FINAL REPORT

NATIONAL DIOXIN STUDY

TIER 3 DIOXIN SCREENING

NALCO CHEMICAL COMPANY

BEDFORD PARK, ILLINOIS

TDD R05-8404-09

ILD 005025112

PREPARED BY: MARY JANE RIPP

ECOLOGY AND ENVIRONMENT, INC.

DECEMBER 19, 1985

EPA Region 5 Records Ctr.

308740

Contents:

SITE INSPECTION MEMO 1

2070 - 13 FORM 2

SITE MAPS 3

ANALYTICAL DATA 4

Executive Summary:

Nalco Chemical Company (Nalco), Bedford Park, Illinois, was investigated as a Tier 3 site as part of the U.S. EPA National Dioxin Study. Results of the analyses of the samples obtained on the site indicate that there is low level 2,3,7,8-TCDD on the site. No reviewed Dioxin and Furan isomers, 2,4,5-TCP, or priority pollutant analysis data is currently available.

Site Activities:

On July 8, 1985, Region V FIT personnel conducted an inspection at the above-referenced facility (see Figures 1 and 2). In addition to Region V FIT personnel, the following individuals participated in the on-site inspection and interview:

1. Steven C. Patzer, Process Engineer, Nalco Chemical Company
2. Vytas Narutis, Research Chemistry Analyst, Nalco Chemical Company

Region V FIT personnel involved in sampling included the following:

1. Mary Jane Ripp, Team Leader
2. Randall Ekstrom, Site Safety Officer
3. Francine Allans, Sampler
4. Kevin Phillips, Team Member
5. Kurt Sims, Team Member
6. Ruth Ann Jacquette, Team Member

The site history and sample procedures are described in the approved Sample Plan.

The total number of samples obtained are as follows:

11 2,3,7,8-TCDD soil (including one duplicate and one performance evaluation)
1 SAS-soil (Other isomers of Dioxin and Furan, and 2,4,5-TCP)
1 Priority Pollutant - soil

Split samples were collected for Nalco.

The final sample locations are identified in Figure 2. Ten 2,3,7,8-TCDD surface soil samples were collected from nine separate locations.

During the site inspection, changes were made in several of the sampling locations. The presence of gravel, concrete, or buildings precluded sampling at a number of locations.

The following table provides a correlation between 2,3,7,8-TCDD samples, duplicate 2,3,7,8-TCDD sample, SAS sample, and the priority pollutant samples.

2,3,7,8-TCDD Sample	Duplicate 2,3,7,8-TCDD	SAS Sample	Priority Pollutant Sample
DE025307	DE025308	-	-
DE025310	-	1812E01	EF354

The following table lists the additional samples analyzed and the sample numbers.

Sample	Sample Numbers
Blank	DE025301
Spike	DE025302
Performance Evaluation (Argonne Field Sample)	DE025303

There was no contact with the press or other media during the sampling.

No photographic log of the sampling locations is included with this report because the photographs taken did not turn out. The loss of the photographs was due to either a camera malfunction or a film processing error.

Sample Results:

Results of the analyses of the samples obtained on the site indicate that there is identifiable 2,3,7,8-TCDD present at two locations. The priority pollutant scan detected toluene, total xylenes and phenanthrene. The Special Analytical Services sample detected tetra, penta, hexa, hepta and octa-furans, tetra, penta, hexa, hepta and octa-dioxions and 2,4,5-trichlorophenol. Other semi-volatiles were detected during the 2,4,5-TCP analysis, but data was not quantified.

The results are summarized below:

Sample Number	Compound Detected	Amount Found
DE025306	2,3,7,8-TCDD	1.9 ppb
DE025310	2,3,7,8-TCDD	2.2 ppb
EF354	Toluene	14 ug/kg
EF354	Total Xylenes	420 ug/kg
ED354	Phenanthrene	45000 ug/kg
1812E01	2,4,5-Trichlorophenol	24000 ug/kg
1812E01	Tetra-Furans(total)	45.1 ng/g
1812E01	Penta-Furans	465 ng/g
1812E01	Hexa-Furans	7070 ng/g
1812E01	Hepta-Furans	25400 ng/g
1812E01	Octa-Furans	1320 ng/g
1812E01	Tetra-Dioxins(total)	6.0 ng/g
1812E01	Penta-Dioxins	444 ng/g
1812E01	Hexa-Dioxins	9540 ng/g
1812E01	Hepta-Dioxins	104000 aJ ng/g
1812E01	Octa-Dioxins	8930 J ng/g

a = Detector saturated; value reported is minimum .

J = Indicates an estimated value.

64H:5F

2

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
NALCO CHEMICAL COMPANY	6216 W. 66TH PLACE

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
BEDFORD PARK	IL	60638	COOK	031	3

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
41° 46' 10.0"	087° 46' 37.4"	■ A. PRIVATE ☐ B. FEDERAL ____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ____ ☐ G UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
07 8 85 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	~1930 (BEGINNING YEAR) present (ENDING YEAR) ____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ■ B. EPA CONTRACTOR ECOLOGY + ENVIRONMENT, INC. (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR ____ (Name of firm) ☐ G OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
MARY JANE RIPP	CHEMIST / FIT TEAM LEADER	ECOLOGY + ENVIRONMENT REGION V	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
RUTH ANN JAQUETTE	GEOGRAPHER / FIT MEMBER	"	( ) "
RANDY EKSTROM	ENVIRONMENTAL HEALTH / FIT MEMBER	"	( ) "
KEVIN PHILLIPS	GEOLOGIST / FIT MEMBER	"	( ) "
KURT SIMS	EARTH SCIENTIST / FIT MEMBER	"	( ) "
FRANCINE ALLANS	BIOLOGIST / FIT MEMBER	"	( ) "

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
STEVEN C. PATZER	PROC. ENGINEER	NALCO CHEMICAL COMPANY same as above	(312) 496-5203
VYTAS NARUTIS	RESEARCH CHEM. ANALYST	"	( ) "
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	8:00 AM	sunny, extremely hot, 90°'s, little wind

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
PEGGY PEARCE	U.S. EPA - REGION V	(312) 886-4747

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
MARY JANE RIPP	ECOLOGY + ENVIRONMENT - REGION V	FIT	312-663-9415	12 19 85 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

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 unknown
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	20,000	gallons/month	located in tanks
OLW	OILY WASTE	5,000	gallons/month	oil-based solvents stored in tanks
SOL	SOLVENTS	250	gallons/month	stored in drums
PSD	PESTICIDES	1000	gallons/month	" " "
OCC	OTHER ORGANIC CHEMICALS	110	gallons/month	" " "
IOC	INORGANIC CHEMICALS	6000	gallons/month	filter cake; stored in drums
ACD	ACIDS	250	gallons/month	stored in drums
BAS	BASES	200	gallons/month	" " "
MES	HEAVY METALS	4000	gallons/month	" " "

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
	Nalco handles vast quantities				
	of chemicals of varying	amounts			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Sodium hydroxide	1310-73-2	FDS		
FDS	Potassium hydroxide	1310-58-3	FDS		
FDS	Zinc chloride	7646-85-7	FDS		
FDS			FDS		

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

site inspection

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION
All population within 3-mile radius is on surface water.
Geology consists of drift underlain by limestone bedrock.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION
Surface water use is from Lake Michigan, with intakes located outside of radius. All residents are on Lake Michigan water.
Nearest surface water is 2.5 miles from site.

