward to working with you to finalize this transaction.

Sincerely yours,

John P. Gruber
Director of Properties

JPG/jls
encls.
cc: Mark F. Muething, Esq.

MEMO

To: John Gruber

From: Steve Zou
Johnnie Ho

Date: February 23, 1995

Subject: Results of Preliminary Sampling and Closure Recommendations
Off-Site Ponds
Lansing, North Carolina

Delta No: E194-001-1.0015

The purpose of this memo is to summarize the results of the preliminary sampling performed by Laidlaw Environmental Services (Laidlaw) and Brown & Root (B&R) Environmental. Recommendations regarding the pond backfilling, surface water disposal, regulatory interactions and a preliminary closure schedule are also discussed.

ANALYTICAL RESULTS

AAG (formerly SPELCO) retained Laidlaw to perform surface water, soil and sludge sampling and subsequent analysis of material present in the settling ponds. The sampling was performed in June and July 1992. Figure 1 illustrates the sample locations with respect to each pond.

Eleven samples were initially obtained by Laidlaw in June 1992. Six of the eleven samples were collected from sludge present on the bottom of each pond identified as samples SEC-2 through SEC-7 (Table 1). Six soil samples were collected from the bank of each pond above the water line identified as samples SEC-2A through SEC-6A (Table 1). Each sample was analyzed for the priority pollutants to include metals, volatiles and base neutrals (semi-volatiles).

Three surface water samples (SEC-20-23) were obtained by Laidlaw from the ponds in July 1992. The location of the surface water samples as illustrated in Figure 1 is based on information obtained during a telephone conversation with Mr. Swaine Skeen (former Laidlaw employee that performed the sampling). The surface water samples were also analyzed for the priority pollutants as summarized in Table 2.

Two additional samples were obtained by Laidlaw in July 1992 and analyzed to determine if liquids and/or sludge and soil within the ponds display the characteristics of hazardous waste (ignitable, corrosive, reactive, toxic). The analytical results are summarized in Table 3. Mr. Swaine Skeen was not able to recall the location of each sample.

Review of Tables 1 through 3 indicates that no volatile organic compounds were reported at levels greater than the method detection limit (toluene was reported at the detection limit of 5 micrograms per liter or parts per billion in sample SEC-21). All of the base neutrals (semi-volatiles) were reported below the method detection limit in all samples.

Numerous metals were reported above the detection limit and/or the average background concentrations of the soil samples that were collected by Delta for the preliminary site assessment in January 1993. Review of Table 1 indicates low levels of mercury in all of the sludge and soil samples. Mercury was not reported in the background samples. The remaining RCRA metals (arsenic, barium, cadmium, chromium, lead, selenium and silver) were not reported above the average background concentrations. Several other metals such as boron, copper, nickel, and vanadium were present in each of the sludge and soil samples. It is unknown if these concentrations can be attributed to background conditions.

Review of the surface water samples (Table 2) indicates the presence of numerous metals, none of which exceeded the TC regulatory level as described in Table 3. The pH values ranged between 3.52 and 7.21. All of these values are within the TC regulatory level of >2.1 or <12.4. Based on the data provided by Laidlaw, none of the material displays characteristics of hazardous waste.

POND BACKFILLING

Based on the analytical data provided by Laidlaw, the sludge does not display characteristics of a hazardous waste; therefore, the removal or in-place treatment of sludge does not appear to be required by applicable regulations. Delta recommends that the ponds be backfilled. This option would include removing the residual surface water (dewatering) and backfilling the ponds with native soil.

SURFACE WATER DISPOSAL TREATMENT OPTION

A grab sample from each lagoon was collected by B&R in August 1993 and composited for analysis by Environmental Testing and Consulting, Inc. Review of the composite water sample (Table 5) results indicate very low biological activity and total suspended solids in the wastewater. The chemical oxygen demand level indicates the presence of inorganics. None of the metal levels exceeded the TC regulatory level. The pH value is also within the TC regulatory level.

The report from Mr. Swaine Skeen indicates that most of the lagoons were dry in July 1993. Assuming that the surface water disposal is carried out during the same season in 1995 and an average water depth of 3 ft. in each pond, we estimate a surface water volume of 2.2 million gallons (96,300 $ft.^2$ × 3 ft. = 288,900 $ft.^3$ × 7.48 $gal/ft.^3$). Delta recommends the surface water be discharged to the New River through transfer of UCCMs permitted outfall No. 005.

REGULATORY INTERACTION

Discussions have occurred with the staff of the North Carolina Division of Environmental Management (DEM) regarding the drainage and closure of the ponds. The NPDES Permit staff has indicated that the ponds will be able to be drained using an outfall from the NPDES permit formerly held by SPELCO. The Non-discharge Permit staff has indicated that following drainage, the ponds can be closed with no further approval or permits. The sludge material in the ponds has been appropriately tested and shown not to be a hazardous waste. Indications received from DEM staff are that no formal closure plan will be required for the drained ponds.

Notwithstanding the indications and discussions above, AAG could elect to prepare a formal closure plan for submittal to DEM Groundwater Section and request a response to the plan. Alternatively, AAG could proceed with closure and notify DEM upon completion of project milestones and completion of closure.

CLOSURE SCHEDULE

The proposed closure schedule is summarized below:

Task	Completed By
Reconfirm Contractors' Bid	April 14, 1995
Bid Evaluation, Recommendation to AAG	April 28, 1995
Stormwater Permit Submittal	May 1, 1995
Preconstruction Meeting	June 1, 1995
Pond Water Removal	June 15, 1995
Construction (Backfilling/Landscaping)	July 31, 1995

TABLE 1
SLUDGE & SOIL SAMPLES
TOTAL ANALYSES
OFF-SITE PONDS
JUNE 1992
LAIDLAW ENVIRONMENTAL SERVICES, INC.
DELTA PROJECT NO. 50-91-105.15

	SLUDGE SAMPLES						SOIL SAMPLES					
ANALYTE	SEC-2	SEC-3	SEC-4	SEC-5	SEC-6	SEC-7	SEC-2A	SEC-3A	SEC-4A	SEC-5A	SEC-6A	BACKGROUND
pH	4.68	6.41	7.03	7.21	5.53	3.97	4.51	4.94	5.47	5.48	4.91	NA
PRIORITY POLLUTANTS (mg/kg)												
METALS												
ANTIMONY	<0.01	0.66	0.82	0.26	0.48	<0.01	0.56	4.78	<0.01	<0.01	0.35	NA
ARSENIC	0.08	<0.01	<0.01	0.14	1.82	0.44	<0.01	1.20	<0.01	<0.01	<0.01	<1.3
BERYLLIUM	0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
BARIUM	2.10	18.18	55.38	87.56	10.18	13.40	16.34	103.16	102.00	24.64	101.32	210
BORON	602.36	462.18	<0.01	37.88	201.94	69.24	441.50	123.64	19.10	32.56	105.42	NA
CADMIUM	<0.005	<0.005	0.42	1.36	<0.005	<0.005	0.22	0.64	1.52	0.90	0.96	2.2
CHROMIUM	5.82	6.16	9.00	33.42	3.46	6.56	11.66	20.56	25.80	29.10	23.02	80
COPPER	22.18	47.26	12.76	30.32	52.02	10.78	17.34	73.06	27.12	27.00	50.44	NA
LEAD	0.36	<0.01	4.68	3.94	<0.01	<0.01	<0.01	<0.01	4.42	3.74	3.42	7.5
MANGANESE	11.46	29.86	36.88	82.82	7.22	44.46	83.60	73.94	217.78	191.70	120.96	NA
MERCURY	0.008	0.01	0.04	0.07	0.008	0.006	0.01	0.005	0.02	0.008	0.009	<0.065
NICKEL	2.22	1.86	1.80	3.80	34.80	1.70	4.10	6.32	6.56	5.48	6.76	NA
SELENIUM	2.36	0.14	1.32	<0.01	0.98	<0.01	0.90	0.48	<0.01	<0.01	<0.01	<1.3
SILVER	0.01	0.46	0.52	1.54	0.40	0.30	0.28	0.72	0.48	0.14	0.42	<2.6
THALLIUM	2.18	2.82	2.64	2.44	1.58	2.54	4.74	0.32	2.18	0.74	<0.05	NA
VANADIUM	6.48	10.04	17.76	31.28	4.34	6.34	12.36	24.98	37.14	26.18	33.40	NA
ZINC	12.28	5.80	5.44	13.46	7.36	10.62	14.88	27.44	21.30	20.78	24.28	NA

VOLATILES
ALL VOLATILE CONSTITUENTS WERE REPORTED BELOW THE METHOD DETECTION LIMIT.

BASE NEUTRALS (SEMI-VOLATILES)
ALL BASE NEUTRAL CONSTITUENTS WERE REPORTED BELOW THE METHOD DETECTION LIMIT.

NA = NOT ANALYZED
SLUDGE SAMPLES SEC-2 THROUGH SEC- 7 WERE OBTAINED FROM THE LAGOONS THAT CORRESPOND WITH SOIL SAMPLES SEC- 2A THROUGH SEC- 6A.

TABLE 2
SURFACE WATER SAMPLES
TOTAL ANALYSES
OFF-SITE PONDS
JULY 1992
LAIDLAW ENVIRONMENTAL SERVICES, INC.
DELTA PROJECT NO. 50-92-105.15

ANALYTE	SEC-20	SEC-21	SEC-22
pH	5.64	4.43	7.13
PRIORITY POLLUTANTS (mg/l)			
METALS			
ANTIMONY	0.04	<0.01	<0.01
ARSENIC	0.03	0.07	0.03
BERYLLIUM	<0.01	<0.01	<0.01
BARIUM	0.02	0.04	0.01
BORON	98.60	7.30	22.24
CADMIUM	<0.005	<0.005	<0.005
CHROMIUM	0.03	0.02	0.01
COPPER	0.02	0.02	0.03
LEAD	<0.01	<0.01	<0.01
MANGANESE	0.15	0.81	0.06
MERCURY	0.007	<0.002	0.00
NICKEL	0.04	0.01	0.03
SELENIUM	0.08	<0.01	<0.01
SILVER	0.01	<0.01	<0.01
THALLIUM	<0.01	<0.01	<0.01
VANADIUM	<0.01	<0.01	<0.01
ZINC	0.37	0.08	0.05
VOLATILES			
TOLUENE	<0.005	0.005	<0.005

ALL OTHER VOLATILE CONSTITUENTS WERE REPORTED BELOW THE METHOD DETECTION LIMIT.

BASE NEUTRALS (SEMI-VOLATILES)
ALL BASE NEUTRAL CONSTITUENTS WERE REPORTED BELOW THE METHOD DETECTION LIMIT.

TABLE 3
OFF-SITE PONDS
TCLP
JULY 1992
LAIDLAW ENVIRONMENTAL SERVICES, INC.
DELTA PROJECT NO. 50-92-105.15

	LIQUID F-5393 thru F-5395	SLUDGE/SOIL F-4421 thru F-4432	TC REGULATORY LEVEL
pH	6.04	3.32	< 2.1 OR > 12.4
METALS (mg/L)			
ALUMINUM	0.17	26.87	NL
ARSENIC	0.02	< 0.01	5.0
BARIUM	< 0.01	< 0.01	100.0
CADMIUM	< 0.005	0.006	1.0
CHROMIUM	< 0.01	< 0.01	5.0
COPPER	< 0.01	< 0.01	NL
LEAD	< 0.01	< 0.01	5.0
MERCURY	0.003	0.005	0.2
NICKEL	< 0.01	< 0.01	NL
SELENIUM	0.01	0.03	1.0
SILVER	< 0.01	< 0.01	5.0
THALLIUM	< 0.06	< 0.06	NL
ZINC	0.01	0.05	NL

VOLATILES

ALL VOLATILE COMPOUNDS WERE REPORTED BELOW THE METHOD DETECTION LIMIT AND THE TC REGULATORY LEVEL.

BASE NEUTRALS (SEMI-VOLATILES)

ALL BNA COMPOUNDS WERE REPORTED BELOW THE METHOD DETECTION LIMIT AND THE TC REGULATORY LEVEL.

ADDITIONAL COMPOUNDS

CORROSIVITY, REACTIVITY AND FLASH POINT VALUES ARE WITHIN THE ACCEPTABLE TC REGULATORY LEVEL.

NL = NO REGULATORY LIMIT PER 40 CFR, PART 261.

TABLE 4
ESTIMATED SLUDGE VOLUMES
OFF-SITE PONDS
DELTA PROJECT NO. 50-92-105.15
AUGUST 1993

POND	APPROXIMATE AREA (FT^2)	AVERAGE SLUDGE THICKNESS (FT.)	APPROXIMATE SLUDGE VOLUME (YDS^3)
1	2,200	3.3	269
2	26,600	1.9	1,872
3	7,200	2.3	613
4	13,200	5.3	2,591
5	19,600	6.8	3,929
6	13,500	1.0	500
7	18,000	1.0	667
TOTALS:	96,300 (FT^2) OR 2.2 ACRES		10,441 (YDS.^3) OR 15,661 TONS

NOTES:

DATA BASED ON INFORMATION PROVIDED BY BROWN & ROOT ENVIRONMENTAL
A CONVERSION FACTOR OF 1.5 WAS USED TO OBTAIN APPROXIMATE TONNAGE

TABLE 5
SURFACE WATER SAMPLE
TOTAL ANALYSES
OFF-SITE PONDS
AUGUST 1993
BROWN & ROOT
DELTA PROJECT NO. 50-92-105.15

ANALYTE	RESULT
METALS (MG/L)	
ALUMINUM	2.41
ARSENIC	<0.002
BARIUM	<0.05
CADMIUM	<0.002
CHROMIUM	<0.02
LEAD	<0.05
MERCURY	<0.001
SELENIUM	<0.002
SILVER	<0.01
INDICATOR PARAMETERS	
pH	6.6
BIOCHEMICAL OXYGEN DEMAND	21
TOTAL SUSPENDED SOLIDS	36
CHEMICAL OXYGEN DEMAND	114
DISSOLVED OXYGEN	10.5

VOLATILES

ALL VOLATILE CONSTITUENTS WERE REPORTED BELOW THE METHOD DETECTION LIMIT.

CHAIN OF CUSTODY RECORD

Environmental Testing & Consulting, Inc.
2924 Walnut Grove Rd.
Memphis, TN 38111
(901)327-2750 fax (901)327-6334

CLIENT NAME: BROWN & ROOT ENVIRONMENTAL

SITE: DELTA/SPECO CARSON, NC.

PROJECT #:

SAMPLED (sign): Robert L. Knight

PHONE #: 615/483-9900
FAX #: 615/483-2014
FID#:
PO #: WILL CALL

FAX RESULTS:
RUSH:
REG. TURN.:
ICE:

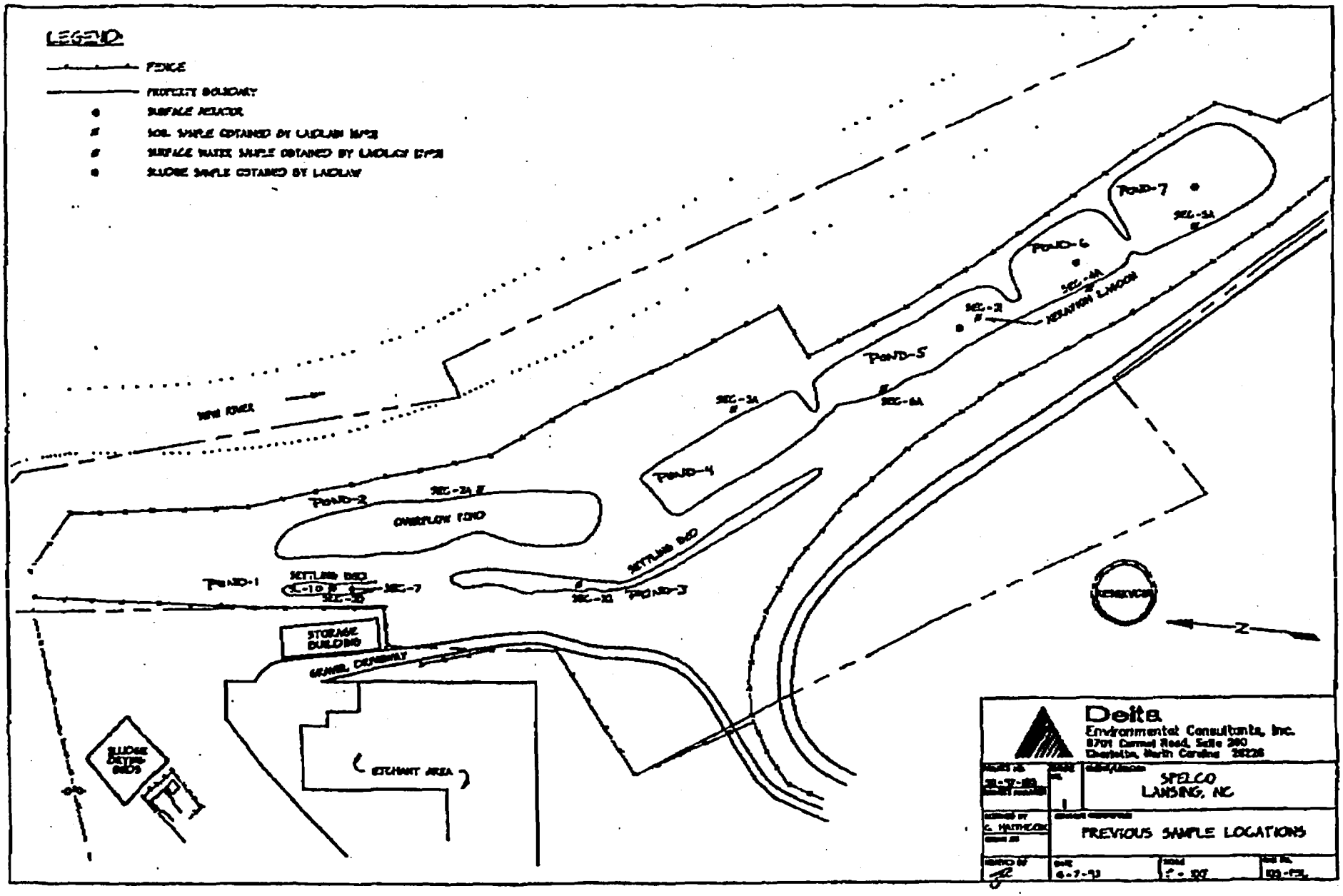
REMARKS: COMPOSITE 2 VOA CONTAINERS from EACH LOCATION + ANALYSE for VOC'S. RUN VOC'S on EACH LOCATION from REMAINING CONTAINERS (2 EACH LOCATION)