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION
Potential exists for contamination migration during airborne dispersal of contaminated soil areas.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
No history of past fires. No observed potential.

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,000 — 04 NARRATIVE DESCRIPTION
24-hour security, entire site is fenced or restricted by buildings.
potential if workers come into contact with contaminated soil areas.

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 07-08-85) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: <1 (Acres) — 04 NARRATIVE DESCRIPTION
Contamination of soils with 2,3,7,8-TCDD, dioxin and furan isomers, and organics. (See data)
Could have occurred during product or raw material transfer at loading areas.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION
see Sections "A + B" above.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 250 employees — 04 NARRATIVE DESCRIPTION
potential if workers do not use proper safety equipment and clothing.
potential if workers come into contact with contaminated soil areas.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION
see "Sections A, B, E and F."

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
None documented.
Potential if animals cross contaminated soil areas.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
see "Section K" above.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION
Contaminated soil areas may have occurred due to spillage of raw materials or products during transfer-dock areas
Storage drums are inspected several times daily. Entire site is fenced or restricted by building

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
none documented.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Nalco chemical treats process waste via neutralization pretreatment.
Nalco physical treats sludge, oil skimmer.
Nalco uses the Metropolitan Sanitary Water System.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
none documented.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
none documented.

III. TOTAL POPULATION POTENTIALLY AFFECTED: >10,000

IV. COMMENTS

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

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
■ E. RCRA INTERIM STATUS	unknown			
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND	yes unknown	
☐ D. TANK, ABOVE GROUND	2 sludge tanks	
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ■ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ■ A. BUILDINGS ON SITE

06 AREA OF SITE: ≈ 35 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one) outdoors

☐ A. ADEQUATE, SECURE ■ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

drum waste storage area is fenced. Drums are inspected several times daily. Security guard 24-hrs.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ■ NO

02 COMMENTS see "Containment" comments above.

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

site inspection

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable) Lake Michigan

	SURFACE	WELL
COMMUNITY	A. ■	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ■
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. >3 (mi)

B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ■ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 0

03 DISTANCE TO NEAREST DRINKING WATER WELL >3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
unknown (ft)	unknown	≈2000 (ft)	unknown (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

N/A very deep aquifer
nearest well is Lyons city well - it is greater than 3-miles

10 RECHARGE AREA unknown
☐ YES
☐ NO
COMMENTS

11 DISCHARGE AREA unknown
☐ YES
☐ NO
COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE (Des Plaines River) ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ■ C. COMMERCIAL, INDUSTRIAL (Chicago Sanitary & Ship Canal) ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Chicago Sanitary and Ship Canal	☐	2.5 (mi)
Des Plaines River	☐	2.75 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 4,000 NO. OF PERSONS	B. >10,000 NO. OF PERSONS	C. >10,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 50 feet (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE >3000

04 DISTANCE TO NEAREST OFF-SITE BUILDING 50 feet (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

mixed industrial and residential area.
densely populated

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ■ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ■ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
350 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
2 (in)	2.5 (in)	0-3 %	west	0-3 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi)

OTHER: B. >3 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

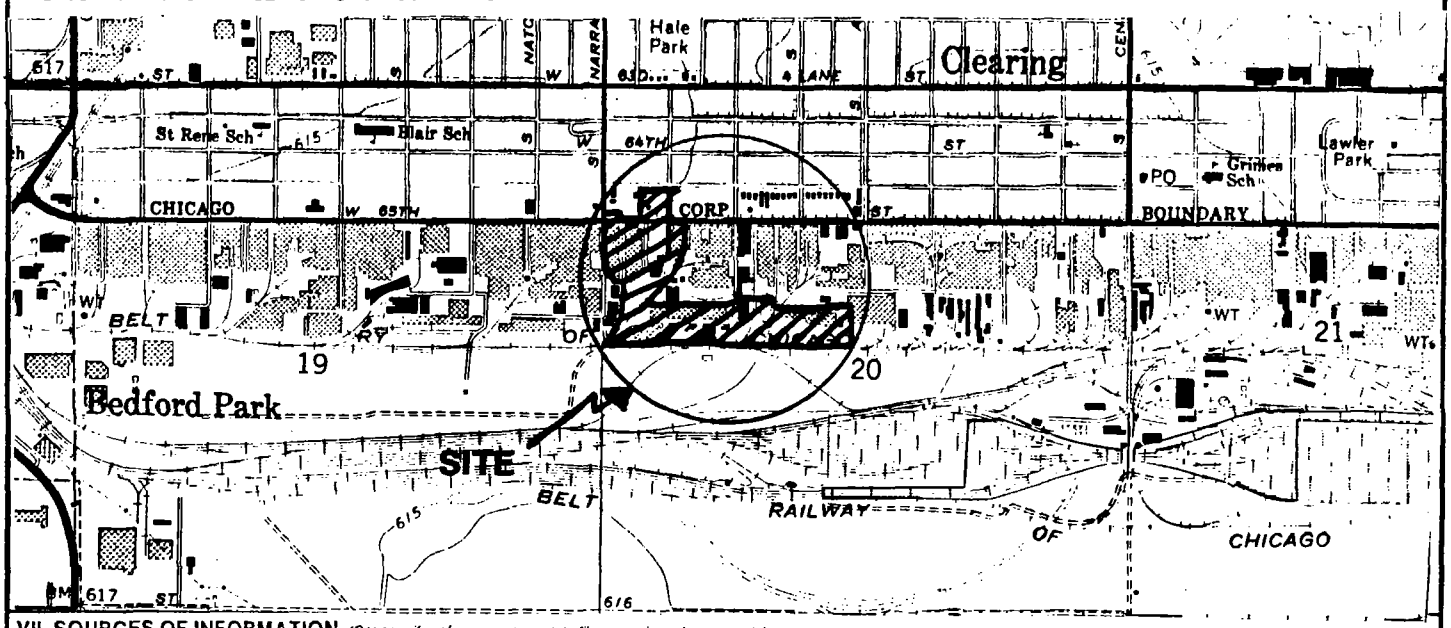
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. site 50 feet ~~(mi)~~	B. 50 feet ~~(mi)~~	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



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

Berwyn, IL 7.5' Quadrangle, 1963, photorevised 1972.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	10-2,3,7,8-TCDD 1 SAS 1 PPS	California Analytical " " Compuchem	available
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	measurements of sample locations collected to indicate position of sample points in relation to permanent structures.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology + Environment, Inc.
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS Ecology + Environment, Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

HNU and Rad-mini safety equipment readings were below background levels.

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

Sample analysis

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Nalco Chemical Company		2901 Butterfield Road		Oak Brook	IL	60521

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
same						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

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

site inspection

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. CURRENT OPERATOR (Provide if different from owner)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME N/A	02 D+B NUMBER		10 NAME	11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

III. PREVIOUS OPERATOR(S) (List most recent first, provide only if different from owner)			PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)		
01 NAME	02 D+B NUMBER		10 NAME	11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME	02 D+B NUMBER		10 NAME	11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME	02 D+B NUMBER		10 NAME	11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				

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

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005092572

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Nalco Chemical Company	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6216 W. 66TH Place	

05 CITY	06 STATE	07 ZIP CODE
Bedford Park	IL	60638

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Chemical Waste Management			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Alsip	IL				

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Chemical Disposal (Waste Management)			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Cicero	IL				

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

site inspection

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

site inspection

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005092572

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ■ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

N/A

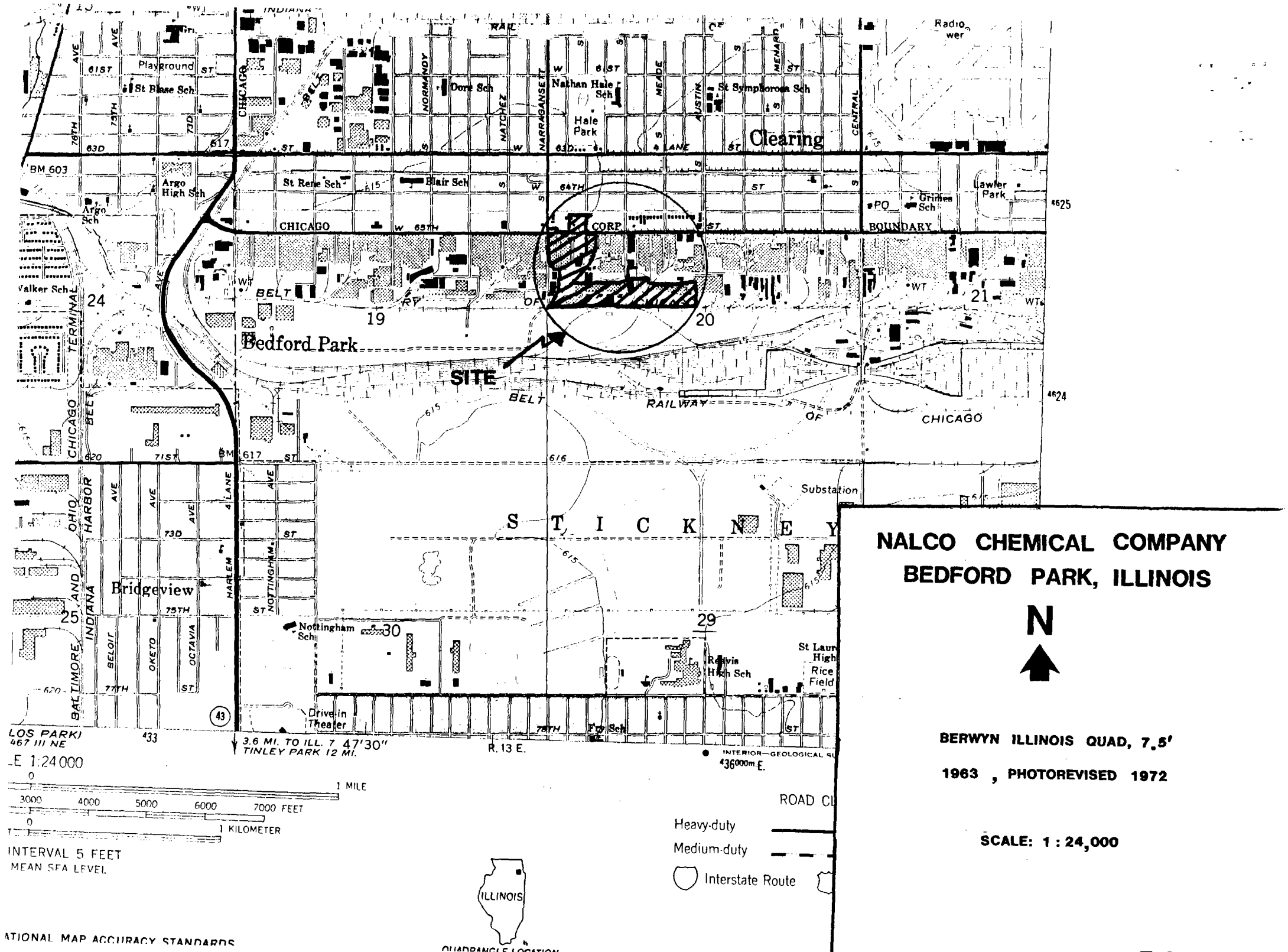
III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

site inspection

EPA FORM 2070-13 (7-81)

3

Cardinal®


NALCO CHEMICAL COMPANY
BEDFORD PARK, ILLINOIS
N
BERWYN ILLINOIS QUAD, 7.5'
1963 , PHOTOREVISED 1972
SCALE: 1 : 24,000
SITE
Bedford Park
Clearing
Bridgeview
STICKNEY
Playground
St Blase Sch
Dore Sch
Nathan Hale Sch
Hale Park
St Symphorosa Sch
Argo High Sch
Argo Sch
St Rene Sch
Blair Sch
Lawler Park
Grimes Sch
Walker Sch
Nottingham Sch
Relvis High Sch
Rice Field
Drive-in Theater
Substation
Radio tower
CHICAGO BELT RAILWAY OF CHICAGO
CHICAGO BOUNDARY
CHICAGO TERMINAL
OHIO AND INDIANA
BALTIMORE AND HARBOR
3.6 MI. TO ILL. 7 47'30"
TINLEY PARK 12 MI.
R. 13 E.
436000m E.
1 MILE
3000 4000 5000 6000 7000 FEET
1 KILOMETER
INTERVAL 5 FEET
MEAN SEA LEVEL
Heavy-duty
Medium-duty
Interstate Route
ILLINOIS
QUADRANGLE LOCATION

SDMS US EPA Region V

Imagery Insert Form

Some images in this document may be illegible or unavailable in SDMS.
Please see reason(s) indicated below:

Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

Specify Type of Document(s) / Comments:

Includes ___ COLOR or RESOLUTION variations.
Unless otherwise noted, these pages are available in monochrome. The source document page(s) is more legible than the images. The original document is available for viewing at the Superfund Records Center.

Specify Type of Document(s) / Comments:

Confidential Business Information (CBI).
This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

Specify Type of Document(s) / Comments:

x

Unscannable Material:
Oversized __X__ or ___ Format.
Due to certain scanning equipment capability limitations, the document page(s) is not available in SDMS.