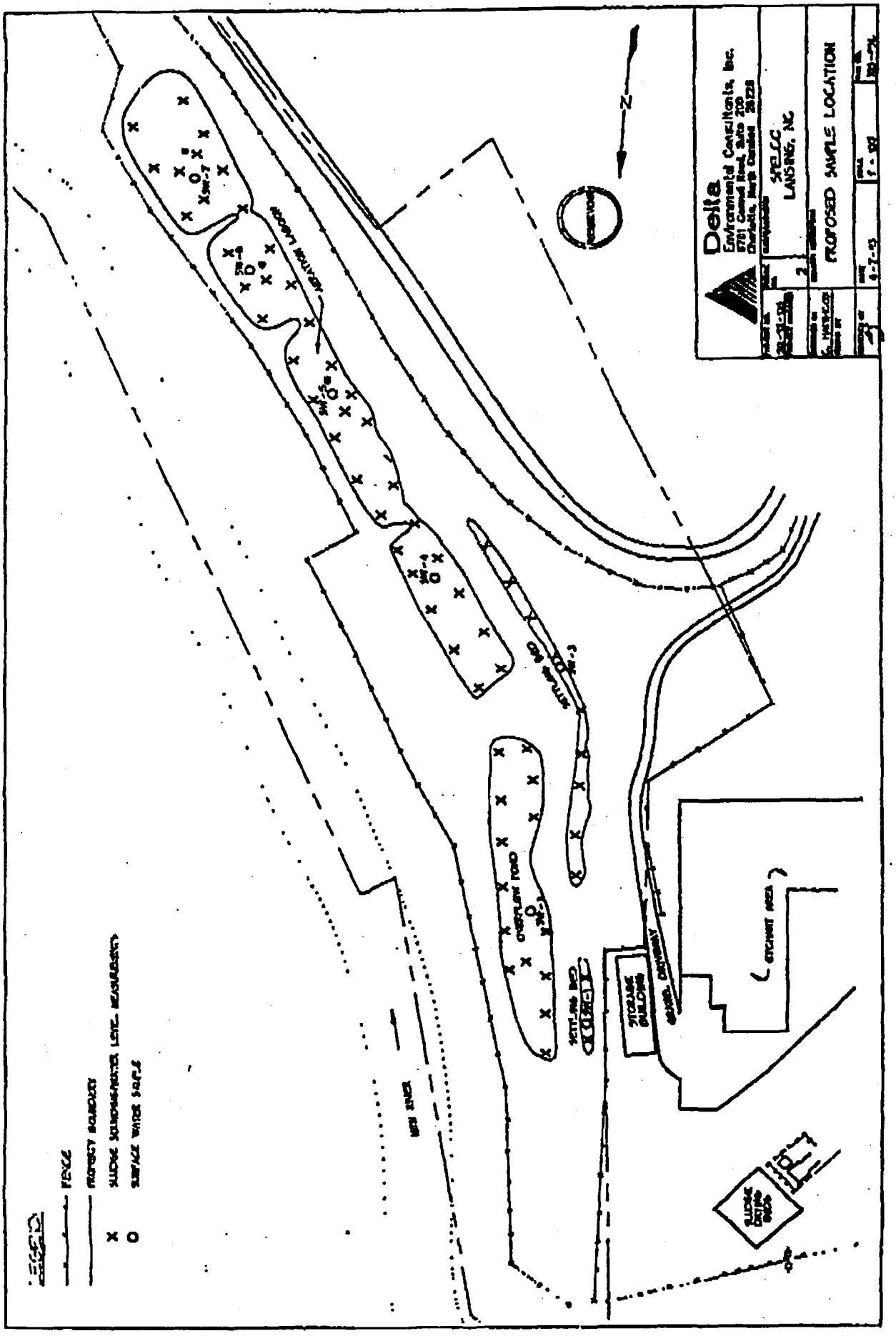
ANALYSES (LIST BELOW)

# of cont.	SAMPLE ID NUMBER	LOCATION/ DEPTH	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	MATRIX WATER	MATRIX SOIL	MATRIX OTHER	VOC (Solid Bed)	TPH 8+A	BOD/TSS/pH	COD	DO			
8	#7	POND #7/SURFACE	12Aug93	1142		X	X			X	X	X	X	X			
8	#6	POND #6/SURFACE	12Aug93	1157		X	X			X	X	X	X	X			
8	#2	POND #2/surface	12Aug93	1300		X	X			X	X	X	X	X			

Dan Davison
Don Brown 8/13/93 have to
1. run VOC'S separately and on composite
2. combine rest of samples into one
unit and run analysis
Steve Kane 8/13/93

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY (sign):	12Aug93	1400	RECEIVED BY (sign): Fed ex Airbill # 9936597535		
2. RELINQUISHED BY (sign):			RECEIVED BY (sign):		
3. RELINQUISHED BY (print):			RECEIVED BY LAB (print): S. HERRMANN	8/13/93	0954
(sign):			(sign): S. Herrmann		


LEGEND
FENCE
PROPERTY BOUNDARY
SURFACE AERATOR
SOIL SAMPLE OBTAINED BY LAIDLAW
SURFACE WATER SAMPLE OBTAINED BY LAIDLAW
SLUDGE SAMPLE OBTAINED BY LAIDLAW
NEW RIVER
POND-1
POND-2
POND-3
POND-4
POND-5
POND-6
POND-7
OVERFLOW POND
SETTLING BIO
SEC-2A
SEC-3A
SEC-4A
SEC-6A
SEC-7
SEC-10
SEC-11
SEC-12
STORAGE BUILDING
GENERAL DRAINAGE
SLUDGE DRYING BEDS
ETCHANT AREA
N
Delta
Environmental Consultants, Inc.
8701 Carmel Road, Suite 200
Charlotte, North Carolina 28226
SPELCO
LANSING, NC
PREVIOUS SAMPLE LOCATIONS
C. HATHCOCK
6-7-93


Delta
Environmental Consultants, Inc.
SPELCO
LANSING, NC
PROPOSED SAMPLE LOCATION
N
FENCE
PROPERTY BOUNDARY
SLUDGE SUBMERGED LINE MEASUREMENT
SURFACE WATER SAMPLE
ASHTON LAGOON
OXIDATION POND
OXIDATION POND
SETTLING POND
STORAGE BUILDING
GRAVEL DRIVEWAY
EXCAVATED AREA
SLUDGE DRYING BEDS

AUG 25 1993

Brown & Root Environmental

800 Oak Ridge Turnpike, A-600
Oak Ridge, TN 37830

93-A648

August 18, 1993

Mr. Steve Zbur
Senior Project Manager
Delta Environmental Consultants, Inc.
6701 Carmel Road
Suite 200
Charlotte, North Carolina 28226-3901

Subject: Final Report
Delta Project No. 50-92-105.15
Brown & Root Project No. NG60
Preliminary Environmental Sampling
Speico Facility
Lansing, North Carolina

Dear Steve:

Brown & Root Environmental appreciates the opportunity to work with Delta Environmental Consultants on the above referenced project.

This report contains a description of the activities and the methods used to complete the scope of work. In addition, the results of the sludge soundings and water depth measurements are included. We have forwarded this part of the final report before the lab results are available so that Delta can proceed with the volume calculations and closure plans. The lab report will be provided as soon as possible.

Brown & Root Environmental looks forward to working with Delta Environmental Consultants on the closure of the lagoons located at the Lansing, NC facility. If you have any questions about this report or any of the information it contains, please feel free to call either myself or Dan Bowser at our Oak Ridge, Tennessee office at (615) 483-9900.

Sincerely,

Daniel A. Bowser for:
Swaine Skeen
Project Manager

SS:ymh

cc: Mr. Daniel A. Bowser
File NG60/db

On August 11, 1993, Brown & Root Environmental (B&RE) entered into a subcontract with Delta Environmental Consultants, Inc. (Delta). This contract detailed the collection of water samples and depth soundings of bottom sediments (sludge) contained in a lagoon located at the United Chemi-Con Manufacturing facility in Lansing, North Carolina. This lagoon had been used by Sprague Electric Company for approximately forty years as a settling pond to store and reclaim aluminum oxide sludge generated by their plant processes.

The scope of work contained in the above referenced contract included the following:

- Mobilization of a two man crew and equipment;
- Collection of grab samples from each lagoon and submit them to an approved lab for analysis as detailed in Delta's RFP;
- Perform sludge soundings and water level measurements;
- Prepare and submit to Delta a final report including the results of the lab analysis and the sludge soundings.

B&RE representatives mobilized on August 12, 1993. Upon arrival at the site, it was discovered that only three of the lagoons (nos. 2, 6 & 7) contained water. These lagoons were sampled based on methods contained in the EPA's Compendium of Superfund Field Operations Methods. The water samples were collected from a boat at sample points designated by Delta . The samples were packaged as per lab and B&RE protocol, preserved at approximately 4°C. and forwarded to the lab for analysis. The water contained in lagoons 2 and 6 was observed to be a bright green color while water from number 7 was dark brown. The water depth measurements are shown in Table I. Please note that the entries for lagoon number 2 indicate an absence of water. While there was a small volume of water present in the lagoon, none of the designated sample points fell within the pool. The water in this lagoon measured <= six inches and covered an area of approximately 10' x 25'.

The sludge soundings and water depth measurements were performed by using clear pvc pipe to collect an undisturbed sample of the bottom sludge. The clear pvc tube was advanced into the clay liner of the lagoons to a depth of approximately six inches. This formed a clay plug in the tube, trapping the sludge sample above it and allowing retrieval of the sample. The sludge depth was then determined by direct measurement of the sample. The water level was measured by marking the top of the water surface level and measuring down to the top of the sludge sample. At the same time, the samples were visually examined for stratification. It was noted that in several locations in the upper lagoons (#'s 1,2,3,4&5) there appeared to exist a 3"-5" layer of silty clay. The sludge contained in the lower two lagoons, no. 6 and no. 7, was distinctly different in texture and color than the sludge in the other lagoons. The sludge was observed to be black in color and of less consistency. The sludge sounding values are also recorded in Table I.

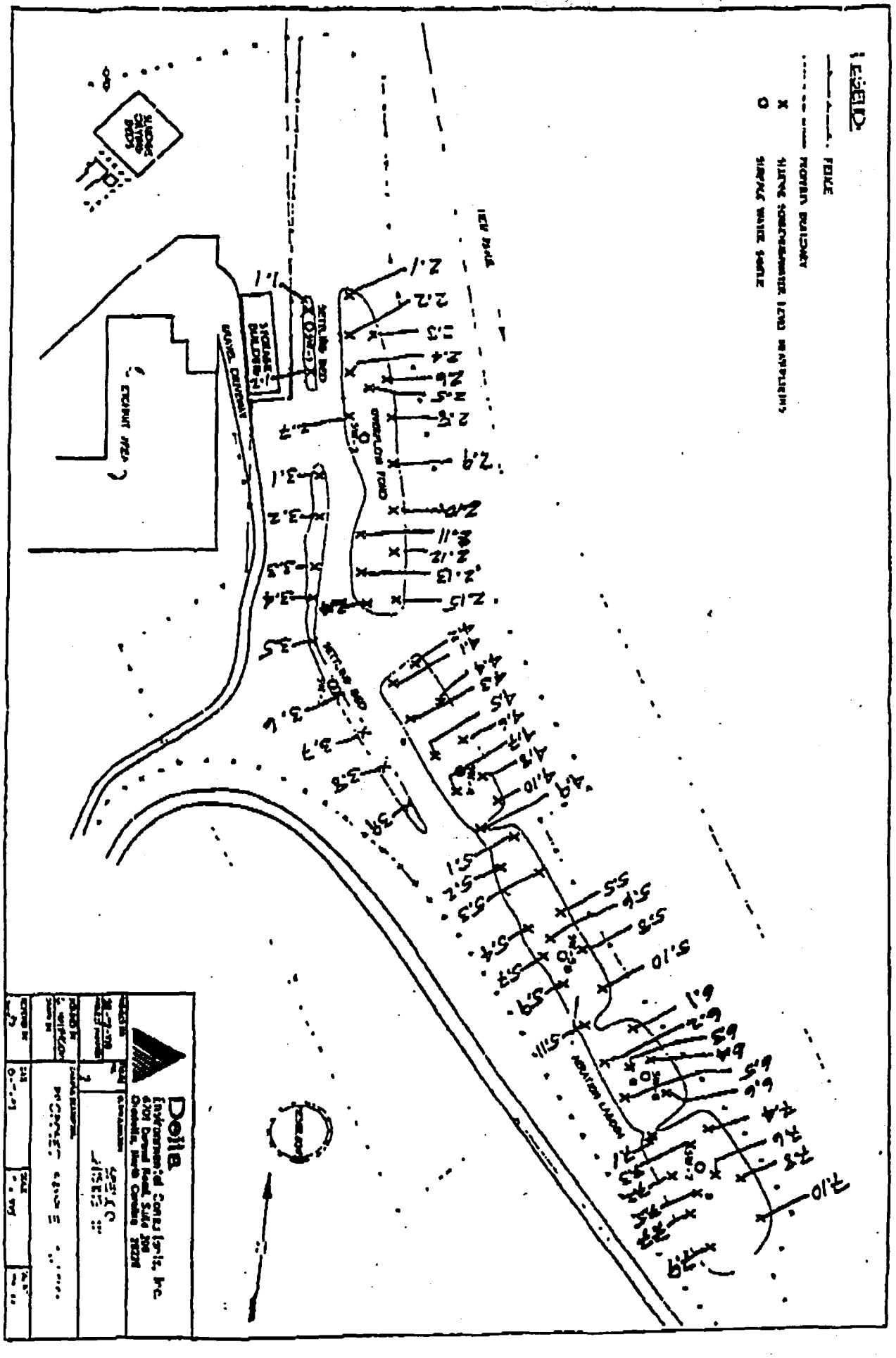

LEGEND
FENCE
PROPERTY BOUNDARY
WELL SOUTHWESTERN CORD IN ASPHALTING
SURFACE WATER SAMPLE
SURFACE WATER STATE
SUNDOWN SATELLITE BOOS
EXHAUST FAN
GRAVEL DRIVEWAY
STORAGE BUILDING
SETTLING POND
OVERFLOW POND
MOUNTAIN LAKE
Delta
Environmental Consultants, Inc.
6701 Denali Road, Suite 200
Anchorage, Alaska 99502

TABLE I

LOCATION	SLUDGE DEPTH	WATER DEPTH
1.1	48	0
1.2	31	0
2.1	43	0
2.2	54	0
2.3	14	0
2.4	45	0
2.5	27	0
2.6	22	0
2.7	18	0
2.8	27	0
2.9	12	0
2.10	6	0
2.11	12	0
2.12	16	0
2.13	19	0
2.14	13	0
2.15	20	0
3.1	30	0
3.2	27	0
3.3	18	0
3.4	24	0
3.5	48	0
3.6	32	0
3.7	23	0
3.8	18	0
3.9	38	0

LOCATION	SLUDGE DEPTH	WATER DEPTH
4.1	40	0
4.2	57	0
4.3	48	0
4.4	70	0
4.5	45	0
4.6	48	0
4.7	87	0
4.8	68	0
4.9	93	0
4.10	63	0
5.1	106	0
5.2	91	0
5.3	27	0
5.4	103	0
5.5	91	0
5.6	90	0
5.7	45	0
5.8	91	0
5.9	83	0
5.10	77	0
5.11	41	0
6.1	16	42
6.2	12	49
6.3	11	52
6.4	11	54
6.5	13	52
6.6	8	47
7.1	10	72
7.2	10	77
7.3	12	84
7.4	13	96
7.5	12	90
7.6	13	95
7.7	12	97
7.8	13	91
7.9	12	94
7.10	12	88

all depth measurements are recorded in inches

Brown & Root Environmental

[illegible] Oak Ridge Turnpike, A-[illegible]
Oak Ridge, TN 37830

93-A682

September 17, 1993

Delta Environmental Consultants, Inc.
6701 Carmel Road
Suite 200
Charlotte, North Carolina 28226-3901

Attention: Mr. Steve Zbor, P.G.
Senior Project Manager

Subject: Final Deliverable
Delta Project No. 50-92-105.15
Brown & Root Project No. NG60
Preliminary Environmental Sampling
Speico Facility
Lansing, North Carolina

Dear Steve:

Please find enclosed the hard copy analytical results of the samples collected during the sampling event conducted at Speico's Lansing, North Carolina facility on August 12, 1993.

This constitutes the final deliverable associated with the above referenced statement of work. The invoice for this project will be processed at this time and forwarded to you during the next billing cycle.

Brown & Root Environmental looks forward to working with Delta Environmental Consultants on this and any other future projects. If you have any questions about this report or any of the information it contains, please feel free to call either myself or Dan Bowser at our Oak Ridge, Tennessee office at (615) 483-9900.

Sincerely,

Swaine Skean
Project Manager

SS:yma

Enclosure

cc: Mr. Daniel A. Bowser, Halliburton NUS
Ms. Chris Savin, Halliburton NUS
File NG60/Cat 2.4/db

ENVIRONMENTAL TESTING & CONSULTING, INC.
2924 Walnut Grove Road • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6334
Founded 1972

August 30, 1993

Mr. Swaine Skeen
Brown & Root Environmental
800 Oak Ridge Turnpike
Jackson Plaza A-600
Oak Ridge, TN 37830

REF: ANALYTICAL TESTING
SAMPLE DATE: 08/12/93
SITE ID: DELTA/SPELCO - LANSING, NC
SAMPLE ID: #2, 6, 7 POND/SURFACE SAMPLES (AQUEOUS)

Dear Mr. Skeen:

The above referenced site has been analyzed per your instructions. The tests were performed in our laboratory (#02027) in accordance with Standard Methods, 17th Edition and the Solid Waste Manual, SW-846. The results are shown below and on the attached Organic Analysis Data Sheets

Test	Composite of 2,6,7 Results (ppm)	Method Number	Date Analyzed	By
pH	6.6	4500-B	08/13/93	SH
Biochemical Oxygen Demand$_5$	21	5210-B	08/13/93	LM
Total Suspended Solids	36	2540-D	08/18/93	TG
Chemical Oxygen Demand	114	5220-B	08/23/93	LM
Dissolved Oxygen	10.5	4500-G	08/13/93	LM
Aluminum	2.41	3111-D	08/26/93	BB
Arsenic	<0.002	3114-B	08/17/93	JF
Barium	<0.03	3111-D	08/26/93	BB
Cadmium	<0.002	3111-B	08/25/93	BB
Chromium	<0.02	3111-B	08/25/93	BB
Lead	<0.05	3111-B	08/25/93	BB
Mercury	<0.001	3112-B	08/17/93	SH
Selenium	<0.002	3114-B	08/17/93	JF
Silver	<0.01	3111-B	08/26/93	BB

Please call our office if you have any questions.

Sincerely,

Randall H. Thomas
Vice President

jw

0813-005

ENVIRONMENTAL TESTING & CONSULTING, INC.
2924 Walnut Grove Road • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6394
Founded 1972

September 8, 1993

Mr. Swaine Skeen
Brown & Root Environmental
800 Oak Ridge Turnpike
Jackson Plaza A-600
Oak Ridge, TN 37830

REF: ANALYTICAL TESTING
SAMPLE DATE: 08/12/93
SITE ID: DELTA/SPELCO - LANSING, NC
SAMPLE ID: #2, 6, 7 POND/SURFACE SAMPLES (AQUEOUS)

Dear Mr. Skeen:

Due to instrumentation problems the above referenced site was screened by Method 8010/8020 and quantitated by Method 8240.

Please call our office if you have any questions.