Specify Type of Document(s) / Comments:

Figure 2 – Target Sample Location

Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments:

Cardinal®

SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025304

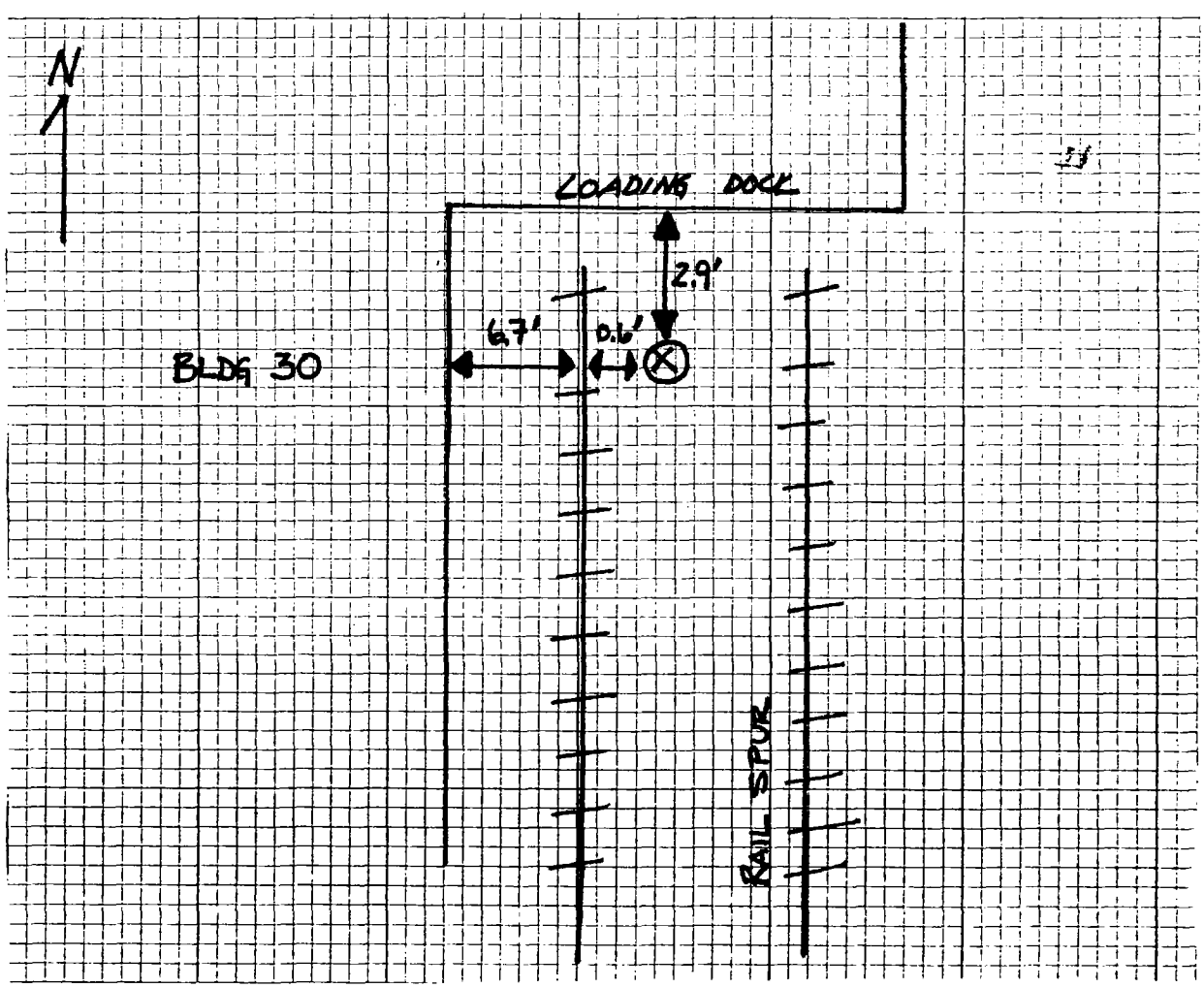
SAMPLER: Kurt Sims

DATE: 0 7 0 8 8 5 TIME: 1 0 3 5 (AM) PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025305

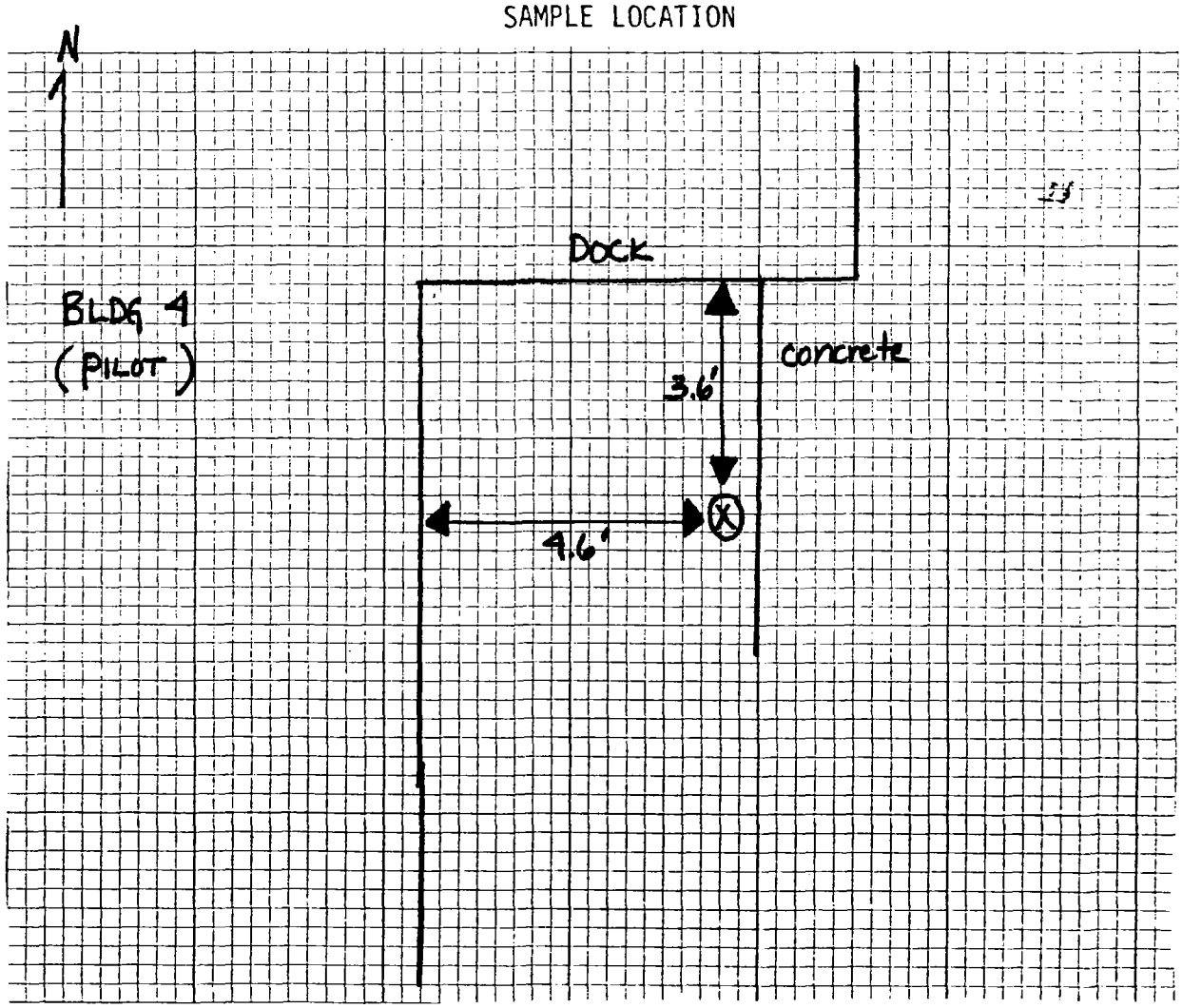
SAMPLER: KURT SIMS

DATE: 07/08/85 TIME: 1043 (AM) PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025306

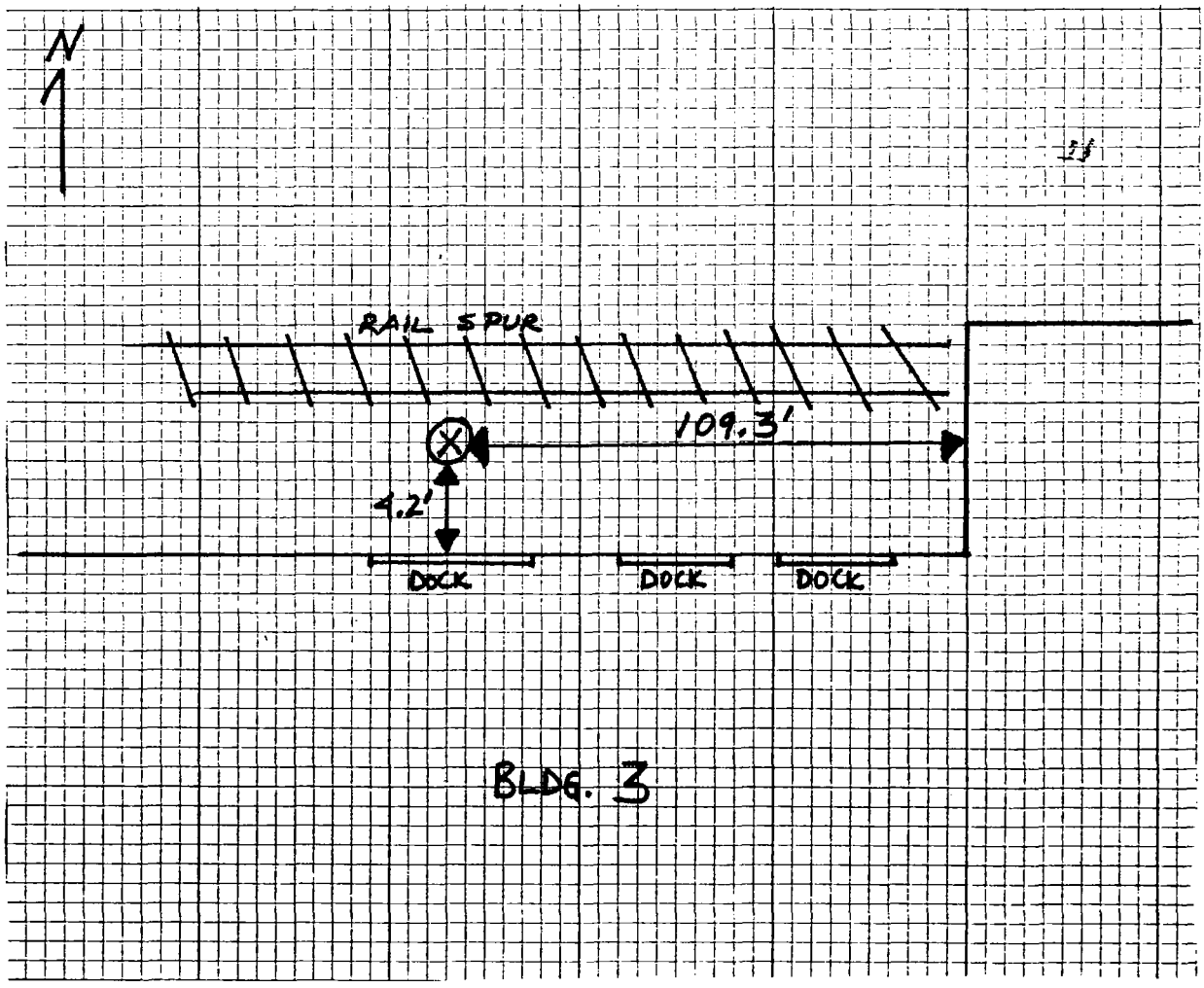
SAMPLER: KEVIN PHILLIPS

DATE: 07 08 85 TIME: 1055 AM PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025307 and DE025308

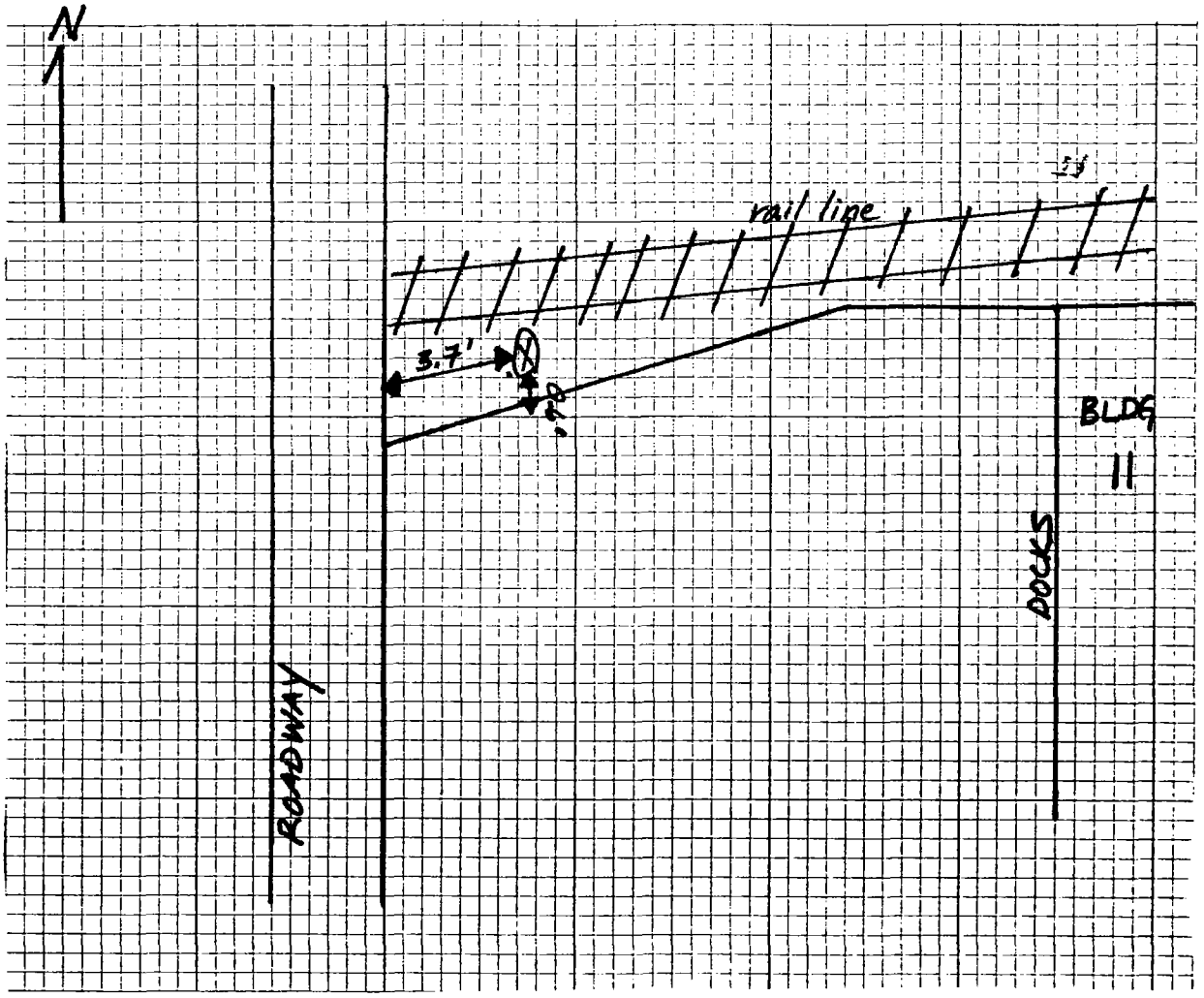
SAMPLER: KEVIN PHILLIPS

DATE: 07/08/85 TIME: 11:25 AM PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025309