Sincerely,

Michael Kauffman
Laboratory Manager

lb

0813-005

ENVIRONMENTAL TESTING AND CONSULTING, INC.
MEMPHIS, TN
GC/MS FRACTION - VOLATILE COMPOUNDS

CLIENT NAME : BROWN & ROOT ENVIRONMENTAL
PROJECT # : _____
DATE ANALYZED : 08/26/93
ANALYST : LS

SITE ID : DELTA/SPELCO-LANSING, N.C.
SAMPLE ID : #2 GRAB
SAMPLE DATE : 08/12/93
DATE ARRIVED : 08/13/93
MATRIX : AQUEOUS
FILE NAME : 0813-005.DOC
SAMPLE # : 0813-005-4
METHOD (SW-846) : 8240

COMPOUND	SAMPLE RESULTS UNITS:(ppb)	PQL :(ppb)
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	5
Carbon Tetrachloride	ND	5
Chlorobenzene	ND	5
Chlorodibromomethane	ND	5
Chloroethane	ND	5
2-Chloroethyl vinyl ether	ND	50
Chloroform	ND	5
Chloromethane	ND	5
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
Dichlorodifluoromethane	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
Methylene Chloride	ND	15
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl Chloride	ND	5
Xylenes	ND	5

SURROGATE	RESULT	EXP (ppb)	% REC	QC LIMITS
1,2-Dichloroethane-d4	55.3	50.0	111	76-114
Toluene-d8	54.2	50.0	108	88-110
4-Bromofluorobenzene	56.5	50.0	113	86-115

D - NOT DETECTED
QL - PRACTICAL QUANTITATION LIMIT

LABORATORY MANAGER

ENVIRONMENTAL TESTING AND CONSULTING, INC.
MEMPHIS, TN
GC/MS FRACTION - VOLATILE COMPOUNDS

CLIENT NAME : BROWN & ROOT ENVIRONMENTAL
PROJECT # : _____
DATE ANALYZED : 08/26/93
ANALYST : LS

SITE ID : DELTA/SPELCO-LANSING, N.C.
SAMPLE ID : #6 GRAB
SAMPLE DATE : 08/12/93
DATE ARRIVED : 08/13/93
MATRIX : AQUEOUS
FILE NAME : 0813-005.DOC
SAMPLE # : 0813-005-3
METHOD (SW-846) : 8240

COMPOUND	SAMPLE RESULTS UNITS:(ppb)	PQL :(ppb)
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	5
Carbon Tetrachloride	ND	5
Chlorobenzene	ND	5
Chlorodibromomethane	ND	5
Chloroethane	ND	5
2-Chloroethyl vinyl ether	ND	50
Chloroform	ND	5
Chloromethane	ND	5
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
Dichlorodifluoromethane	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
Methylene Chloride	ND	15
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl Chloride	ND	5
Xylenes	ND	5

SURROGATE	RESULT	EXP (ppb)	% REC	QC LIMITS
1,2-Dichloroethane-d4	54.2	50.0	108	76-114
Toluene-d8	54.0	50.0	108	88-110
4-Bromofluorobenzene	56.6	50.0	113	86-115

ND - NOT DETECTED
PQL - PRACTICAL QUANTITATION LIMIT

LABORATORY MANAGER

ENVIRONMENTAL TESTING AND CONSULTING, INC.
MEMPHIS, TN
GC/MS FRACTION - VOLATILE COMPOUNDS

CLIENT NAME : BROWN & ROOT ENVIRONMENTAL
PROJECT # : _____
DATE ANALYZED : 08/26/93
ANALYST : JS

SITE ID : DELTA/SPELCO-LANSING, N.C.
SAMPLE ID : #7 GRAB
SAMPLE DATE : 08/12/93
DATE ARRIVED : 08/13/93
MATRIX : AQUEOUS

FILE NAME : 0813-005.DOC
SAMPLE # : 0813-005-2

METHOD (SW-846) : 8240

COMPOUND	SAMPLE RESULTS UNITS:(ppb)	PQL :(ppb)
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	5
Carbon Tetrachloride	ND	5
Chlorobenzene	ND	5
Chlorodibromomethane	ND	5
Chloroethane	ND	5
2-Chloroethyl vinyl ether	ND	50
Chloroform	ND	5
Chloromethane	ND	5
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
Dichlorodifluoromethane	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
Methylene Chloride	ND	15
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl Chloride	ND	5
Xylenes	ND	5

SURROGATE	RESULT	EXP (ppb)	% REC	QC LIMITS
1,2-Dichloroethane-d4	53.3	50.0	107	76-114
Toluene-d8	53.8	50.0	108	88-110
4-Bromofluorobenzene	55.7	50.0	111	86-115

D = NOT DETECTED
PQL = PRACTICAL QUANTITATION LIMIT

LABORATORY MANAGER

ENVIRONMENTAL TESTING AND CONSULTING, INC.
MEMPHIS, TN
GC/MS FRACTION - VOLATILE COMPOUNDS

CLIENT NAME : BROWN & ROOT ENVIRONMENTAL
PROJECT # : _____
DATE ANALYZED : 08/26/93
ANALYST : LS

SITE ID : DELTA/SPELCO-LANSING, N.C.
SAMPLE ID : COMPOSITE OF #7, #6, & #2
SAMPLE DATE : 08/12/93
DATE ARRIVED : 08/13/93
MATRIX : AQUEOUS
FILE NAME : 0813-005.DOC
SAMPLE # : 0813-005-1
METHOD (SW-846) : 8240

COMPOUND	SAMPLE RESULTS UNITS: (ppb)	PQL :(ppb)
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	5
Carbon Tetrachloride	ND	5
Chlorobenzene	ND	5
Chlorodibromomethane	ND	5
Chloroethane	ND	5
2-Chloroethyl vinyl ether	ND	50
Chloroform	ND	5
Chloromethane	ND	5
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
Dichlorodifluoromethane	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
Methylene Chloride	ND	15
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl Chloride	ND	5
Xylenes	ND	5

SURROGATE	RESULT	EXP (ppb)	% REC	QC LIMITS
1,2-Dichloroethane-d4	54.4	50.0	109	76-114
Toluene-d8	52.8	50.0	106	88-110
4-Bromofluorobenzene	55.8	50.0	112	86-115

- NOT DETECTED
- PRACTICAL QUANTITATION LIMIT

LABORATORY MANAGER

State of North Carolina
Department of Environment,
Health and Natural Resources
Winston-Salem Regional Office

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Leesha Fuller, Regional Manager

DEHNR

Division of Environmental Management
Water Quality Section
March 16, 1994

CERTIFIED MAIL # P-536 301 149
RETURN RECEIPT REQUESTED

Mr. Ted Fischer, Vice President
United Chemi-Con, Inc.
185 McNeil Road
Lansing, NC 28643

SUBJECT: NOTICE OF VIOLATION
Compliance Sampling Inspection
United Chemi-Con WWTP
NPDES Permit # NC0000019
Ashe County

Dear Mr. Fischer:

A Compliance Sampling Inspection was performed on the subject facility by Mr. George Smith, Mr. Lee Spencer and Mr. Allan Smith of this office on January 27, 1994. Mr. Bill Miller, ORC, and Mr. Ron Watson, Plant Engineer were present for the inspection. Analysis of our samples taken from the effluent during the inspection met all permit effluent limits.

A review of the monthly self-monitoring reports from July through December 1993 did show monitoring deficiencies for metals and an incorrect sampling technique from outfall #001.

The following items are noted below:

1) At the time of inspection it was noticed that residuals from the drying beds are either stored or spread on the grounds. This practice is in direct violation of § 143-215.1 (a)(9). The residuals must be taken to a landfill or you must obtain a permit from the Division for land application of residuals.

2) A sampling could not be conducted on outfall #003 because the sampling manhole was submerged in high water from the New River.

3) According to the monthly DMR's you are taking <u>grab</u> samples for BOD and TSS from outfall #001. This is a permit violation. You are required to take samples using a composite method. Please implement a method to take composite samples so that you will be in compliance with sampling requirements for outfall #001.

on Tracking

8025 North Point Boulevard, Suite 100, Winston-Salem, North Carolina 27106-3203
Telephone 910-896-7007 FAX 910-896-7005
An Equal Opportunity Affirmative Action Employer 50% recycled/ 10% post-consumer paper

4) You are required to conduct a monthly composite sampling for metals (Cd, Cr, Cu, Pb, Ni, Ag, Zn) from outfall #001. You are required to do this for a period of one year after your permit approval. These are to be sampled via a composite sampling method. A total of twelve reports are required. To this date none have been submitted. (Permit effective, April 7, 1993)

5) You are reminded that a Total Toxic Organics (TTO) must be conducted within the first year after the permit has been renewed. (Permit effective date, April 7, 1993)

6) A semivolatile and volatile organic analysis was conducted on outfall #001. The results are listed below:

Methyl Pyrrolidinone	100 ug/l
Ammonium Salt Benzoic Acid	120 ug/l
Hydroxy Benzoic Acid	110 ug/l
Nitro Benzoic Acid	130 ug/l
Butoxy-Phosphate Ethanol	33 ug/l
Dimethyl Formamide	**290 ug/l**
Unidentified Peaks (seven)	
Tetrachloroethylene	6.9 ug/l

As noted in the NPDES permit Part III, Section C, you are required to report any toxic substance discharge. Please submit data to this office to verify that the discharge is not toxic.

7) A semivolatile and volatile organic analysis was conducted on outfall #006. There were 16 unidentified peaks and a detection of 1,2 Dichlorobenzene, at 1.9 ug/l.

In general, the Compliance Inspection revealed some monitoring deficiencies. Please respond in writing to the above seven items, to this office no later than April 31, 30 1994. Also, please be advised these discharges may be subject to civil penalities of $10,000.00 per day, per violation, as well as other actions taken by the Division of Environmental Management. If you have any questions please contact Mr. George Smith, Mr. M. Steve Mauney or myself at (910) 896-7007.

Sincerely,

Larry D. Coble

Larry D. Coble
Regional Supervisor

cc: Mr. Ron Watson - Plant Engineer
Ashe County Health Dept.
Central Files
WSRO

United States Environmental Protection Agency
Washington, D.C. 20460

EPA NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2 5	3 N C 0 0 0 0 0 0 1 9 11	12 9 4 0 1 2 7 17	18 S	19 S	20 2

Remarks

21 66

Reserved	Facility Evaluation Rating	BI	QA	Reserved
67 69	70 2	71 N	72 N	73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
UNITED CHEMI-CON, INC. ASHE COUNTY	11 15 ☒ AM ☐ PM Exit Time/Date: 2 30 pm / 1-27-94	APR. 7, 1993 Permit Expiration Date: DEC. 31, 1995

Name(s) of On-Site Representative(s)	Title(s)	Phone No(s)
RON WATSON BILL MILLER	PLANT ENGINEER ORC	(910) 384-2551

Name, Address of Responsible Official	Title	Contacted
TED FISCHER 185 McNEIL RD. LANSING, NC 28643	VICE PRESIDENT Phone No.: (910) 384-2551	☐ Yes ☒ No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	U	Flow Measurement	N	Pretreatment	S	Operations & Maintenance
S	Records/Reports	N	Laboratory	S	Compliance Schedules	U	Sludge Disposal
S	Facility Site Review	S	Effluent/Receiving Waters	S	Self-Monitoring Program		Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Parameters PIPE →	Mo. Avg Lim 001	Mo. Avg Lim 006	Sample Results 001	Sample Results 006	Self-Monitoring Mo. Avg. Violations
FLOW	.500 MGD	.018 MGD			
OIL + GREASE	26.0	—	2		
BOD		30.0 mg/l		36	
TSR		30.0 mg/l		10	
NH_3		—		18	
Cd	ug/l	—	<2		NO METALS CONDUCTS 4-93 to present
Cr		—	<25		
Cu		—	37		
Ni		—	<10		
Pb		—	<10		
ZN		—	41		
Ag		—	<5		

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
George S. Smith	DEM / WSRO / 910-896-7007	3-14-94

Signature of Reviewer	Agency/Office	Date
M. [illegible]		3-16-94

Regulatory Office Use Only

Action Taken	Date	Compliance Status
NOTICE OF VIOLATION	3-16-94	☒ Noncompliance ☐ Compliance

DIVISION OF ENVIRONMENTAL MANAGEMENT — WATER QUALITY FIELD-LAB FORM (DM1)

66

For Lab Use ONLY
Lab Number: 4W159
Date Received: 940128 Time: 0920
Rec'd by: HMW | From: Bus-Courier-Hand Del
DATA ENTRY BY: 94 CK: DS
DATE REPORTED: 2/25/94

COUNTY: ASHE
RIVER BASIN: NEW
REPORT TO: ARO FRO MRO RRO WaRO WIRO (WSRO) TS AT BM
Other
Shipped by: Bus (Courier) Staff, Other
COLLECTOR(S): SMITH G
Estimated BOD Range: 0-5 (5-25) 25-65/40-130 or 100 plus
Seed: Yes ☐ No ☑ Chlorinated: Yes ☐ No ☑

PRIORITY: ☐ AMBIENT ☐ QA ☑ COMPLIANCE ☐ CHAIN OF CUSTODY ☐ EMERGENCY

SAMPLE TYPE: ☐ STREAM ☑ EFFLUENT ☐ LAKE ☐ INFLUENT ☐ ESTUARY

STATION LOCATION: CHEMI - CON
REMARKS: DOMESTIC WASTEWATER

Station #	Date Begin (yy/mm/dd)	Time Begin	Date End	Time End	Depth DM DB DBM	Value Type	Composite	Sample Type
006	94 01 27	11 15				(A) H L	T S B	C (G) GNXX

1	X	BOD5 310 36	mg/l		Chloride 940	mg/l	X	NH3 as N 610 18	mg/l		Li-Lithium 1132 ug/l
2		COD High 340	mg/l		Chl a: Tri 32217	ug/l		TKN as N 625	mg/l		Mg-Magnesium 927 mg
3		COD Low 335	mg/l		Chl a: Corr 32209	ug/l		NO2 plus NO3 as N 630 2.3	mg/l		Mn-Manganese 1055 ug/l
4		Coliform: MF Fecal 31616	/100ml		Pheophytin a 32213	ug/l		P: Total as P 665	mg/l		Na-Sodium 929 mg/l
5		Coliform: MF Total 31504	/100ml		Color: True 80	Pt-Co		PO4 as P 70507	mg/l		Arsenic:Total 1002 ug/l
6		Coliform: Tube Fecal 31615	/100ml		Color:(pH) 83	ADMI		P: Dissolved as P 666	mg/l		Se-Selenium 1147 ug/l
7		Coliform: Fecal Strep 31673	/100ml		Color: pH 7.6 82	ADMI					Hg-Mercury 71900 ug/l
8		Residue: Total 500	mg/l		Cyanide 720	mg/l		Cd-Cadmium 1027	ug/l		Organochlorine Pesticides
9		Volatile 505	mg/l		Fluoride 951	mg/l		Cr-Chromium:Total 1034	ug/l		Organophosphorus Pesticides
10		Fixed 510	mg/l		Formaldehyde 71880	mg/l		Cu-Copper 1042	ug/l		
11	X	Residue: Suspended 530 10	mg/l		Grease and Oils 556	mg/l		Ni-Nickel 1067	ug/l		Acid Herbicides
12		Volatile 535	mg/l		Hardness Total 900	mg/l		Pb-Lead 1051	ug/l		
13		Fixed 540	mg/l		Specific Cond. 95	uMhos/cm^2		Zn-Zinc 1092	ug/l		Base/ Neutral Extractable Organics
14	X	pH 403 6.6	units		MBAS 38260	mg/l					Acid Extractable Organics
15		Acidity to pH 4.5 436	mg/l		Phenols 32730	ug/l		Ag-Silver 1077	ug/l		
16		Acidity to pH 8.3 435	mg/l		Sulfate 945	mg/l		Al-Aluminum 1105	ug/l	X	Purgeable Organics (VOA bottle reg'd)
17		Alkalinity to pH 8.3 415	mg/l		Sulfide 745	mg/l		Be-Beryllium 1012	ug/l	X	SEMI VOLATILE
18		Alkalinity to pH 4.5 410	mg/l					Ca-Calcium 916	mg/l		
19		TOC 680	mg/l					Co-Cobalt 1037	ug/l		
20		Turbidity 76	NTU					Fe-Iron 1045	ug/l		Phytoplankton S, V

Sampling Point %	Conductance at 25 C	Water Temperature (C)	D.O. mg/l	pH	Alkalinity pH 8.3	Alkalinity pH 4.5	Acidity pH 4.5	Acidity pH 8.3	Air Temperature (C)
2	94	10	300 | •	400 | •	82244	431	82243	82242	20
	Salinity %	Precipition (In/day)	Cloud Cover %	Wind Direction (Deg)	Stream Flow Severity	Turbidity Severity	Wind Velocity M/H	Mean Stream Depth ft.	Stream Width ft.
	480	45	32	36	1351	1350	35	64	4

SEMIVOLATILE ORGANICS REPORT - DEM LAB

LAB NUMBER:4W159 SUPERVISOR REK LAB #:4W159
DATE : 2/15/94

REPORTED BY SDC
CHECKED BY Sm ENTERED BY JH
REVIEWED BY MD CHECKED BY DS

SAMPLE TYPE: WATER DILUTION FACTOR : 1

CAS NUMBER	TQL X 1	ANALYTE NAME	CONC. UG/L
108-95-2	10	PHENOL	U
111-44-4	10	BIS(2-CHLOROETHYL) ETHER	U
95-57-8	10	2-CHLOROPHENOL	U
541-73-1	10	1,3-DICHLOROBENZENE	U
106-46-7	10	1,4-DICHLOROBENZENE	U
100-51-6	20	BENZYL ALCOHOL	U
95-50-1	10	1,2-DICHLOROBENZENE	U
95-48-7	10	2-METHYL PHENOL	U
108-60-1	10	BIS(2-CHLOROISOPROPYL) ETHER	U
106-44-5	10	4-METHYL PHENOL	U
621-64-7	10	N-NITROSO-DI-N-PROPYLAMINE	U
67-72-1	10	HEXACHLOROETHANE	U
98-95-3	10	NITROBENZENE	U
78-59-1	10	ISOPHORONE	U
88-75-5	10	2-NITRO PHENOL	U
105-67-9	10	2,4-DIMETHYL PHENOL	U
65-85-0	50	BENZOIC ACID	U
111-91-1	10	BIS(2-CHLOROETHOXY) METHANE	U
120-83-2	10	2,4-DICHLORO PHENOL	U
120-82-1	10	1,2,4-TRICHLOROBENZENE	U
91-20-3	10	NAPHTHALENE	U
106-47-8	20	4-CHLOROANILINE	U
87-68-3	10	HEXACHLOROBUTADIENE	U
59-50-7	20	4-CHLORO-3-METHYL PHENOL	U
91-57-6	10	2-METHYL NAPHTHALENE	U
77-47-4	10	HEXACHLOROCYCLOPENTADIENE	U
88-06-2	10	2,4,6-TRICHLORO PHENOL	U
95-95-4	10	2,4,5-TRICHLORO PHENOL	U
91-58-7	10	2-CHLORO NAPHTHALENE	U
88-74-4	50	2-NITROANALINE	U
131-11-3	10	DIMETHYL PHTHALATE	U
208-96-8	10	ACENAPHTHYLENE	U
606-20-2	10	2,6-DINITROTOLUENE	U
99-09-2	50	3-NITROANALINE	U
83-32-9	10	ACENAPHTHENE	U
51-28-5	50	2,4-DINITRO PHENOL	U
100-02-7	50	4-NITRO PHENOL	U
132-64-9	10	DIBENZOFURAN	U
121-14-2	10	2,4-DINITROTOLUENE	U
84-66-2	10	DIETHYL PHTHALATE	U
7005-72-3	10	4-CHLOROPHENYL PHENYL ETHER	U
86-73-7	10	FLUORENE	U
100-01-6	50	[illegible]-NITROANALINE	U
534-52-1	50	[illegible],6-DINITRO-2-METHYL PHENO[illegible]	U

SEMIVOLATILE ORGANICS REPORT - DEM LAB

86-30-6	10	N-NITROSODIPHENYLAMINE	U
101-55-3	10	4-BROMOPHENYL PHENYL ETHER	U
118-74-1	10	HEXACHLOROBENZENE	U
87-86-5	50	PENTACHLORO PHENOL	U
85-01-8	10	PHENANTHRENE	U
120-12-7	10	ANTHRACENE	U
84-74-2	10	DI-N-BUTYL PHTHALATE	U
206-44-0	10	FLUORANTHENE	U
129-00-0	10	PYRENE	U
85-68-7	10	BUTYLBENZYL PHTHALATE	U
91-94-1	20	3,3'-DICHLOROBENZIDINE	U
56-55-3	10	BENZO(A)ANTHRACENE	U
218-01-9	10	CHRYSENE	U
117-81-7	10	BIS(2-ETHYLHEXYL) PHTHALATE	U
117-84-0	10	DI-N-OCTYL PHTHALATE	U
205-99-2	10	BENZO(B)FLUORANTHENE	U
207-08-9	10	BENZO(K)FLUORANTHENE	U
50-32-8	10	BENZO(A)PYRENE	U
193-39-5	10	INDENO(1,2,3-CD)PYRENE	U
53-70-3	10	DIBENZO(A,H)ANTHRACENE	U
191-24-2	10	BENZO(G,H,I)PERYLENE	U