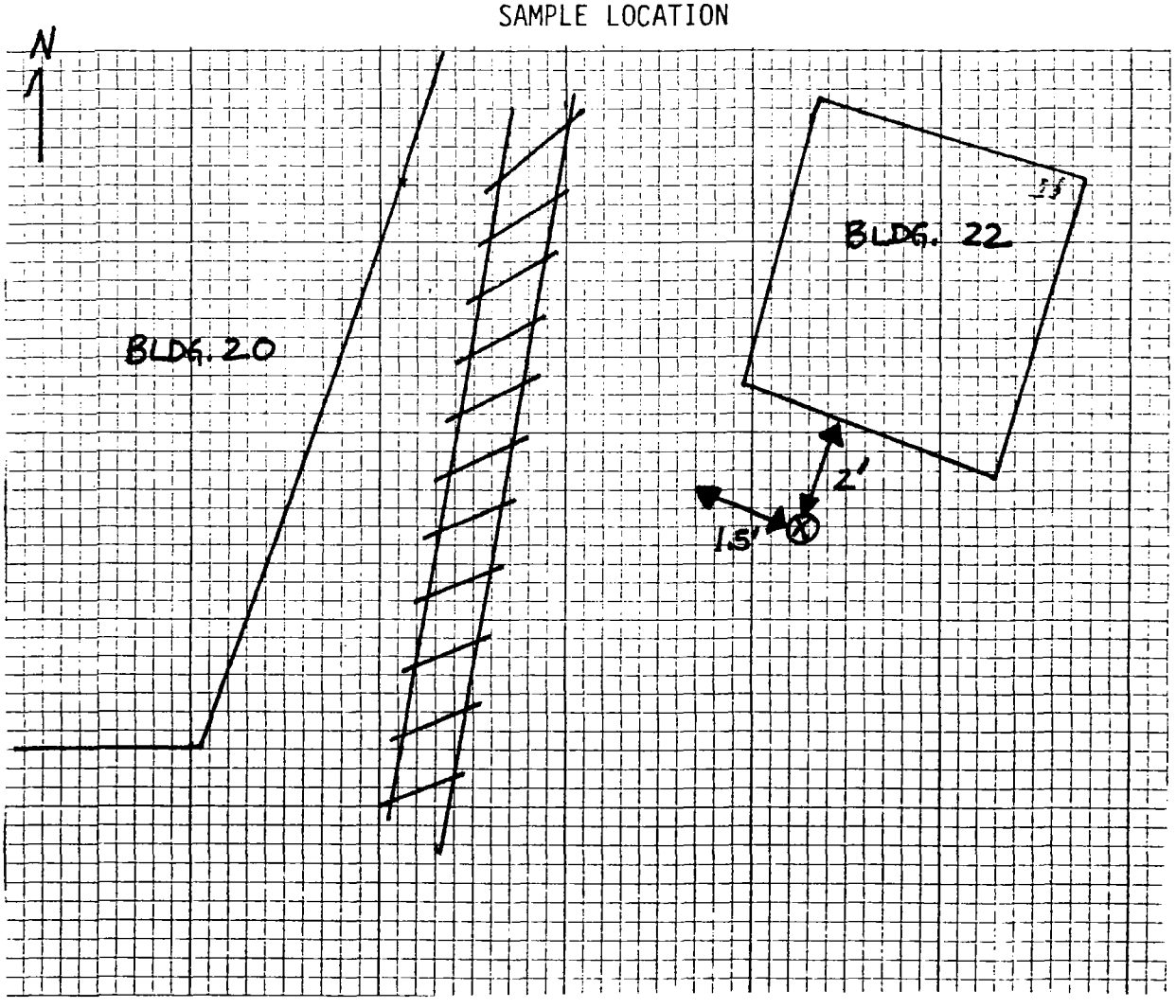
SAMPLER: KURT SIMS

DATE: 07/08/85 TIME: 11/53 (AM) PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025310 and EF354 and SAS1812E01