OTHER SEMIVOLATILE ORGANICS FOR SAMPLE NUMBER : 4W159

UNIDENTIFIED	15	E
UNIDENTIFIED	9	E
UNIDENTIFIED	6	E
UNIDENTIFIED	5	E
UNIDENTIFIED	17	E
UNIDENTIFIED	7	E
UNIDENTIFIED	160	E
UNIDENTIFIED	6	E
UNIDENTIFIED	190	E
UNIDENTIFIED	190	E
UNIDENTIFIED	39	E
UNIDENTIFIED	19	E
UNIDENTIFIED	9	E
UNIDENTIFIED	31	E
UNIDENTIFIED	8	E
UNIDENTIFIED	6	E

TQL= TARGET QUANTITATION LIMIT
T= TENTATIVELY IDENTIFIED ESTIMATED CONCENTRATION
E= ESTIMATED CONCENTRATION
U= COMPOUND ANALYZED FOR NOT DETECTED
N= COMPOUND NOT ANALYZED FOR
D= DETECTED BELOW QUANTITATION LIMIT
H= HOLDING TIME EXCEEDED
TQL SUBJECT TO CHANGE DUE TO INSTRUMENT SENSITIVITY

EHNR/DEM LABORATORY
VOLATILE ANALYTICAL REPORT

LAB NO. 4W159

REPORTED BY FLB
CHECKED BY
REVIEWED BY

SUPERVISOR RRK
DATE 2/17/94
ENTERED BY
CHECKED BY

SAMPLE TYPE: WATER

ANALYSIS RESULTS

CAS#	VOA TARGET COMPOUND	TQL ug/l	DETECTED ug/l
75-35-4	1,1-Dichloroethene	0.75	U
75-09-2	Methylene Chloride	0.25	U
156-60-5	trans-1,2-Dichloroethene	0.75	U
75-34-3	1,1-Dichloroethane	0.25	U
590-20-7	2,2-Dichloropropane	0.25	U
156-59-4	cis-1,2-Dichloroethene	0.25	U
67-66-3	Chloroform	0.25	U
74-97-5	Bromochloromethane	0.75	U
71-55-6	1,1,1-Trichloroethane	0.25	U
563-58-6	1,1-Dichloropropene	0.25	U
56-23-5	Carbon Tetrachloride	0.75	U
107-06-2	1,2-Dichloroethane	0.25	U
79-01-6	Trichloroethene	0.25	U
78-87-5	1,2-Dichloropropane	0.25	U
75-27-4	Bromodichloromethane	0.25	U
74-95-3	Dibromomethane	1	U
10061-01-5	cis-1,3-Dichloropropene	0.25	U
10061-02-6	trans-1,3-Dichloropropene	0.25	U
79-00-5	1,1,2-Trichloroethane	0.25	U
127-18-4	Tetrachloroethene	0.25	U
142-28-9	1,3-Dichloropropane	0.25	U
124-48-1	Dibromochloromethane	0.75	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	0.25	U
630-20-6	1,1,1,2-Tetrachloroethane	0.25	U
75-25-2	Bromoform	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.75	U

CAS#	VOA TARGET COMPOUND	TQL ug/l	DETECTED ug/l
96-18-4	1,2,3-Trichloropropane	0.25	U
108-86-1	Bromobenzene	1	U
95-49-8	2-Chlorotoluene	0.25	U
106-43-4	4-Chlorotoluene	0.25	U
541-73-1	1,3-Dichlorobenzene	0.25	U
106-46-7	1,4-Dichlorobenzene	0.25	1.9
95-50-1	1,2-Dichlorobenzene	0.25	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	0.25	U
87-68-3	Hexachlorobutadiene	0.25	U
87-61-6	1,2,3-Trichlorobenzene	0.75	U
1634-04-4	Methyl-tert-butyl ether	5	U
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m,p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
98-82-8	Isopropylbenzene	1	U
103-65-1	n-Propylbenzene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
99-87-6	p-isopropyltoluene	1	U
104-51-8	n-Butylbenzene	1	U
91-20-3	Naphthalene	1	U

TQL- Target Quantitation Limit- Subject to change due to instrument sensitivity
T- Tentatively Identified, not confirmed
E- Estimated Value
U- Samples analyzed for this compound but not detected
N- Sample not analyzed for this compound
D- Detected below quantitation limit
M- GC/MS Analysis performed

Other purgeables detected (up to 10 highest peaks) — Detected ug/l

NO VOLATILE ORGANIC COMPOUNDS DETECTED BY GC/PID

COMMENTS:

DIVISION OF ENVIRONMENTAL MANAGEMENT — WATER QUALITY FIELD-LAB FORM (DM1)

(61)

For Lab Use Only

Lab Number: 4W158
Date Received: 940128 Time: 0920
Rec'd by: HMW From: Bus Courier Hand Del
DATA ENTRY BY: JH CK: DB
DATE REPORTED: 2/24/94

COUNTY: ASHE
RIVER BASIN: NEW
REPORT TO: ARO FRO MRO RRO WaRO WIRO WSRO TS AT BM
Other
Shipped by: Bus Courier Staff, Other
COLLECTOR(S): SMITH G.
Estimated BOD Range: 0-5 5-25 25-65/40-130 or 100 plus
Seed: Yes ☐ No ☑ Chlorinated: Yes ☐ No ☑

PRIORITY: ☐ AMBIENT ☐ QA ☑ COMPLIANCE ☐ CHAIN OF CUSTODY ☐ EMERGENCY

SAMPLE TYPE: ☐ STREAM ☑ EFFLUENT ☐ LAKE ☐ INFLUENT ☐ ESTUARY

STATION LOCATION: CHEMI - CON

REMARKS: NON-CONTACT, BOILER, DEION REG STREAM, A/C COND, ASSEMBLED PRODUCT RINSE

Station #	Date Begin (yy/mm/dd)	Time Begin	Date End	Time End	Depth DM DB DBM	Value Type A H L	Composite T S B	Sample Type C G GNXX
001	94 01 27	11:40						

1		BOD5 310	mg/l		Chloride 940	mg/l		NH3 as N 610	mg/l		Li-Lithium 1132 ug/l
2		COD High 340	mg/l		Chl a: Tri 32217	ug/l		TKN as N 625	mg/l		Mg-Magnesium 927 mg/l
3		COD Low 335	mg/l		Chl a: Corr 32209	ug/l		NO2 plus NO3 as N 630	mg/l		Mn-Manganese 1055 ug/l
4		Coliform: MF Fecal 31616	/100ml		Pheophytin a 32213	ug/l		P: Total as P 665	mg/l		Na-Sodium 929 mg/l
5		Coliform: MF Total 31504	/100ml		Color: True 80	Pt-Co		PO4 as P 70507	mg/l		Arsenic:Total 1002 ug/l
6		Coliform: Tube Fecal 31615	/100ml		Color:(pH) 83	ADMI		P: Dissolved as P 666	mg/l		Se-Selenium 1147 ug/l
7		Coliform: Fecal Strep 31673	/100ml		Color: pH 7.6 82	ADMI					Hg-Mercury 71900 ug/l
8		Residue: Total 500	mg/l	* X	Cyanide 720 <0.005	mg/l	X	Cd-Cadmium 1027 <2.0	ug/l		Organochlorine Pesticides
9		Volatile 505	mg/l		Fluoride 951	mg/l	X	Cr-Chromium:Total 1034 <25	ug/l		Organophosphorus Pesticides
10		Fixed 510	mg/l		Formaldehyde 71880	mg/l	X	Cu-Copper 1042 37	ug/l		
11		Residue: Suspended 530	mg/l	X	Grease and Oils 556 2	mg/l	X	Ni-Nickel 1067 <10	ug/l		Acid Herbicides
12		Volatile 535	mg/l		Hardness Total 900	mg/l	X	Pb-Lead 1051 <10	ug/l		
13		Fixed 540	mg/l		Specific Cond. 95	uMhos/cm^2	X	Zn-Zinc 1092 41	ug/l		Base/ Neutral Extractable Organics
14		pH 403	units	X	MBAS 38260 **	mg/l					Acid Extractable Organics
15		Acidity to pH 4.5 436	mg/l		Phenols 32730	ug/l	X	Ag-Silver 1077 <5.0	ug/l		
16		Acidity to pH 8.3 435	mg/l		Sulfate 945	mg/l		Al-Aluminum 1105	ug/l	X	Purgeable Organics (VOA bottle reg'd)
17		Alkalinity to pH 8.3 415	mg/l		Sulfide 745	mg/l		Be-Beryllium 1012	ug/l	X	SEMI VOLATILE
18		Alkalinity to pH 4.5 410	mg/l					Ca-Calcium 916	mg/l		
19		TOC 680	mg/l					Co-Cobalt 1037	ug/l		
20		Turbidity 76	NTU					Fe-Iron 1045	ug/l		Phytoplankton S, V

Sampling Point %	Conductance at 25 C	Water Temperature (C)	D.O. mg/l	pH	Alkalinity pH 8.3	Alkalinity pH 4.5	Acidity pH 4.5	Acidity pH 8.3	Air Temperature (C)
2	94	10	300	400	82244	431	82243	82242	20
Res Cl2	Salinity %	Precipition (In/day)	Cloud Cover %	Wind Direction (Deg)	Stream Flow Severity	Turbidity Severity	Wind Velocity M/H	Mean Stream Depth ft.	Stream Width ft.
	480	45	32	36	1351	1350	35	64	4

* Cyanide sample was not preserved in the field with sodium hydroxide.
** QC limits not met, insufficient sample to reanalyze, please resample.

DM1/Revised 10/86

SEMIVOLATILE ORGANICS REPORT - DEM LAB

LAB NUMBER:4W158 SUPERVISOR RRK LAB #:4W158
DATE : 2/15/94

REPORTED BY DK
CHECKED BY SM ENTERED BY JM
REVIEWED BY PM CHECKED BY DS

SAMPLE TYPE: WATER DILUTION FACTOR : 1

CAS NUMBER	TQL X 1	ANALYTE NAME	CONC. UG/L
108-95-2	10	PHENOL	U
111-44-4	10	BIS(2-CHLOROETHYL) ETHER	U
95-57-8	10	2-CHLOROPHENOL	U
541-73-1	10	1,3-DICHLOROBENZENE	U
106-46-7	10	1,4-DICHLOROBENZENE	U
100-51-6	20	BENZYL ALCOHOL	U
95-50-1	10	1,2-DICHLOROBENZENE	U
95-48-7	10	2-METHYL PHENOL	U
108-60-1	10	BIS(2-CHLOROISOPROPYL) ETHER	U
106-44-5	10	4-METHYL PHENOL	U
621-64-7	10	N-NITROSO-DI-N-PROPYLAMINE	U
67-72-1	10	HEXACHLOROETHANE	U
98-95-3	10	NITROBENZENE	U
78-59-1	10	ISOPHORONE	U
88-75-5	10	2-NITRO PHENOL	U
105-67-9	10	2,4-DIMETHYL PHENOL	U
65-85-0	50	BENZOIC ACID	U
111-91-1	10	BIS(2-CHLOROETHOXY) METHANE	U
120-83-2	10	2,4-DICHLORO PHENOL	U
120-82-1	10	1,2,4-TRICHLOROBENZENE	U
91-20-3	10	NAPHTHALENE	U
106-47-8	20	4-CHLOROANILINE	U
87-68-3	10	HEXACHLOROBUTADIENE	U
59-50-7	20	4-CHLORO-3-METHYL PHENOL	U
91-57-6	10	2-METHYL NAPHTHALENE	U
77-47-4	10	HEXACHLOROCYCLOPENTADIENE	U
88-06-2	10	2,4,6-TRICHLORO PHENOL	U
95-95-4	10	2,4,5-TRICHLORO PHENOL	U
91-58-7	10	2-CHLORO NAPHTHALENE	U
88-74-4	50	2-NITROANALINE	U
131-11-3	10	DIMETHYL PHTHALATE	U
208-96-8	10	ACENAPHTHYLENE	U
606-20-2	10	2,6-DINITROTOLUENE	U
99-09-2	50	3-NITROANALINE	U
83-32-9	10	ACENAPHTHENE	U
51-28-5	50	2,4-DINITRO PHENOL	U
100-02-7	50	4-NITRO PHENOL	U
132-64-9	10	DIBENZOFURAN	U
121-14-2	10	2,4-DINITROTOLUENE	U
84-66-2	10	DIETHYL PHTHALATE	U
7005-72-3	10	4-CHLOROPHENYL PHENYL ETHER	U
86-73-7	10	FLUORENE	U
100-01-6	50	4-NITROANALINE	U
534-52-1	50	4,6-DINITRO-2-METHYL PHENOL	U

SEMIVOLATILE ORGANICS REPORT - DEM LAB

86-30-6	10	N-NITROSODIPHENYLAMINE	U
101-55-3	10	4-BROMOPHENYL PHENYL ETHER	U
118-74-1	10	HEXACHLOROBENZENE	U
87-86-5	50	PENTACHLORO PHENOL	U
85-01-8	10	PHENANTHRENE	U
120-12-7	10	ANTHRACENE	U
84-74-2	10	DI-N-BUTYL PHTHALATE	U
206-44-0	10	FLUORANTHENE	U
129-00-0	10	PYRENE	U
85-68-7	10	BUTYLBENZYL PHTHALATE	U
91-94-1	20	3,3'-DICHLOROBENZIDINE	U
56-55-3	10	BENZO(A)ANTHRACENE	U
218-01-9	10	CHRYSENE	U
117-81-7	10	BIS(2-ETHYLHEXYL) PHTHALATE	U
117-84-0	10	DI-N-OCTYL PHTHALATE	U
205-99-2	10	BENZO(B)FLUORANTHENE	U
207-08-9	10	BENZO(K)FLUORANTHENE	U
50-32-8	10	BENZO(A)PYRENE	U
193-39-5	10	INDENO(1,2,3-CD)PYRENE	U
53-70-3	10	DIBENZO(A,H)ANTHRACENE	U
191-24-2	10	BENZO(G,H,I)PERYLENE	U

OTHER SEMIVOLATILE ORGANICS FOR SAMPLE NUMBER : 4W158

METHYL PYRROLIDINONE	C5.H9.O.N	100	T
AMMONIUM SALT BENZOIC ACID	C7.H9.O.N	120	T
HYDROXY BENZOIC ACID	C7.H6.O3	110	T
NITRO BENZOIC ACID	C7.H5.O4.N	130	T
BUTOXY-PHOSPHATE ETHANOL	C18.H39.O7.P	33	T
DIMETHYL FORMAMIDE	C3.H7.O.N.	290 PPB	T
UNIDENTIFIED		97	E
UNIDENTIFIED		17	E
UNIDENTIFIED		47	E
UNIDENTIFIED		7	E
UNIDENTIFIED		7	E
UNIDENTIFIED		16	E
UNIDENTIFIED		7	E

TQL= TARGET QUANTITATION LIMIT
T= TENTATIVELY IDENTIFIED ESTIMATED CONCENTRATION
E= ESTIMATED CONCENTRATION
U= COMPOUND ANALYZED FOR NOT DETECTED
N= COMPOUND NOT ANALYZED FOR
D= DETECTED BELOW QUANTITATION LIMIT
H= HOLDING TIME EXCEEDED
TQL SUBJECT TO CH[illegible]E DUE TO INSTRUMENT SENS[illegible]VITY

BHNR/DEM LABORATORY
VOLATILE ANALYTICAL REPORT

LAB NO. 4W158

REPORTED BY
CHECKED BY
REVIEWED BY

SUPERVISOR RSK
DATE 2/23/94
ENTERED BY
CHECKED BY

SAMPLE TYPE: WATER

ANALYSIS RESULTS

CAS#	VOA TARGET COMPOUND	TQL ug/l	DETECTED ug/l
75-35-4	1,1-Dichloroethene	0.75	U
75-09-2	Methylene Chloride	0.25	U
156-60-5	trans-1,2-Dichloroethene	0.75	U
75-34-3	1,1-Dichloroethane	0.25	U
590-20-7	2,2-Dichloropropane	0.25	U
156-59-4	cis-1,2-Dichloroethene	0.25	U
67-66-3	Chloroform	0.25	U
74-97-5	Bromochloromethane	0.75	U
71-55-6	1,1,1-Trichloroethane	0.25	U
563-58-6	1,1-Dichloropropene	0.25	U
56-23-5	Carbon Tetrachloride	0.75	U
107-06-2	1,2-Dichloroethane	0.25	U
79-01-6	Trichloroethene	0.25	U
78-87-5	1,2-Dichloropropane	0.25	U
75-27-4	Bromodichloromethane	0.25	U
74-95-3	Dibromomethane	1	U
10061-01-5	cis-1,3-Dichloropropene	0.25	U
10061-02-6	trans-1,3-Dichloropropene	0.25	U
79-00-5	1,1,2-Trichloroethane	0.25	U
1:10^4 127-18-4	Tetrachloroethene 1.6230=d	2.5	6.9
142-28-9	1,3-Dichloropropane	0.25	U
124-48-1	Dibromochloromethane	0.75	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	0.25	U
630-20-6	1,1,1,2-Tetrachloroethane	0.25	U
75-25-2	Bromoform	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.75	U

CAS#	VOA TARGET COMPOUND	TQL ug/l	DETECTED ug/l
96-18-4	1,2,3-Trichloropropane	0.25	U
108-86-1	Bromobenzene	1	U
95-49-8	2-Chlorotoluene	0.25	U
106-43-4	4-Chlorotoluene	0.25	U
541-73-1	1,3-Dichlorobenzene	0.25	U
106-46-7	1,4-Dichlorobenzene	0.25	U
95-50-1	1,2-Dichlorobenzene	0.25	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	0.25	U
87-68-3	Hexachlorobutadiene	0.25	U
87-61-6	1,2,3-Trichlorobenzene	0.75	U
1634-04-4	Methyl-tert-butyl ether	5	U
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m,p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
98-82-8	Isopropylbenzene	1	U
103-65-1	n-Propylbenzene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
99-87-6	p-isopropyltoluene	1	U
104-51-8	n-Butylbenzene	1	U
91-20-3	Naphthalene	1	U

TQL- Target Quantitation Limit- Subject to change due to instrument sensitivity
T- Tentatively Identified, not confirmed
E- Estimated Value
U- Samples analyzed for this compound but not detected
N- Sample not analyzed for this compound
D- Detected below quantitation limit
M- GC/MS Analysis performed

Other purgeables detected (up to 10 highest peaks) — Detected ug/l

NO VOLATILE ORGANIC COMPOUNDS QUANTITATED BY GC/PID.

COMMENTS:

ROUTE JAY LEE & GEORGE

Delta
Environmental
Consultants, Inc.

6701 Carmel Road
Suite 200
Charlotte, NC 28226-3901
704/541-9890
FAX: 704/543-4035

COPY

RECEIVED
N.C. Dept. of EHNR
NOV 05 1993
Winston-Salem
Regional Office

November 4, 1993

North Carolina Department of Environment,
Health and Natural Resources
Division of Environmental Management
Water Quality Section
P.O. Box 29535
Raleigh, North Carolina 27626-0535

Attention: Mr. Greg Nizich

Subject: One-Time NPDES Permit
For Retention Pond Closure
Sprague Electric Co (SPELCO)
Lansing, NC
Delta # 50-92-105.15

Dear Greg:

This letter is intended to follow up from our phone conversation of October 21, 1993 in regard to Delta's request for a one-time NPDES permit to discharge residual surface water from the referenced facility ponds to the New River. As we have previously discussed, the removal of the ponds residual surface water from the ponds is necessary for the implementation of the ponds closure plan. It is our understanding that you have reviewed the data we submitted to you (a copy attached) and have verbally approved our request for the one time NPDES permit to discharge the ponds residual surface water into New River with the following conditions:

1. Sludge from the ponds is not permitted to be discharged into the New River.

2. The discharge flow rate should be controlled to prevent erosion of the New River's bank.

It is also our understanding that you will be notifying Mr. Steve Mooney and Mr. George Smith of the Winston-Salem Regional Office (WSRO) of your decision. Barring any unforeseen circumstances, we have tentatively scheduled the ponds residual surface water to be pumped into the New River during May 1994. Please advise Delta in writing at your earliest convenience, if you are in agreement with the comments stated above, or if there are any further steps that are required. Thank you for your cooperation and careful consideration of this matter.

Please call me at (704) 541-9890, if you should have any questions, or if you would like to discuss the matter further.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Johnnie Ho, P.E

JH/amh

cc: Mr. Steve Mooney, NCDEHNR - Winston Salem Regional Office
Mr. George Smith, NCDEHNR - Winston Salem Regional Office

ENVIRONMENTAL TESTING & CONSULTING, INC.
29[illegible] Walnut Grove Road • Memphis, TN 38111 • ([illegible]) 327-2750 • FAX (901) 327-6334
Founded 1972

August 30, 1993

Mr. Swaine Skeen
Brown & Root Environmental
800 Oak Ridge Turnpike
Jackson Plaza A-600
Oak Ridge, TN 37830

REF: ANALYTICAL TESTING
SAMPLE DATE: 08/12/93
SITE ID: DELTA/SPELCO - LANSING, NC
SAMPLE ID: #2, 6, 7 POND/SURFACE SAMPLES (AQUEOUS)

Dear Mr. Skeen:

The above referenced site has been analyzed per your instructions. The tests were performed in our laboratory (#02027) in accordance with Standard Methods, 17th Edition and the Solid Waste Manual, SW-846. The results are shown below and on the attached Organic Analysis Data Sheets

Test	Composite of 2,6,7 Results (ppm)	Method Number	Date Analyzed	By
pH	6.6	4500-B	08/13/93	SH
Biochemical Oxygen Demand$_5$	21	5210-B	08/13/93	LM
Total Suspended Solids	36	2540-D	08/18/93	TG
Chemical Oxygen Demand	114	5220-B	08/23/93	LM
Dissolved Oxygen	10.5	4500-G	08/13/93	LM
Aluminum	2.41	3111-D	08/26/93	BB
Arsenic	<0.002	3114-B	08/17/93	JF
Barium	<0.03	3111-D	08/26/93	BB
Cadmium	<0.002	3111-B	08/25/93	BB
Chromium	<0.02	3111-B	08/25/93	BB
Lead	<0.05	3111-B	08/25/93	BB
Mercury	<0.001	3112-B	08/17/93	SH
Selenium	<0.002	3114-B	08/17/93	JF
Silver	<0.01	3111-B	08/26/93	BB

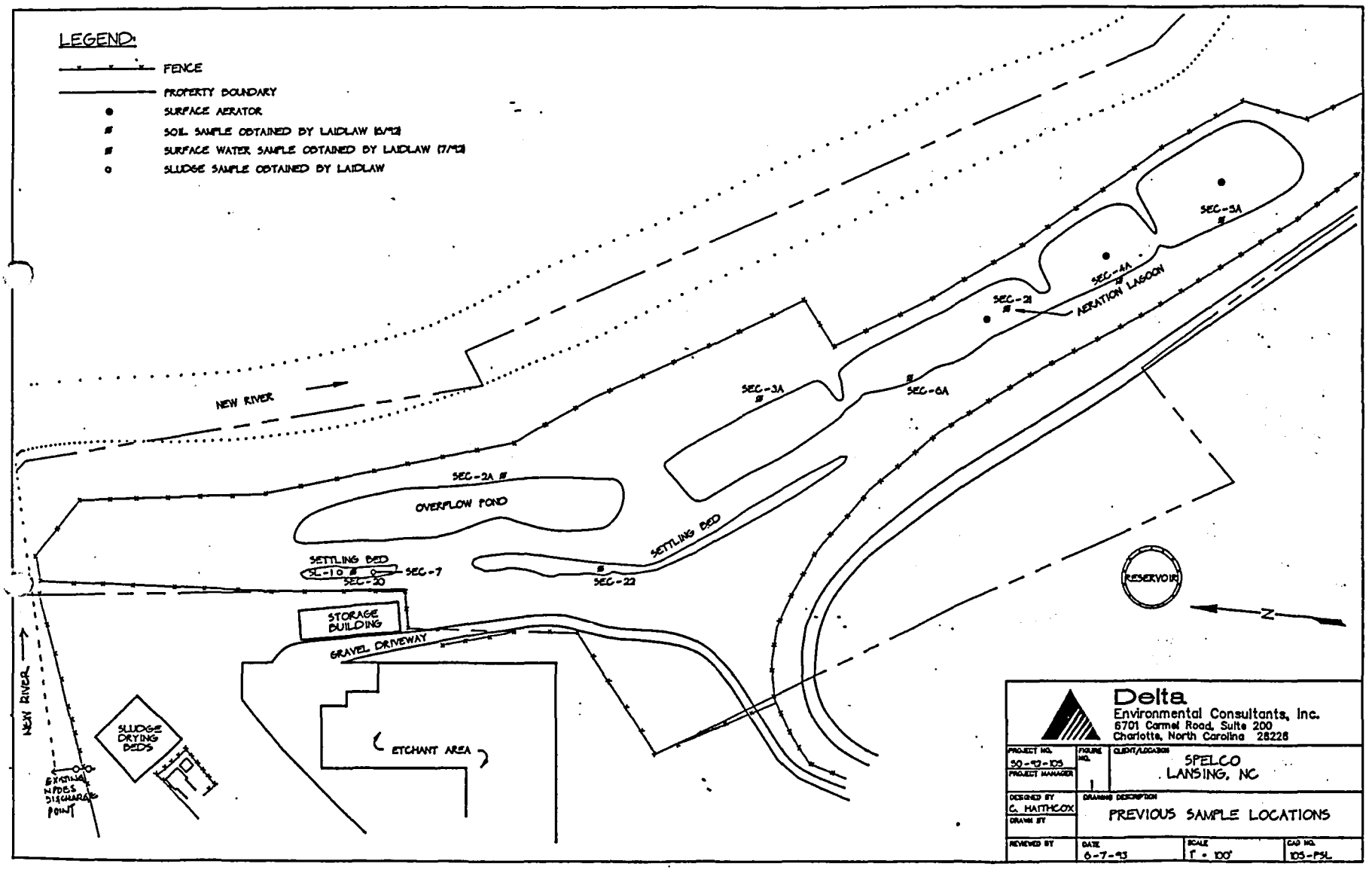
Please call our office if you have any questions.

Sincerely,

Randall H. Thomas
Vice President

jw

0813-005


LEGEND:
FENCE
PROPERTY BOUNDARY
SURFACE AERATOR
SOIL SAMPLE OBTAINED BY LAIDLAW (5/92)
SURFACE WATER SAMPLE OBTAINED BY LAIDLAW (7/92)
SLUDGE SAMPLE OBTAINED BY LAIDLAW
NEW RIVER
SEC-3A
SEC-4A
SEC-5A
SEC-2B
AERATION LAGOON
SEC-6A
SEC-2A
OVERFLOW POND
SETTLING BED
SEC-22
SETTLING BED
SL-10
SEC-20
SEC-7
STORAGE BUILDING
GRAVEL DRIVEWAY
RESERVOIR
N
NEW RIVER
SLUDGE DRYING BEDS
ETCHANT AREA
EXISTING NPDES DISCHARGE POINT
Delta
Environmental Consultants, Inc.
6701 Carmel Road, Suite 200
Charlotte, North Carolina 28228
PROJECT NO.
50-92-105
PROJECT MANAGER
FIGURE NO.
1
CLIENT/LOCATION
SPELCO
LANSING, NC
DESIGNED BY
C. HATTHCOX
DRAWN BY
DRAWING DESCRIPTION
PREVIOUS SAMPLE LOCATIONS
REVIEWED BY
DATE
6-7-93
SCALE
1" = 100'
CAD NO.
105-PSL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

RECEIVED
FEB - 7 1992
SUPERFUND SECTION

FEB 5 1992

4WD-WPB

Ms. Pat DeRosa
Superfund Section
Division of Solid Waste
North Carolina Department of Environment,
Health and Natural Resources
P.O. Box 27687
Raleigh, North Carolina 27611

Dear Ms. DeRosa:

The U.S. Environmental Protection Agency, Region IV has reviewed the Site Inspection Report prepared by the former Region IV Field Investigation Team, NUS Corporation for the Sprague Electric Company site, (NCD003167780). A low priority SIP has been recommended. Enclosed for your files is a copy of the final report.

If you or your staff have any questions, please contact me at (404) 347-5065.

Sincerely yours,

Debbie

Deborah A. Vaughn-Wright
Project Manager

cc: Craig Benedikt, NC Project Officer

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

FILE COPY

RECEIVED
DEC 27 1990
SUPERFUND SECTION

4WD-WPB

Ms. Pat DeRosa, Head
North Carolina Department of Environment,
Health and Natural Resources
Division of Solid Waste Management
Post Office Box 27687
Raleigh, North Carolina 27611

Dear Ms. DeRosa:

Enclosed for your files are four Screening Site Inspections (SSI) Phase I reports, one SSI Phase II Study Plan and one Environmental Priorities Initiative report prepared by the Region IV Field Investigation Team, NUS Corporation. The site names and their determinations are as follows:

Sprague Electric Co.	NCD003167780	Study Plan
Textron, Inc.	NCD091249417	Deferred to RCRA
R.J. Reynolds Tobacco Co.	NCD000616474	NFRAP
PPG Industries, Inc.	NCD043712298	NFRAP
Southern Resin	NCD077821296	NFRAP
Southern Latex Corp.	NCD980729651	NFRAP

If you have any questions, please contact me at (404) 347-5065.

Sincerely yours,

Deborah A. Vaughn-Wright

Deborah A. Vaughn-Wright
Project Manager

Enclosures

Federal
Trip Notification & Authorization

Prepared by: David Lilley

Today's Date: Nov 15, 1990

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

Site Trip

Date of Trip: December 10, 1990

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

NCD#: 003 167 780 Site Name: Sprague Electric Co.
City: Lansing County: Ashe

Reason for Trip: Phase II Screening Site Investigation

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

Authorized by: David B. Lilley
Industrial Hygienist

Project Team Leader: Eric Cochin

Assistants: _____, _____, _____

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. John Alley (Note if Dr., M.P., etc.) Title: District Env. Supervisor

Telephone Number: (704) 264-4995

Notes: Health Department Official Contacted: Ms. Nancy Frost
Back Up Letter Required: Yes ✓ No ____

Notified Ms. Frost on 11-15-90 (DBC)

Note: Signed original to Data Manager

State Copy

R-586-11-0-8

STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA
EPA ID #: NCD003167780

Prepared Under
TDD No. F4-9010-25
CONTRACT NO. 68-01-7346

Revision 0

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

NOVEMBER 19, 1990

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Eric Corbin	Roger Franklin	Phil Blackwell for
Eric Corbin Project Manager	Roger Franklin Assistant Regional Project Manager	Phil Blackwell Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

TABLE OF CONTENTS

Section		Page
1.0	**INTRODUCTION**	**1**
1.1	Objectives	1
1.2	Scope of Work	2
1.3	Schedule	2
1.4	Personnel	2
1.5	Permits and Authorization Requirements	3
1.6	Site History and Description	3
1.7	Regional Hydrogeology	6
2.0	**SAMPLING INVESTIGATION**	**6**
2.1	Surface and Subsurface Soil Sampling	10
2.2	Sediment and Surface Water Sampling	10
2.3	Groundwater Sampling	10
2.4	Analytical and Container Requirements	10
2.5	Methodology	11
REFERENCES		12

FIGURES

Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Sample Location Map	9

TABLES

Table 1	Sample Locations and Rationale	7

STUDY PLAN

SCREENING SITE INSPECTION, PHASE II

SPRAGUE ELECTRIC COMPANY

LANSING, ASHE COUNTY, NORTH CAROLINA

EPA ID #NCD003167780

TDD NO. F4-9010-25

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) has been tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Sprague Electric Company facility in Ashe County, North Carolina. The inspection will be performed under the authority of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Tasks will be performed to satisfy the requirements stated in Phase II of Technical Directive Document (TDD) number F4-9010-25.

1.1 Objectives

The objectives of this Phase II inspection will be to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection will seek to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation will be made regarding future activities at the site.

Specific elements are:

- Obtain information to prepare a site-specific preliminary HRS.
- Provide EPA the necessary information to make decisions on any other actions warranted at the site.

1.2 Scope of Work

The scope of this investigation will include the following activities:

- Obtain and review background materials relevant to HRS scoring of site.
- Obtain aerial photographs and maps of site, if possible.
- Obtain information on local water systems.
- Evaluate target populations associated with the groundwater, surface water, air and onsite exposure pathways.
- Conduct a survey of private wells.
- Determine location and distance to nearest potable well.
- Develop a site sketch .
- Conduct a geophysical screening of site to determine whether buried drums may be present.
- Collect environmental samples.

1.3 Schedule

Week of December 10, 1990

1.4 Personnel

Project Manager - Eric Corbin
Other personnel as required

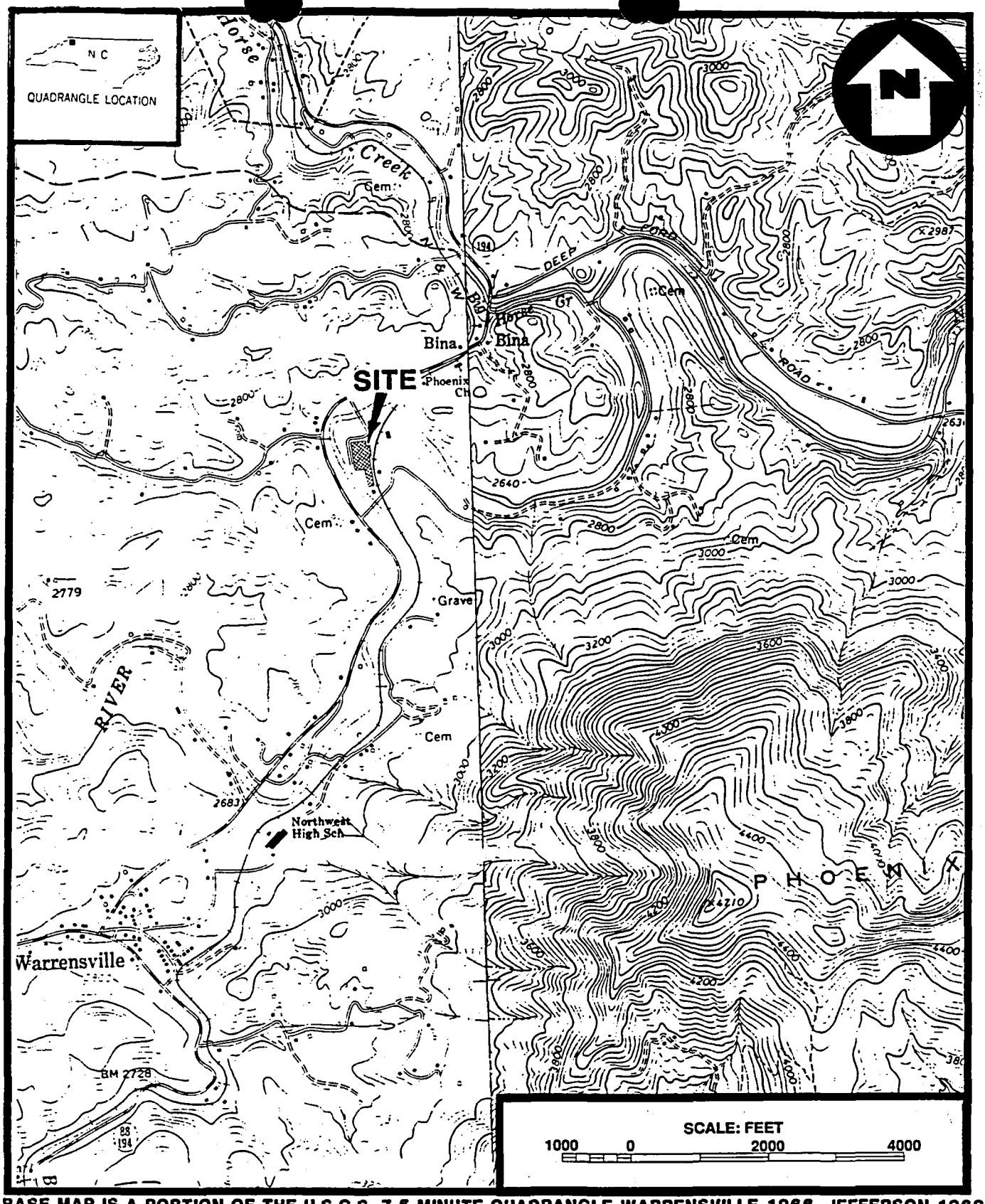
1.5 Permits and Authorization Requirements

EPA is responsible for obtaining access to the site and permission to take photographs of site. In addition, EPA is responsible for all permits which may be required to accomplish this task.

1.6 Site History and Description

The Sprague Electric Company facility is situated on 60-acre tract of land located off of Highway 194 approximately 1.25 miles south of Lansing, North Carolina (Refs. 1, 2; Figures 1 and 2) . The facility has been actively engaged in the manufacturing of aluminum electrolytic capacitors since 1953 and is the only known industry that has ever occupied the facility area (Refs. 1, 3). Raw materials utilized in the production process include aluminum foil, nitric acid, tartaric acid, sodium hydroxide, calcium hydroxide, sodium chloride, and dimethylformamide (DMF) (Refs. 1, 3). Sulfuric acid was used in the past (Ref. 3). The manufacturing process involves the etching of aluminum foil in an electrochemical bath. Aluminum oxides formed in the process are recovered from the wastewater by filtering and settling in a lagoon, mined and sold (Refs. 1, 3). Waste dimethylformamide (DMF) used in the process is stored in drums and shipped off site (Refs. 1, 3). Available information indicates that wastes were handled in essentially the same manner since operations commenced (Ref. 3).

On November 17, 1980, Sprague Electric Company filed a RCRA Part A hazardous waste permit application for treatment. They reported that their facility conducted operations that resulted in a discharge to U.S. waters and treats 250,000,000 pounds of corrosive waste (D002) were treated per year (Ref. 4). At the time of filing, Sprague Electric Company officials advised the U.S. Environmental Protection Agency that they were in doubt as to whether or not the Lansing plant was a waste treatment, storage, or disposal facility under the Resource Conservation and Recovery Act, and that the application was submitted as a precaution in case this location was such a facility (Ref. 5). On December 16, 1981, the U.S. EPA advised Sprague Electric Company that they acknowledged receipt of Sprague's request for withdrawal of their permit application under RCRA (Ref. 6). On March 4, 1982, the North Carolina Solid and Hazardous Waste Management Branch (NCHWMB) granted Sprague's request for deletion as a treater, storer, or disposer of hazardous waste under RCRA (Ref. 7). On July 1, 1983, Sprague was also deleted as a large quantity generator of hazardous waste under RCRA (Ref. 8). On November 14, 1983, Sprague advised the NCHWMB that a Part B application for the facility would not be filed. On March 13, 1984, the NCHWMB advised Sprague that their interim status was formally terminated (Ref. 9). The facility is currently listed as a small quantity generator (Ref. 10).