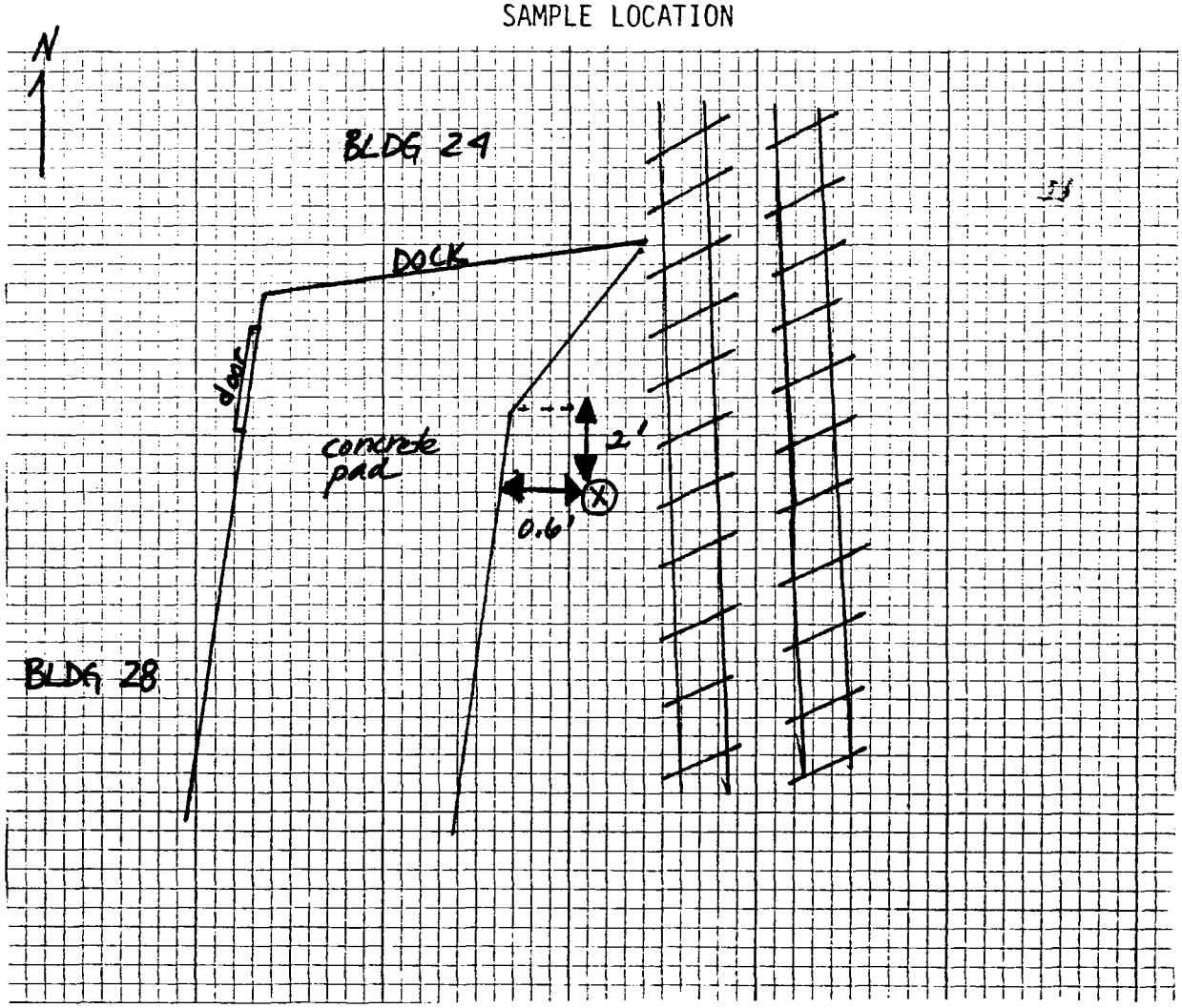
SAMPLER: KEVIN PHILLIPS

DATE: 07 08 85 TIME: 12 05 AM (PM)

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025311

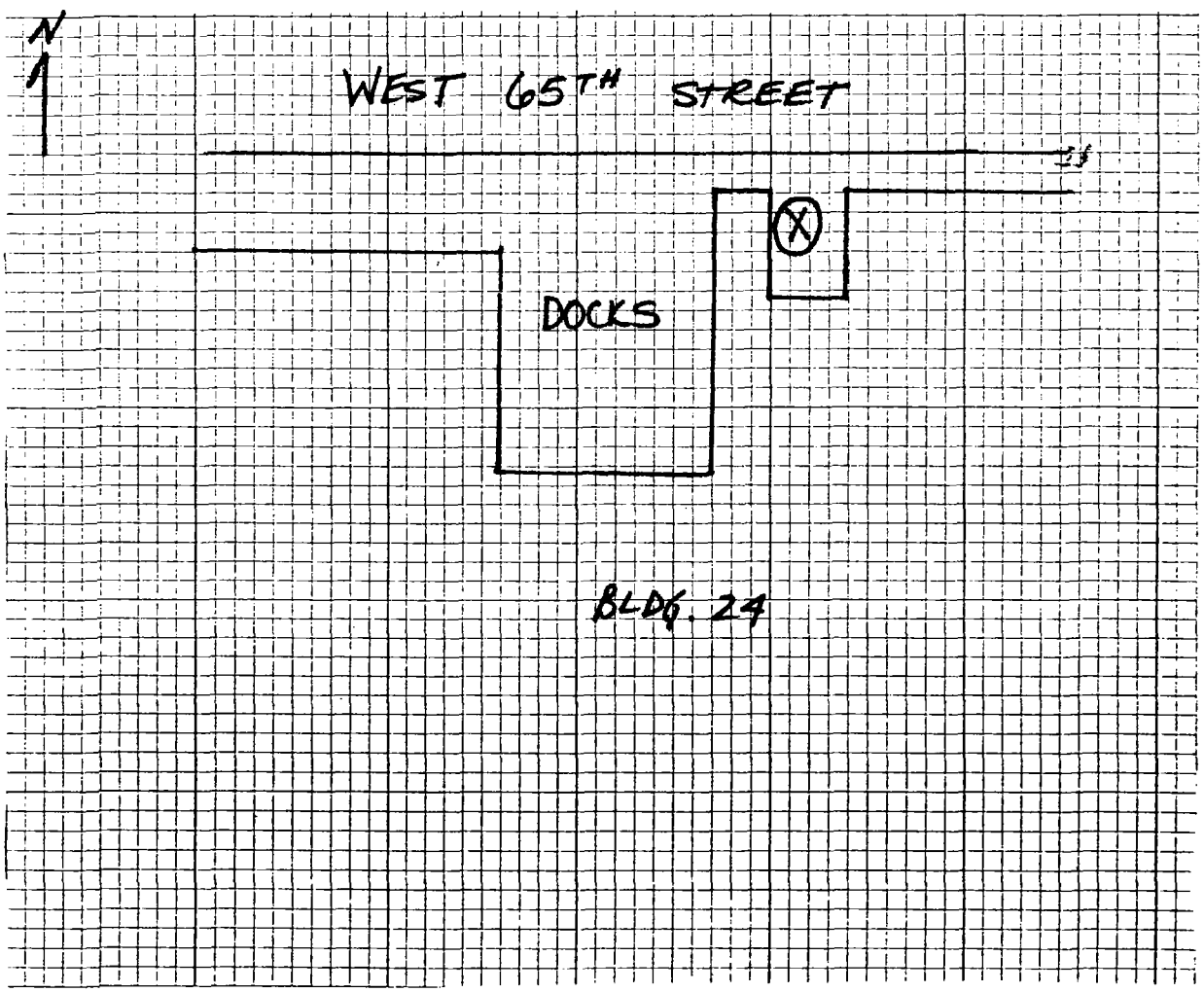
SAMPLER: KURT SIMS

DATE: 07/09/85 TIME: 1025 AM PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025312