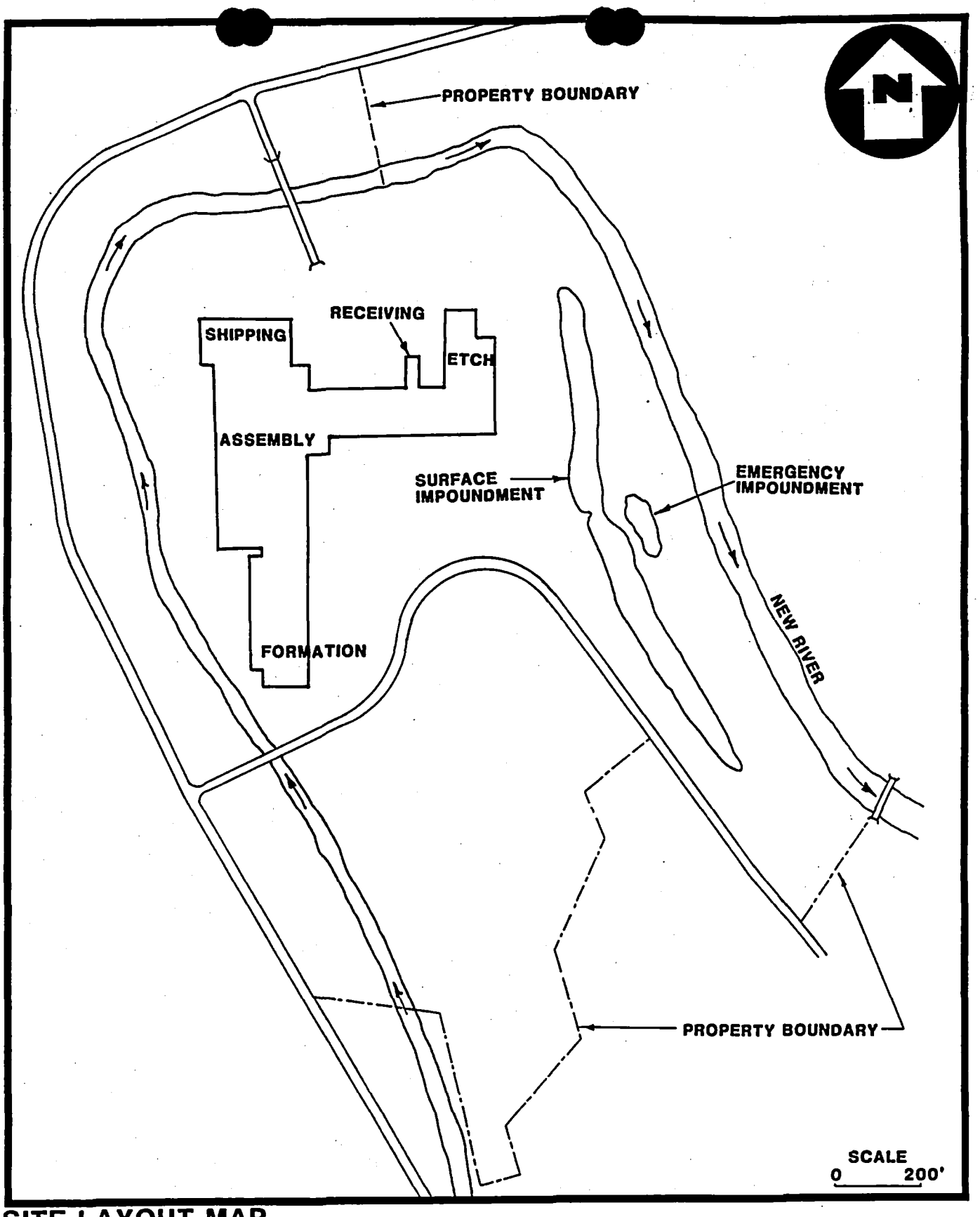


BASE MAP IS A PORTION OF THE U.S.G.S. 7.5 MINUTE QUADRANGLE WARRENSVILLE 1966, JEFFERSON 1968, NORTH CAROLINA.

SITE LOCATION MAP
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

FIGURE 1

NUS CORPORATION



SITE LAYOUT MAP
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

FIGURE 2

NUS CORPORATION

1.7 Regional Hydrogeology

The Sprague Electric Company is located in the Piedmont - Blue Ridge physiographic province. This regime is characterized by a thick layer of residual soil and weathered rock overlying fractured crystalline and metamorphosed sedimentary rocks (Ref. 11, pp. 251, 252). The immediate area around the facility consists of high hills and steep sloped, narrow valleys (Ref. 2). Ashe County has a moist, temperate climate with a net annual rainfall of 18 inches, and a 1-year, 24-hour rainfall of 2.5 inches (Refs. 12, 13).

Geologically, the area of the electric company is underlain by residual soils ranging from 25 to 36 feet thick. The residuum is underlain by blue and white metamorphosed granite rocks of the Late Proterozoic era (Ref. 14). The aquifer used in the area is the crystalline rock aquifer system (Ref. 16, p. 331). Two wells drilled in the city of Warrensville, 1.5 miles south of the facility, were 80 and 130 feet deep. The 80-foot deep well reached water at 70 and 75 feet below land surface (bls). The 130-foot deep well reached water at 50 feet bls (Ref. 14). Water levels in the immediate area of the facility would be less than 25 feet bls because of its close proximity to the New River (Ref. 2).

Groundwater flow along the fractures in the bedrock and in the intergranular pore spaces of the residual soils. The porosity and the hydraulic conductivity of the soil decreases as depth increases (Ref. 17, pp. 12-14). Some igneous dikes are found in the Piedmont regime, but these have few fractures and contain little water (Ref. 17, p. 10). The residual soils and bedrock are hydrologically interconnected. The unsaturated zone of the residuum represents the layer of lowest hydraulic conductivity. Soils of this type have been shown to have hydraulic conductivities that range between 1×10^{-3} and 1×10^{-5} cm/sec (Ref. 18, p. 29).

2.0 SAMPLING INVESTIGATION

A total of 17 environmental samples will be collected at various onsite and offsite locations during this investigation. Samples will consist of surface and/subsurface soil, sediment, surface water and groundwater. Sample codes, descriptions, and rationale are presented in Table 1 actual sampling locations are presented on Figure 3. Sample locations may change as field conditions warrant. Samples will be analyzed for extractable and purgeable organic compounds, pesticides, PCBs, cyanides, and metals. Analyses will be performed under the Contract Laboratory Program (CLP).

TABLE 1

SAMPLE LOCATIONS AND RATIONALE
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

Sample Code	Sample Type	Location	Rationale
SE-SS-01	Surface Soil	Background location south of the facility	To assess background conditions
SE-SS-02	Surface Soil	Near suspected drum storage area	To determine presence or absence of contaminants
SE-SS-03	Surface Soil	Near potential waste disposal area	To determine presence or absence of contaminants
SE-SB-01	Subsurface Soil	Background location south of the facility	To assess background conditions
SE-SB-02	Subsurface Soil	Near suspected drum storage area	To determine presence or absence of contaminants
SE-SB-03	Subsurface Soil	Near potential waste disposal area	To determine presence or absence of contaminants
SE-SD-01	Sediment	Background location upstream on the New River	To assess background conditions
SE-SD-02	Sediment	Downstream location on the New River	To determine presence or absence of contaminants
SE-SD-03	Sediment	Downstream location on the New River	To determine presence or absence of contaminants
SE-SD-04	Sediment	Downstream location on the New River	To determine presence or absence of contaminants
SE-SW-01	Surface Water	Background location upstream on the New River	To assess background conditions
SE-SW-02	Surface Water	Downstream location on the New River	To determine presence or absence of contaminants
SE-SW-03	Surface Water	Downstream location on the New River	To determine presence or absence of contaminants
SE-SW-04	Surface Water	Downstream location on the New River	To determine presence or absence of contaminants
SE-IW-01	Groundwater	Background location south of facility	To assess background conditions

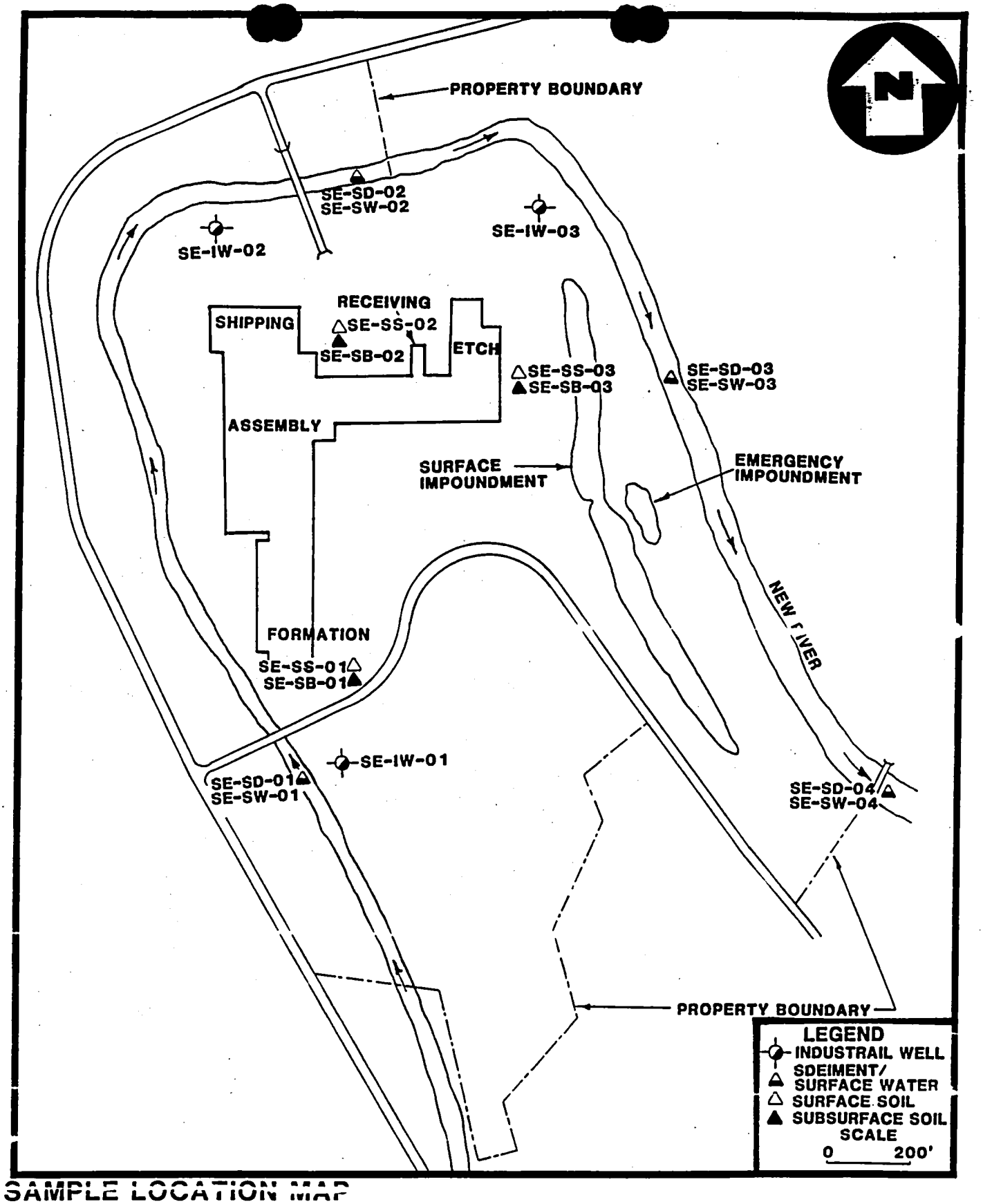
SE Sprague Electric
SS Surface Soil
SB Subsurface Soil
SD Sediment
SW Surface Water
IW Groundwater

TABLE 1

SAMPLE LOCATIONS AND RATIONALE
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

Sample Code	Sample Type	Location	Rationale
SE-IW-02	Groundwater	Downgradient of potential disposal area	To determine presence or absence of contaminants
SE-IW-03	Groundwater	Downgradient of potential disposal area	To determine presence or absence of contaminants

SE Sprague Electric
SS Surface Soil
SB Subsurface Soil
SD Sediment
SW Surface Water
IW Groundwater



SAMPLE LOCATION MAP
SPRAGUE ELECTRIC COMPANY
LANSING, ASHE COUNTY, NORTH CAROLINA

FIGURE 3

NUS CORPORATION

2.1 Surface and Subsurface Soil Sampling

Three surface soil and three subsurface soil samples will be collected. One of each media type will be collected from an upgradient location south of the facility to assess background conditions. Two additional surface soil and two subsurface soil sample will be collected from potential disposal areas to determine presence or absence of contaminants.

2.2 Sediment and Surface Water Sampling

Four sediment and four surface water samples will be collected. One of each media type will be collected from a location upstream of the facility to assess background condition. Two additional sediment and two surface water samples will be collected downgradient of the facility from onsite drainage pathways to determine presence or absence of contaminants. One downstream sediment and surface water samples will be collected to determine downstream conditions.

2.3 Groundwater Sampling

Three existing onsite industrial groundwater well samples will be collected. One of these well locations will be located upgradient (south) of the facility to assess background conditions. Two additional downgradient groundwater well samples will be collected to determine presence or absence of contaminants. If groundwater samples are unobtainable from these wells due to their depths then temporary wells will be installed in place of them.

2.4 Analytical and Container Requirements

Sample containers used will be in accordance with the requirements specified in the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986. The following is a description of the analysis and types of containers required.

Analyses	Container	Preservatives**
Ext. Organics, Water	1 gal., amber glass*	None
Volatile Organics, Water	40 ml., glass vial*	4 drops conc. HCL to pH <2

Analyses	Container	Preservatives**
Metals, Water	1 liter, plastic	50% HNO_3 to pH <2
Cyanide, Water	1 liter, plastic	NaOH to pH >12
Ext. Organics, Soil/Sediment	8 oz., glass*	None
Volatile Organics Soil/Sediment	4 oz., glass*	None
Inorganics, Soil/Sediment	8 oz., glass*	None

* Sample container lids are lined with teflon.

** All samples will be iced to 4°C upon collection.

2.5 Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation will be in accordance with the standard operating procedures as specified in Section 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

All laboratory analyses and laboratory quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

REFERENCES

1. Stan Atwood, North Carolina Solid and Hazardous Waste Management Branch, letter to Denise Bland, EPA NC CERCLA Project Officer, November 27, 1985. Subject: Preliminary Assessment Report.

2. U.S. Geological Survey, 7.5 minute series Topographic Quadrangle Maps of North Carolina: Warrensville 1966, Jefferson 1968, Grassy Creek 1966, Park, 1978, scale 1:24,000.

3. Stan Atwood, North Carolina Solid and Hazardous Waste Management Branch, letter to file, November 19, 1985. Subject: Sprague Electric Company.

4. EPA Notification of Hazardous Waste Site (EPA Form 3510-1) for Sprague Electric Company. Completed by Robert D. Smith, V.P., Materials and Manpower, Sprague Electric Company, November 17, 1980.

5. Fred A. Windover, Sprague Electric Company, letter to EPA Region IV, November 17, 1980. Subject: Hazardous Waste Permit Application for Sprague Electric Company

6. James H. Scarbrough, Chief, Residuals Management Branch, letter to Fred A. Windover, Sprague Electric Company, December 16, 1981. Subject: Acknowledgement of request for withdrawal of RCRA permit application.

7. O.W. Strickland, Head, North Carolina Solid and Hazardous Waste Management Branch, letter to Fred A. Windover, Sprague Electric Company, March 4, 1982. Subject: Notification of facility status change.

8. O.W. Strickland, Head, North Carolina Solid and Hazardous Waste Management Branch, letter to Edward A. Stone, Sprague Electric Company, July 1, 1983. Subject: Notification of facility status change.

9. O.W. Strickland, Head, Solid and Hazardous Waste Management Branch, letter to Edward A. Stone, Sprague Electric Company, March 13, 1984. Subject: Sprague Electric Company.

10. North Carolina Department of Human Resources, Solid and Hazardous Waste Management, Alphabetical List of Hazardous Waste Facilities, August 10, 1989. Subject: Sprague Electric Company.

11. Linda Aller, et al., DRASTIC: A Standardized System for Evaluating Ground-Water Pollution Using Hydrogeologic Settings, EPA-600/2-87-035 (Ada, Oklahoma: EPA, April 1987), pp. 251, 252.

12. U.S. Department of Commerce, Climatic Atlas of the United States (Washington, D.C.: GPO, June 1968) Reprint: 1983, National Oceanic and Atmospheric Administration, pp. 43, 63.

13. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO, 1961), p. 93.

14. Mrs. Ray Taylor, Taylor Well Drilling, telephone conversation with Brant McCanless, NUS Corporation, March 12, 1990. Subject: Geology and groundwater levels in the Warrensville, North Carolina area.

15. Philip M. Brown, et al. Geologic Map of North Carolina, scale 1:500,000 (Department of Natural Resources and Community Development, Division of Land Resources, 1985).

16. U.S. Geological Survey, National Water Summary 1984: Hydrologic Events, Selected Water Quality Trends, and Ground-Water Resources, Water Supply Paper 2275 (1984), pp. 329-334.

17. Charles C. Daniel, III and N. Bonar Sharpless, Ground-Water Supply Potential and Procedures for Well-Site Selection Upper Cape Fear River Basin (North Carolina Department of Natural Resources and Community Development, Raleigh, North Carolina, October 1983), pp. 10, 12-15.

18. R. Allan Freeze and John A. Cherry, Groundwater (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979), p. 29.

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

November 15, 1990

Mr. John Alley
District Environmental Supervisor
Appalachian District Health Department
Route 5, Box 199
Boone, North Carolina 28607

RE: Phase II Screening Site Investigation
Sprague Electric Company
NCD 003 167 780

Dear Mr. Alley:

David Lilley of the North Carolina Superfund Section spoke with Ms. Nancy Frost of your office today to notify you that the EPA Field Investigation Team (FIT) will conduct a screening site investigation of the subject site located in Ashe County, North Carolina. The investigation will be conducted on December 10, 1990 by Eric Corbin of NUS Corporation.

The purpose of this investigation 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 take samples on and around the site to determine if a hazardous condition exists. Additionally, they will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

This investigation 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 investigation team at the site. If so, please contact Mr. Eric Corbin at 1-800-888-7710 and he will coordinate a meeting. I am enclosing background data on the site for your information.

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

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

Enclosures

cc: Gordon Layton
Doug Holyfield
Steve Reid
Pat Bowden
David Lilley
Ann Rudd
File

RECEIVED
JUL 17 1990
SUPERFUND SECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

4WD-WPB

JUL 12 1990

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

Dear Ms. DeRosa:

Enclosed for your files are 8 Screening Site Inspection, Phase I reports prepared by the Region IV Field Investigation Team, NUS Corporation. The site names and their determinations are as follows:

Madison County Cyanide Site	NCD980848782	NFRAP
Proctor Chemical Co., Inc.	NCD048469993	NFRAP
Spague Electric Company	NCD003167780	SSI Phase II
Wilkes County Municipal Landfill	NCD980557896	NFRAP
Sultzer Ruti Incorporated	NCD980558803	NFRAP
Waxhaw Storage Tanks	NCD981030836	SSI Phase II
Swannonoa Landfill	NCD980557987	SSI Phase II
Singer Company Bryson	NCD098765506	SSI Phase II

If you have any questions please contact me at (404) 347-5065.

Sincerely,

Deborah A. Vaughn-Wright

Deborah A. Vaughn-Wright
Project Manager

Enclosure

see PIT
file
PP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

4WD-WPB

NOV 09 1990

RECEIVED
NOV 15 1990
SUPERFUND SECTION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Mickey Miller
Sprague Electric Co.
Highway 194
Lansing, North Carolina 28643

RE: Sprague Electric Co.
Lansing, North Carolina
NCD003167780

Dear Mr. Miller:

The United States Environmental Protection Agency (EPA), pursuant to the authority and requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act (SARA), Public Law 99-499, is planning to conduct an investigation of the above referenced site. Sprague Electric Co. is located on Highway 184, Lansing, North Carolina. EPA has reason to believe that there may be a release or threat of a release of hazardous substances from the site into the surrounding environment. The purpose of this investigation is to determine the nature and extent of contamination at the site and to determine what, if any, further response action would be appropriate.

As per your telephone conversation with me on November 7, 1990, EPA was granted permission for access to your property beginning on or about December 10, 1990, and continuing through the completion of the investigation on or about December 12, 1990. Activities to be conducted during the investigation include:

1. Inspect, sketch, and photograph the premises;

2. Collect surface and subsurface soil samples;

3. Collect groundwater and subsurface water samples;

4. Collect sediment samples;

5. Conduct air monitoring;

6. Transportation of equipment onto and about the site as necessary to accomplish the activities above, including trucks and sampling equipment.

The above sampling activities will be conducted by personnel from EPA Region IV's Field Investigation Team (FIT). Mr. Eric Corbin of FIT will contact you prior to the actual site visit to make final arrangements and note any changes.

Split samples will be made available if requested. However, you will be required to furnish you own containers as well as your own laboratory analyses.

If you have any questions, please contact me at (404) 347-5065. Your cooperation in this matter is appreciated.

Sincerely,

Deborah A. Vaughn-Wright

Deborah A. Vaughn-Wright
Environmental Scientist

cc: Pat DeRosa, NCDEHNR
Joan Dupont, NUS Corporation
Mr. Bryan Williams, NUS Corporation

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

22 August 1990

Mr. Jim Johnson
Water Quality Section
DEM - Winston-Salem Regional Office
NC DEHNR
825 North Point Boulevard
Winston-Salem, NC 27106-3256

SUBJECT: Sprague Electric Company
NCD 003 167 780
Lansing, Ashe County, NC

Dear Mr. Johnson:

Please find enclosed a copy of the Preliminary Assessment and Phase I Screening Site Investigation for the subject site. US EPA has tentatively scheduled the Phase II Screening Site Investigation for sometime in December of this year. We will be glad to inform you of the date of the on-site inspection following notification by US EPA.

If you have any questions or require additional information, please feel free to contact me at (919)733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch

Attachments

cc: Steve Phibbs

PD/jo/letters.pd

22 August 1990

TO: File

FROM: Pat DeRosa PD

RE: Sprague Electric Company
NCD 003 167 780

On August 22, 1990, I spoke by telephone with Jim Johnson, Water Quality Section, DEM Winston-Salem Regional Office (919)761-2351 regarding the subject site. Mr. Johnson was concerned about the process waste lagoons on site. He said that he had recently discovered that these lagoons had never been permitted by DEM and that permits were indeed required. Apparently, the lagoons had been mistakenly omitted during the permitting process. He checked with Steve Phibbs, Hazardous Waste Section, and verified that these lagoons were not required to be permitted under RCRA. Currently, the Sprague facility holds numerous NPDES permits, however, these permits do not cover the lagoons. The facility has a WWTP which handles only its domestic waste. This discharge, along with five non-contact water discharges, are permitted by DEM. Mr. Johnson said that some of the old lagoons on site have been closed and some have even been mined subsequent to closing due to their high aluminum content. Mr. Johnson indicated that DEM will be requiring Sprague to get permits for all its active lagoons. In addition, they are urging Sprague to install a waste treatment system to remove most of the contaminants prior to discharging wastewater to the lagoons. Mr. Johnson said that the closed lagoons will not be covered under the permits.

I told Mr. Johnson that I would send him a copy of our PA and the Phase I SSI recently completed by EPA FIT. EPA has recommended that a Phase II SSI be conducted at this site. I told Mr. Johnson that he would be contacted when the Phase II was scheduled. Debbie Vaughn-Wright at EPA (404)347-5065 indicated that the Phase II was tentatively scheduled for December 1990.

PD/jo/memos.pd

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

30 January 1990

Mr. Carl D. Tuttle
Health Director
Ashe County Health Department
P.O. Box 208
Jefferson, NC 28640

RE: Off-site Reconnaissance
Sprague Electric Co. NCD 003 167 780

Dear Mr. Tuttle:

David Lilley of the NC Superfund Section spoke with you today to notify you that the EPA Field Investigation Team (FIT) will conduct an off-site reconnaissance of the subject site located in Lansing, NC. The reconnaissance will be conducted on 12-14 February 1990 by Eric Corbin of NUS Corporation.

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.

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 Eric Corbin at 1-800-888-7710 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,

Grover Nicholson, Head
CERCLA Branch
Superfund Section

GN/db/sitenot.doc

Enclosures

cc: Gordon Layton
Doug Holyfield
Steve Reid
Lois Walker
Ann Rudd
David Lilley
File

Federal

Trip Notification & Authorization

Prepared by: David Lilly

Today's Date: 1-29-90

Site Trip

Date of Trip: 2-12 to 2-14, 1990

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

NCD#: 003 167 780 **Site Name:** Sprague Electric Co.
City: Lansing **County:** Ashe

Reason for Trip: offsite reconnaissance (EPA FIT)

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

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Mr. Carl D. Tuttle Title: Health Director
(Note if Dr., M.P., etc.)

Telephone Number: (919) 246 - 9449

Project Team Leader: Eric Corbin

Assistants: _____, _____, _____

Authorized by: David B. Lilly
Industrial Hygienist

Attach To Notification Form: 4 copies each: Preliminary Assessment Form (First page only)
Notification Form
EPA Transmittal Letter

Staff Notification Procedures: Use Black Ink or Typewriter only*

1. This form goes to Data Management Coordinator (DMC) 10 days prior to trip
2. If date of trip changes - note change. Mark "X" if cancelled.
3. Day after trip, submit to Lee Crosby a short paragraph on site trip.

Notes: Health Department Official Contacted: Mr. Carl Tuttle
Back Up Letter Required: Yes ✓ No ___
notified Mr. Tuttle on 1-30-90 DBL

NUS CORPORATION

1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

RECEIVED
JAN 29 1990
SUPERFUND SECTION

C-586-1-0-192

January 25, 1990

Mr. Grover Nicholson
Superfund Branch
North Carolina Department of Human Resources
Post Office Box 2091
Raleigh, North Carolina 27602-2091

Subject: Scheduled FIT Activities in North Carolina

Dear Mr. Nicholson:

The EPA Field Investigation Team (FIT) will be visiting the state of North Carolina during February 1990. FIT will be conducting offsite reconnaissances and gathering information to investigate the following sites:

Date	EPA ID No.	Site Name	County	FIT Project Manager
Feb. 12-14	NCD003155587	Scott Aviation of Monroe	Union	Matt McCoy
	NCD000616516	Scovill Inc. Security Product	Union	Matt McCoy
	NCD981030836	Waxhaw Storage Tanks	Union	Matt McCoy
	NCD980729651	Southern Latex Corp.	Cabarrus	Brooke Bittinger
	NCD003152659	Reichold Chemical, Inc.	Cabarrus	Brooke Bittinger
Feb. 12-14	NCD980502991	Jacksonville Landfill	Onslow	Robert Rose
	NCD057451270	Singer Company, Inc.	New Hanover	Dale Trimpe
	NCD000773515	GA-Pacific Corp. Hardwood Sawmill	Duplin	Dale Trimpe
Feb. 12-14	NCD003167780	Sprague Electric Co.	Ashe	Eric Corbin
	NCD980557896	Wilkes Co. Municipal Landfill	Wilkes	Eric Corbin
	NCD003229358	SCM Proctor-Silex	Surry	Cliff Leonard
	NCD003464765	Vaughan-Bassett Furniture Co.	Surry	Cliff Leonard

Please notify the appropriate local agencies. I appreciate your help in this matter.

Very truly yours,

Joan J. Dupont

Joan J. Dupont
North Carolina Coordinator

Approved:

JJD/tb

cc: Kelly Cain

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

27 November 1985

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

SUBJECT: Preliminary Assessment Report
Sprague Electric Co. NC D003167780
Highway 194
Lansing, NC 28643

Dear Ms. Bland:

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

Sprague Electric Company is about a 60 acre site located off NC 194 south of Lansing, NC. The plant has manufactured aluminum electrolytic capacitors since 1953. No other business has ever occupied the site.

The company uses aluminum foil, nitric acid, tartaric acid, sodium hydroxide, calcium hydroxide, sodium chloride, and dimethylformamide (DMF) in the production process. Aluminum oxides are formed when the aluminum foil is etched in an electrochemical bath. Aluminum oxides are recovered from the waste water, by filtering and settling in a lagoon, and sold. Effluent pH was reported between 3 and 4. Waste DMF is shipped off site in drums.

Several wells were reported to be on the site; however, only one is presently in use. The well water is tested periodically for bacteria and iron content. Soil, well, and impoundment sampling is recommended to confirm that no hazardous constituents are present. Based on the available information, a low priority is recommended for inspection of this site.

On 27 November 1985, this Preliminary Assessment was reviewed by CERCLA Unit personnel and by the following representatives from the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management: Doug Dixon, Groundwater Section; Glen Ross, Air Quality Section; and Howard Bryant, Water Quality Section.

If you have any questions, please call me at (919) 733-2178.

Sincerely,

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

SA/tb/0221b

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003167780

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Sprague Electric Co.	Highway 194

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Lansing	NC	28643	Ashe	005	5

09 COORDINATES LATITUDE	LONGITUDE
36 28 48 .N	08 1 30 10 .W

10 DIRECTIONS TO SITE (Starting from nearest public road)

Take highway 194 South of Lansing about 1½ to 2 miles. Plant is located on the left across the river.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
General Cable Corp.	

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Greenwich	CT		( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Sprague Electric Co.	87 Marshall Street

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
North Adams	MA	01247	(413 664-4411

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: ___/___/___ (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

1953 (BEGINNING YEAR) | _____ (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Sprague Electric manufactures Aluminum electrolytic capacitors. Nitric acid and sodium hydroxide are used and consumed in the process. Waste water (pH 3 to 4) containing aluminum oxides is held in a surface impoundment. The aluminum oxides settle and are mined and sold. Nitric acid is stored in above ground tanks. Dimethylformamide (DMF)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

is also used. DMF wastes are stored in drums and transported off site. Several wells were reported on site; only one is currently used. Potential hazards exist for spills of nitric acid. No hazardous constituents were reported for their waste stream.

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
Ron Watson, Plant Engineer	Sprague Electric Co.	(919) 384-2551

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Stan Atwood/Pat DeRosa	NC DHR/DHS	SHW Mgmt. Br.	(919) 733-2178	11 / 20 / 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D003167780

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ *(Specify)*
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE *(Measures of waste quantities must be independent)*

TONS _____
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ☐ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Dimethylformamide	----	Drums		

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Nitric Acid	7697372	FDS		
FDS	Sodium Hydroxide	1310732	FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

1. Permanent Files, NC Solid and Hazardous Waste Mgmt. Branch, Raleigh, NC.
2. Keith Masters, Waste Management Specialist, Bakersville, NC, personal communication, 11-19-85.
3. Ron Watson (Plant Engineer), and Gene Hunsucker (Mgr. Foil Processing), Sprague Electric, Lansing, NC, personal communication, 11-19-85.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003167780

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Large surface impoundment.

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

North Fork of the New River traverses the site.

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

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

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

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Surface impoundment or spills.

01 [ ] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [X] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Handling and use of nitric acid.

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

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D003167780

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff/standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

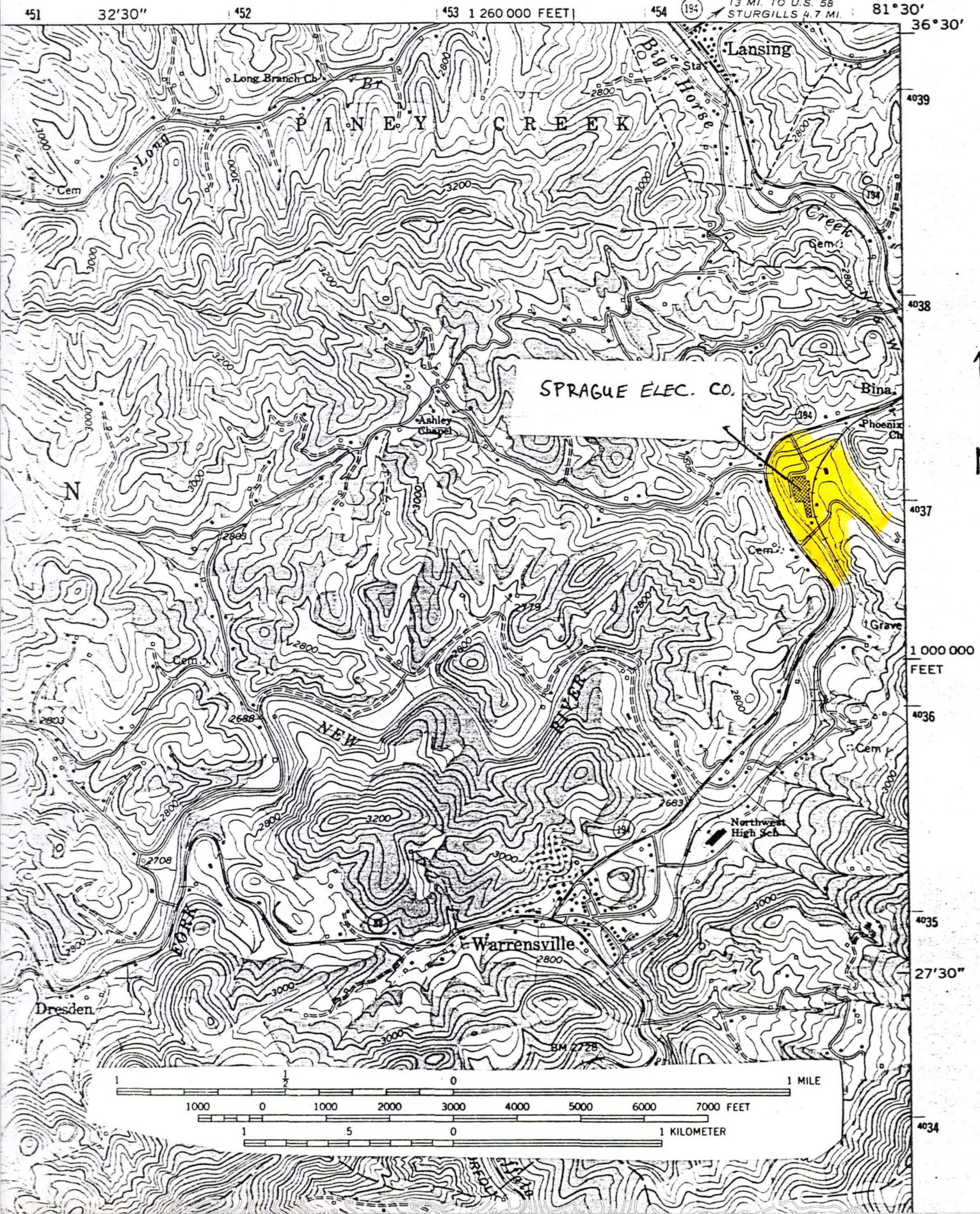
Waste stream was not reported to contain any hazardous constituents. The waste water pH was reported at 3 to 4.

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

As previously cited.

WARRENSVILLE QUADRANGLE
NORTH CAROLINA—ASHE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

4757 III SW
(GRASSY CREEK)



Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

March 13, 1984

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Edward A. Stone
Sprague Electric Co.
87 Marshall St.
North Adams, Massachusetts 01247

Re: NCD003167780

Dear Mr. Stone:

On November 14, 1983, in response to a formal call for part B of a permit application, an officer of your company advised this Branch that a part B application would not be filed. Following this, on January 29, 1984 and February 1, 1984, the Solid and Hazardous Waste Management Waste Management Branch of the Department of Human Resources published a legal notice in the Raleigh papers, announcing its intention to deny a permit and terminate interim status for a number of plants, including yours.

You are now advised that this plant has been denied a permit as a hazardous waste treatment, storage, or disposal facility and its interim status has been formally terminated. As of March 30, 1984, the operators of it may not treat or dispose of hazardous waste, nor store it for more than 90 days from the of accumulation.

If you have any questions about this matter, please call or write to Mr. Keith Lawson at this office.

Very sincerely,

O. W. Strickland, Head
Solid and Hazardous Waste Management Branch
Environmental Health Section

OWS/KL: tl

HAZARDOUS WASTE MANIFEST

ORIGINAL — NOT NEGOTIABLE

84-1
MANIFEST DOCUMENT NUMBER

554415
SHIPPER NUMBER

VAN WATERS & ROGERS TRUCK
NAME OF CARRIER (SCAC) CARRIER NUMBER

IDENTIFICATION

	12 DIGIT EPA ID #	COMPANY NAME, MAILING ADDRESS, AND TELEPHONE NUMBER	DATE SHIPPED OR RECEIVED
GENERATOR/ SHIPPER	NCD00316780	SPRAGUE ELECTRIC CO P O BOX 1, SPRAGUE ROAD, LANSING, N. C. 28643 919-384-2551	1-17-84
TRANSPORTER # 1	NCD003466919	AVAN WATERS & ROGERS	
TRANSPORTER # 2 (If required)		P O BOX 3226 3001 HOLT'S CHAPEL RD	
DF TREATMENT STORAGE OR DIS— POSAL FACILITY		GREENSBORON. C. 27402	
TSDF TREATMENT STORAGE OR DIS— POSAL FACILITY		VAN WATERS & ROGERS EPA NO. NCD003466919 ALTERNATE	

WASTE INFORMATION

NO. OF UNITS & CONTAINER TYPE	HM	DESCRIPTION AND CLASSIFICATION (Proper Shipping Name, Class and Identification Number per 172.101, 172.202, 172.203	UN # or NA #	EXEMPTION OR NO LABELS REQUIRED	UNITS WT/VOL	TOTAL QUANTITY	RATE	CHARGES (For Carrier Use Only)
15 STEEL DRUMS	X	DIMETHYLFORMAMIDE ,HAZARD CLASS COMBUSTABLE	UN 2265	COMBUST-ABLE	6150#	825 GAL.		

SPECIAL HANDLING INSTRUCTIONS

COMBUSTABLE WASTE LIQUID, HAZARDOUS FUMES, AVOID SKIN CONTACT

COMMENTS

n "Collect on Delivery" shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

PLACARDS TENDERED
Yes ☒ No ☐

EMIT
.O.D. TO:
DDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Note—Where the rate is dependent on value, shippers required to state specifically in writing the agreed or lared value of the property.
The agreed or declared value of the property is hereby cifically stated by the shipper to be not exceeding.

per

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

TOTAL CHARGES: $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CERTIFICATION

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the U.S. Environmental Protection Agency

Joe W. Young 1-17-84
GENERATOR'S SIGNATURE DATE

This is to certify acceptance of the hazardous waste shipment.

1-17-84
TRANSPORTER #1 SIGNATURE & DATE TRANSPORTER #2 SIGNATURE & DATE (If required)

This is to certify acceptance of the hazardous waste for treatment, storage or disposal.

TSDF SIGNATURE DATE

2

HAZARDOUS WASTE MANIFEST

ORIGINAL — NOT NEGOTIABLE

RECEIVED AUG 25 1983 SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

83-2
MANIFEST DOCUMENT NUMBER

554415
SHIPPER NUMBER

AXION CROSS TRUCK
NAME OF CARRIER (SCAC)

CARRIER NUMBER

IDENTIFICATION

	12 DIGIT EPA ID #	COMPANY NAME, MAILING ADDRESS, AND TELEPHONE NUMBER	DATE SHIPPED OR RECEIVED
GENERATOR/ SHIPPER	NCD00316780 SG	SPRAGUE ELECTRIC CO P O BOX 1, LANSING, N. C. 28643 PHONE 919-384-2551	8-22-83
TRANSPORTER # 1	NCD003466919	AXION CROSS INDUSTRIAL CHEMICAL	
TRANSPORTER # 2 (if required)		3001 HOLT'S CHAPEL RD., P O BOX 3226	
TSDF TREATMENT STORAGE OR DISPOSAL FACILITY		GREENSBORO, N. C. 27402 PHONE 919-273-0511	
TSDF TREATMENT STORAGE OR DISPOSAL FACILITY		AXION CROSS/EPA NO: NCD003466919 ALTER NAT-E TSDF	

WASTE INFORMATION

NO. OF UNITS & CONTAINER TYPE	HM	DESCRIPTION AND CLASSIFICATION (Proper Shipping Name, Class and Identification Number per 172.101, 172.202, 172.203	UN # or NA #	EXEMPTION OR NO LABELS REQUIRED	UNITS WT/VOL	TOTAL QUANTITY	RATE	CHARGES (For Carrier Use Only)
15 STEEL DRUMS	X	DIMETHYLFORMAMIDE, HAZARD CLASS COMBUSTABLE	UN 2265	COMBUST-ABLE	6150#	825 GAL.		
		This waste is ~~sent~~ recovered for the DMF		JR		8/26/83		

SPECIAL HANDLING INSTRUCTIONS

COMBUSTABLE WASTE LIQUID, HAZARDOUS FUMES, AVOID SKIN CONTACT

COMMENTS

On "Collect on Delivery" shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

PLACARDS TENDERED Yes ☒ No ☐

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

Note—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding.

$ _____ per _____

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

_____ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

TOTAL CHARGES: $

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CERTIFICATION

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the U.S. Environmental Protection Agency

Joe W. Young 8-22-83

GENERATOR'S SIGNATURE DATE

This is to certify acceptance of the hazardous waste shipment.

X David H. Bos 8/22/83

TRANSPORTER #1 SIGNATURE & DATE

TRANSPORTER #2 SIGNATURE & DATE (if required)

This is to certify acceptance of the hazardous waste for treatment, storage or disposal.

TSDF SIGNATURE DATE

2

STYLE F-50 c LABELMASTER CHICAGO IL 60626

DATE: 19 November 1985

TO: File

FROM: Stan Atwood

SUBJECT: Sprague Electric Co. NC D003167780

I called Sprague Electric Co., (919) 384-2551, and talked to Arlie Keith, Manager Manufacturing Eng., Ron Watson, Plant Eng., and Gene Hunsucker, Manager Foil Processing.

Sprague Electric has manufactured aluminum electrolytic capacitors since 1953 and is the only industry that has ever occupied the site. Raw materials include aluminum foil, nitric acid, tartaric acid, sodium hydroxide, calcium hydroxide, sodium chloride and dimethylformamide. Sulfuric acid was used in the past. Nitric acid is stored in tanks outside the building.

The manufacturing process involves etching of aluminum foil in an electrochemical bath. Aluminum oxides are formed in the process which are filtered and settled in a lagoon. The aluminum oxides are mined and sold. Effluent to the lagoon has a pH of 3 to 4. Dimethylformamide (DMF) is also used in the process. Spent DMF is stored in drums and shipped off site. Waste were reported to have been handled in essentially the same manner since operations began.

There are several wells on site - only one is presently being used. The wells are sampled periodically and tested by Burlington Labs for bacteria, BOD, and iron. I requested a copy of lab results and they said they would mail me a copy.

SA/tb/0221b

DATE: 19 November 1985

TO: File

FROM: Stan Atwood

SUBJECT: Sprague Electric Co. NC D003167780

I called Keith Masters (704) 688-4237 about Sprague Electric Co. in Ashe County. He said he had never visited the site but that he had talked to them twice by phone regarding the nature of their wastes. The company accumulates dimethylformamide in 55 gallon drums. Keith had copies of manifests to Caldwell Systems where the waste was incinerated. Caldwell Systems also analyzed the waste and reported it as non-hazardous.

Keith also gave me a contact, Ivey S. Goodman (919) 384-2551. He is purchasing agent with Sprague Electric.

SA/tb/0221b

SPRAGUE ELECTRIC COMPANY

NORTH ADAMS, MASSACHUSETTS 01247

ROBERT D. SMITH
VICE PRESIDENT
CORPORATE MATERIALS
AND MANPOWER

RECEIVED
NOV 14 1983
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

November 8, 1983

Mr. Keith Lawson, Environmental Chemist
Solid and Hazardous Waste Management Branch
Environmental Health Section
P.O. Box 2091
Raleigh, NC 27602

Dear Mr. Lawson:

In accordance with your telephone conversation with our Mr. Edward Stone, this confirms that the Sprague Electric Company, Lansing, North Carolina plant withdrew its application as a hazardous waste treatment facility on February 6, 1981, which was acknowledged by the EPA Region IV by letter on December 16, 1981.

My understanding is this notification complies with the requirements of the letters dated November 3, 1983, and signed by Mr. O. W. Strickland.

Very truly yours,

Robert D. Smith

Robert D. Smith

RDS:rg
cc: E. A. Stone

Keith,

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

Date: July 1, 1983

Mr. Edward A. Stone
Sprague Electric Co.
87 Marshall St.
North Adams, Massachusetts

Re: Facility ID No. NCD003167780

Dear Mr. Stone:

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
☐	☐	treater
☐	☐	storer
☐	☐	disposer
☐	☐	small generator

We are advising 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 ☐ is not ☒ being cancelled.

Cordially,

O. W. Strickland, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

OWS

cc: Doug McCurry
EPA Region IV
Emil Breckling
Bob Apple
Jackie Blackburn

DHS Form 3048 3/82
Solid & Haz. Waste Mgt. Branch

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

June 1, 1983

Mr. Edward A. Stone
Sprague Electric Company
87 Marshall Street
North Adams, Massachusetts 01247

Dear Mr. Stone:

Thank you for sending our office the executed change in status form for your plant in Lansing, N. C. We do not anticipate any problem or complications in granting your request.

Purely as a formality, I have asked our field agent in this area, Mr. Robert Apple, to make a brief call at this plant and verify that none of your waste is hazardous. As soon as we hear from him, I will send you notice that the requested change has been made.

Very truly yours,

Keith Lawson

Keith Lawson, Environmental Chemist
Solid & Hazardous Waste Management Branch
Environmental Health Section

KL:ct

Department of Human Resources
Division of Health Services
Solid & Hazardous Waste Management Branch

APPLICATION FOR CHANGE IN CLASSIFICATION UNDER RCRA

Date: May 26, 1983

Company Name: Sprague Electric Company

Company Address: 87 Marshall Street, North Adams, MA 01247

EPA ID No: NC D003167780

Mr. O. W. Strickland, Head
Solid & Hazardous Waste Management Branch
Division of Health Services
P. O. Box 2091
Raleigh, N. C. 27602

Dear Mr. Strickland:

Our company requests the following change in its classification under RCRA (check all that apply):

Add As	Delete As	
☐	☒	generator
☐	☐	transporter
☐	☐	treater
☐	☐	storer
☐	☐	disposer
☐	☐	small generator

Our reason for this request is:

The modification or clarification of rules pertaining to TSD facilities eliminated the requirement to declare as a generator. See copies of letters, attached.

NOTE: Give any pertinent information. This may be a change in your process, a new calculation of the volume of your waste, new analyses of your waste, etc. Be specific. Please note that this is not a petition for delisting a listed waste, which requires totally different handling.

If your request takes you out of the regulated system, but you wish to retain your EPA ID No., please state why.

Firms taking some wastes for recycling have asked us to manifest which in turn has space for EPA ID number. Wastes are hazardous only because of characteristic, not listing.

(over)

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

Keith

Date: March 4, 1982

Mr. Fred A. Windover
Sprague Electric Company
87 Marshall Street
North Adams, Massachusetts 01247

Re: Facility ID NO. NCD003167780

Dear Mr. Windover:

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
☐	☒	treater
☐	☒	storer
☐	☒	disposer
☐	☐	small generator

We are advising 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 ☐ is not ☒ being cancelled.

Cordially,

O. W. Strickland

O. W. Strickland, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

OWS

cc: John Herrmann
EPA Region IV
Emil Breckling

Lansing RCRA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

DEC 16 1981

REF: 4AW-RM

Fred A. Windover
Sprague Electric Company
North Adams, MA 01247

Re: EPA ID No. NCD003167780/Lansing NC

Gentlemen:

This letter is to acknowledge receipt of your request for withdrawal of your application for a permit under the Resource Conservation and Recovery Act (RCRA), as amended. Your letter indicated that you no longer treat, store, or dispose of hazardous waste.

It has been our general experience that the RCRA regulations and the amendments which have been published since May 19, 1980, have caused confusion, and have been subjected to misinterpretation. This confusion on the part of the regulated community has been compounded, due to EPA's and the State's overlapping responsibilities for implementation of the hazardous waste regulatory program during the period of interim authorization.

Withdrawal of your permit application constitutes revokation of interim status, as defined by Section 3005(e) of the Act. Consequently, under the Federal program, you would no longer be allowed to treat, store, or dispose of hazardous waste. However, as you are probably aware, the State has been authorized to implement certain requirements of the program in lieu of the Federal regulatory requirements. Therefore, withdrawal of your applications also directly affect the State program.

In light of the foregoing, EPA plans to proceed as follows. EPA will place your file in our "suspense" file. This action, in essence, revokes you interim status under the Federal program. However, we will forward the request to the State for formal action. The State will contact you if further information relating to your request is required. If the State agrees that your waste is not hazardous, and that you do not need a RCRA permit, the State will notify you of this determination, and by carbon copy of this notification sent to EPA, your application will be formally withdrawn, and your file will be inactivated.

In conclusion, this letter should <u>not</u> be construed as EPA's concurrence with your determination that RCRA regulatory requirements are not applicable to your facility. Furthermore, this letter does not relieve you of your responsibility to comply with State and Local hazardous waste regulatory requirements.

Finally, your request to withdraw interim status means that you may not treat, store, or dispose of hazardous waste without a permit issued under the authority of §3005 of the Act and 40 CFR 264.

If for any reason you wish to reconsider this withdrawal request, please advise this office and the State within the next ten days. You should be receiving a formal response to your request from the State in the near future. If you require further clarification, please contact John Herrmann of my staff (404) 881-3433 or a representative of the State hazardous waste program.

Sincerely yours,

James H Scarbrough

James H. Scarbrough, Chief
Residuals Management Branch

ENVIRONMENTAL PROTECTION AGENCY

A&HMD -- Informal Memo

Date: 9/17/81

TO: John Harvanek

Subject: Sprague Elec. Co.

On Nov. 17, 80 hazardous waste that are neutralize on a tank, container, transport vehicle or vessel were exempted from regulation.

But this co. treats their waste on a surface impoundment.

Therefore, permit should not be withdrawn

2/22/82

From conversation with Mr. Ed Stone, I gather that the waste is brought to ~ pH 3 by mixing streams before it gets to the impoundment, so should be exempt.

FROM: [signature]

SPRAGUE ELECTRIC COMPANY

NORTH ADAMS, MASSACHUSETTS

FRED A. WINDOVER
ASSOCIATE GENERAL COUNSEL
AND ASSISTANT SECRETARY

February 6, 1981

EPA Region IV
RCRA Activities
345 Courtland, N.E.
Atlanta, Georgia 30308

Gentlemen:

Pursuant to my cover letter to you dated November 17, 1980 (photocopy enclosed for your convenience) which was attached to the Hazardous Waste Permit Application for the Sprague Electric Manufacturing Plant in Lansing, North Carolina, please be advised that after carefully reviewing the Environmental Protection Agency's Amendments regarding its Hazardous Waste Management System, which were promulgated on November 17, 1980, we have determined that the Sprague Electric Company's Lansing plant is not a waste treatment, storage, or disposal facility under the Resource Conservation and Recovery Act Regulations.

Very truly yours,

Fred A. Windover

FAW:gej

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

GENERAL INFORMATION

Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: N C D 0 0 3 1 6 7 7 8 0

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS: If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete Items II and IV-VI if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under 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 supplemental 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
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

1 SPRAGUE ELECTRIC COMPANY

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 ORTMAN JOHN FACILITIES ENG MGR	4 1 3 6 6 4 4 4 1 1

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 87 MARSHALL STREET

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 NORTH ADAMS	MA	0 1 2 4 7

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 HIGHWAY 194

B. COUNTY NAME

ASHE

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 LANSING	NC	2 8 6 4 3	

NTINUED FROM THE FRONT

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

A. FIRST: 3675 (specify) CAPACITORS - ELECTRONIC

B. SECOND: (specify)

C. THIRD: (specify)

D. FOURTH: (specify)

VIII. OPERATOR INFORMATION

A. NAME: SPRAGUE ELECTRIC COMPANY

B. Is the name listed in Item VIII-A also the owner? ☒ 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)

P (specify)

D. PHONE (area code & no.): A 413 664 4411

E. STREET OR P.O. BOX: 87 MARSHALL STREET

F. CITY OR TOWN: NORTH ADAMS

G. STATE: MA

H. ZIP CODE: 01247

IX. INDIAN LAND
Is the facility located on Indian lands? ☐ YES ☐ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): N NC00000019

D. PSD (Air Emissions from Proposed Sources): P

B. UIC (Underground Injection of Fluids): U

E. OTHER (specify): 4519 (specify) FILTER BACKWASH

C. RCRA (Hazardous Wastes): R

F. OTHER (specify): (specify)

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)

Manufacture aluminum electrolytic capacitors. Raw aluminum foil is etched formed, rolled, inserted in appropriate container, assembled, tested, packaged and shipped.

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
Robert D. Smith V. P., Materials & Manpower	Robert D. Smith	11/17/80

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

HAZARDOUS WASTE PERMIT APPLICATION

ENVIRONMENTAL PROTECTION AGENCY

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

S													T/A	C
F	N	C	D	0	0	3	1	6	7	7	8	0		1

1 2 - 13 14 15

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
23	24 - 29	

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, or a 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's 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.)* 71

[ ] 2. NEW FACILITY *(Complete item below.)* 71

C	YR.	MO.	DAY
8	5 3	0 3	1 5
15	73 74	75 76	77 78

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
73 74	75 76	77 78

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

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

[ ] 1. FACILITY HAS INTERIM STATUS 72

[ ] 2. FACILITY HAS A RCRA PERMIT 72

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 for 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, then 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 OF MEASURE CODE
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	Q
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 the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

S		T/A	C
C	D U P		1

1 2 - 13 14 15

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
	16 - 18	19 - 27	28	29 - 32		16 - 18	19 - 27	28	29 - 32
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 2	6000	E		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODE[illegible] F[illegible] DESCRIBING OTHER PROCESSES *(cod[illegible]4")*. [illegible]R EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

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 you 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 characteristics 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 annual 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 handled 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 appropriate 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 into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
For listed hazardous wastes: For each listed hazardous waste entered in column A, select the code*(s)* from the list of process codes contained in Item III 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 codes 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 possess 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 the 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 by 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 annual 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 enter "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 pounds 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 wastes 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 estimated 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

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE

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

F	N	C	D	0	0	3	1	6	7	7	8	0	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 28 048	081 30 010

VIII. FACILITY OWNER

☐ 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
Robert D. Smith V. P., Materials & Manpower	Robert D. Smith	11/17/80

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

CONTINUE ON PAGE

Continued from page 2.
NOTE: Photocopy this page before completing [illegible] have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

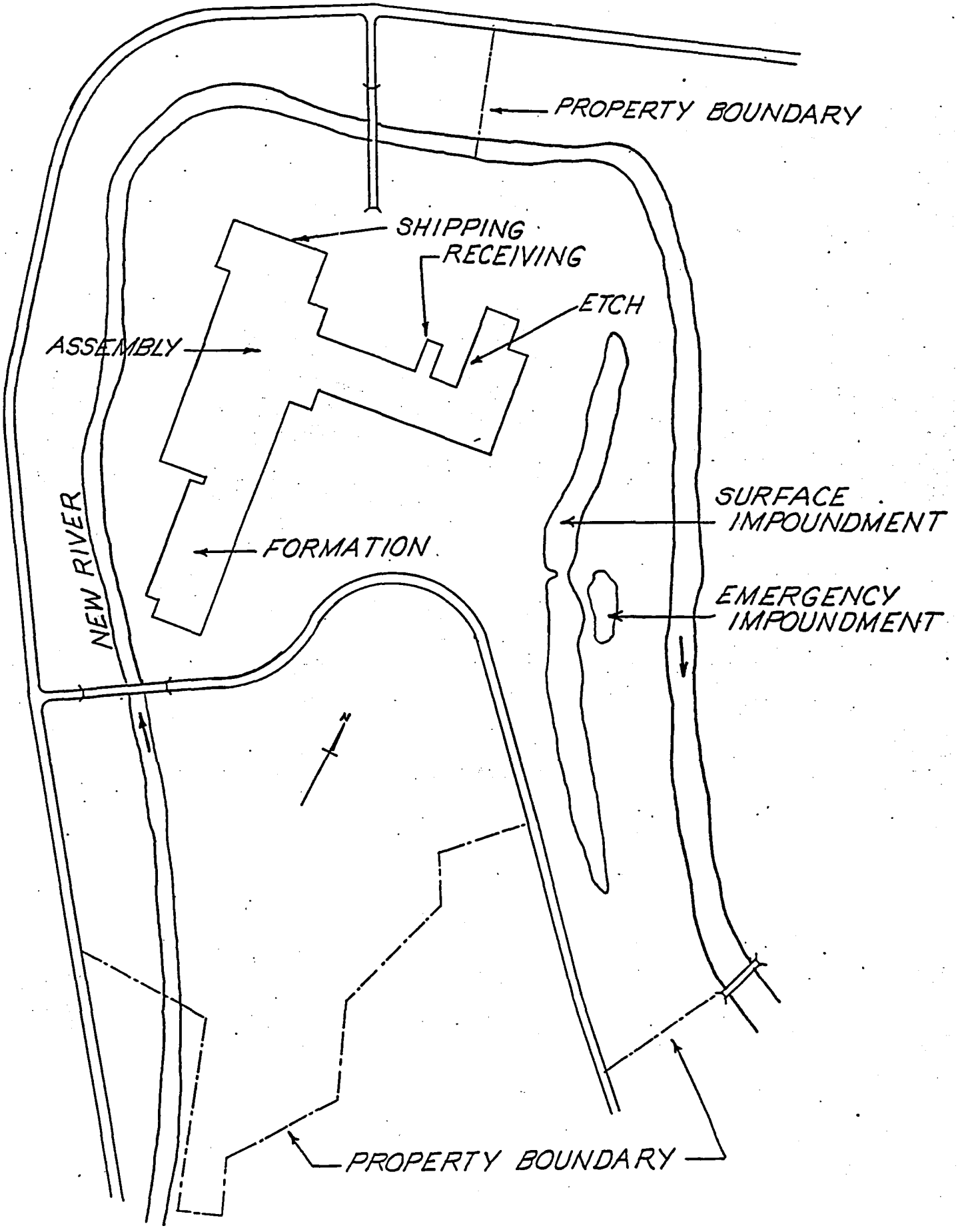
EPA I.D. NUMBER (enter from page 1)	T/A	C	FOR OFFICIAL USE ONLY	T/A	C	
W N C D 0 0 3 1 6 7 7 8 0		1	W DUP		2	DUP

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	D 0 0 2	250,000,000	P	T 0 2				
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								

Continued from page 4.

V. FACILITY DRAWING *(see page 4)*



SCALE: 3/8 IN = 100 FT.

SPRAGUE ELECTRIC COMPANY

NORTH ADAMS, MASSACHUSETTS

01247

FRED A. WINDOVER
ASSOCIATE GENERAL COUNSEL
AND ASSISTANT SECRETARY

November 17, 1980

NOV 19 1980

EPA Region IV.
RCRA Activities
345 Courtland, N.E.
Atlanta, Georgia 30308

Gentlemen:

Enclosed please find a Hazardous Waste Permit Application for the Sprague Electric Company manufacturing plant in Lansing, North Carolina.

Please be advised that we are in doubt as to whether or not the Lansing plant is indeed a waste treatment, storage, or disposal facility under the Resource Conservation & Recovery Act Regulations, and this Application is submitted as a caution so that in case this location is such a facility, we will be in interim status. We are in doubt regarding some of the definitions of the RCRA Regulations as well as some of the facts regarding this manufacturing location.

Please be advised that on November 19, 1980, we will begin compliance with the Interim Status Standards set forth in Part 265 of the Regulations.

However, in the event that further clarification of the Regulations, and/or further investigations by us of the facts regarding the facility, determine that this facility is not a waste treatment, storage, or disposal facility under RCRA, we will notify you of such determination and naturally, cease compliance with the interim standards.

Please be assured that until we are confident that this facility is not a waste treatment, storage, or disposal facility under RCRA, we will abide by all regulations applicable to such a facility.

Very truly yours,

Fred A. Windover

Fred A. Windover

FAW:gej

Enclosure