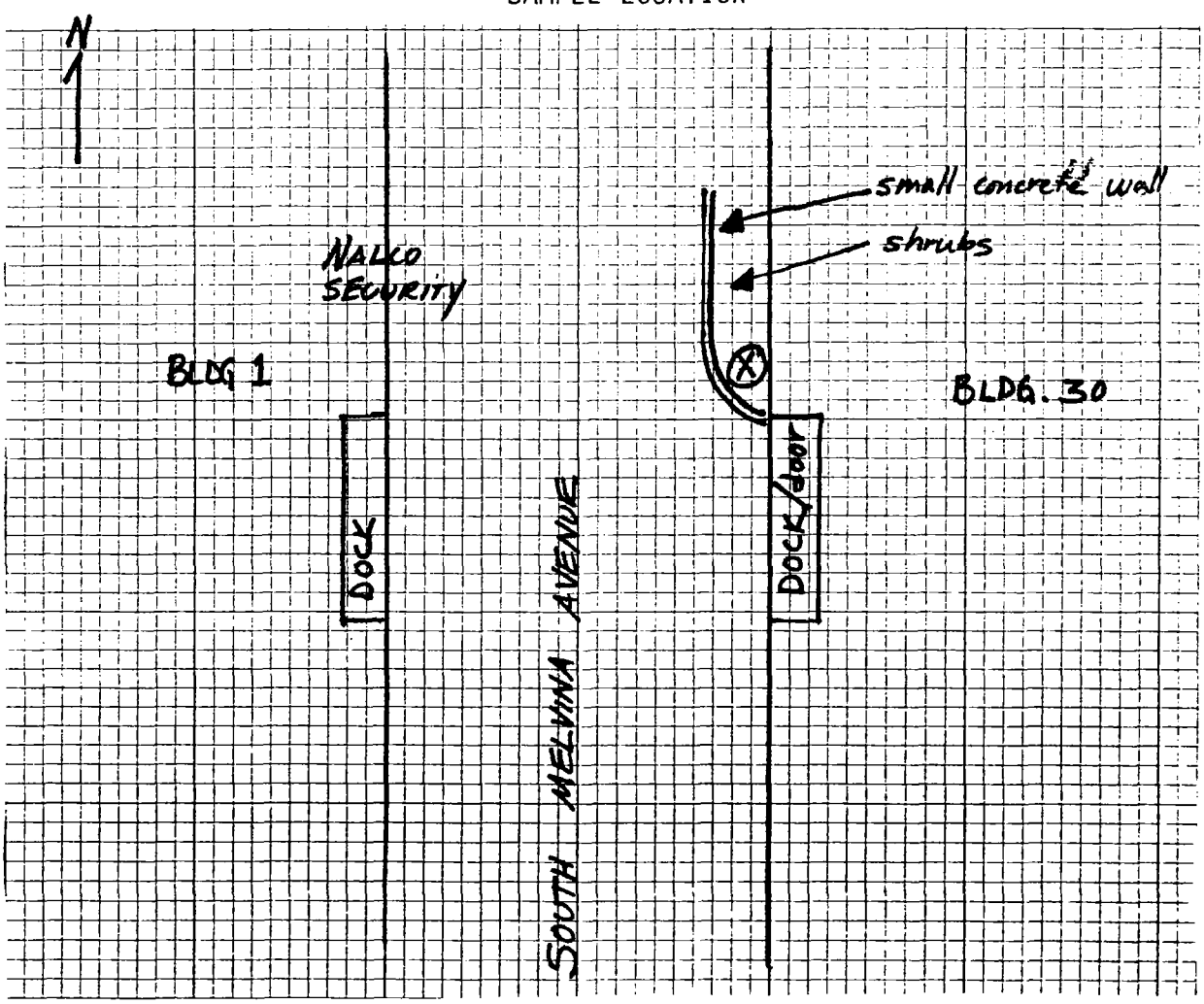
SAMPLER: KEVIN PHILLIPS

DATE: 0 7 0 9 8 5 TIME: 1 1 0 5 AM PM

METHOD OF SAMPLE COLLECTION: GRAB

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



SITE: Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

TDD: R05-8404-009
WSTS: IL0212
ILD005092572

SAMPLE: DE025313

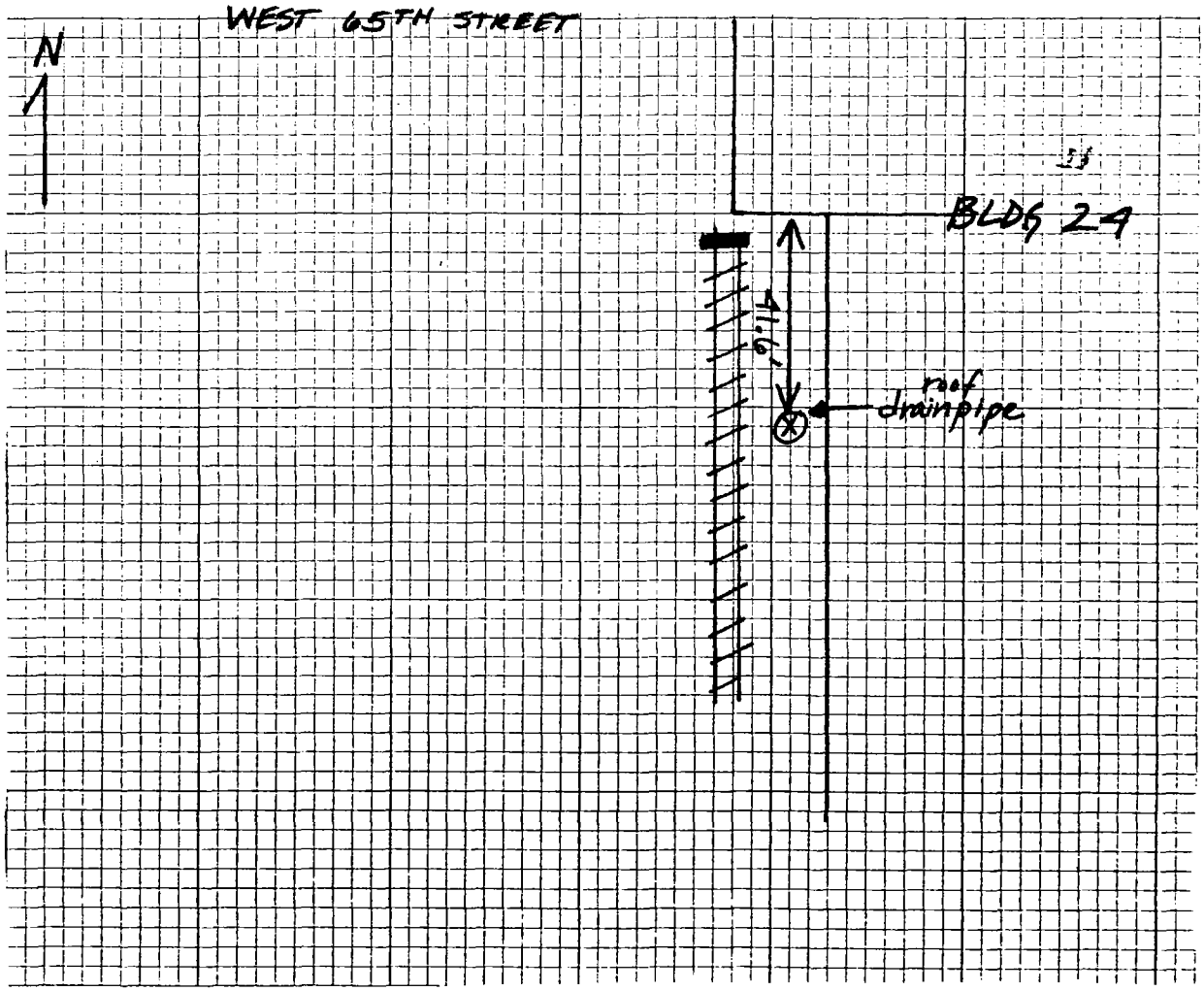
SAMPLER: KEVIN PHILLIPS

DATE: 07 09 85 TIME: 10 30 (AM) PM

METHOD OF SAMPLE COLLECTION: COMPOSITE

PHOTOGRAPHY (including directions):

SAMPLE LOCATION



ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

Date Received for Review: 9/24/85 Date Review Completed: 9/25/85

To: Mary Jane Rupp

From: Arlene Pratl

Subject: Nalco Chemical R05-8404-9 (VOC)

Sample Description: Case # 4669 13 low soil CLP Screen

Project Data Status: still awaiting organics & SAS Samples

FIT Data Review Findings:

See attached CRL review. data are acceptable

Additional Comments:

Book No. 4
Page No. 284

35X:3M

recycled paper

RECEIVED SEP 2 4 1985

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 9/23/85

SUBJECT: Review of Region V CLP Data
Received for Review on 7-25-85

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Francis Thomas

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Nalco Chemical SMO Case No. 4669

EPA Data Set No. SF 2486 No. of Samples: 13 D.U./Activity Numbers Y9051 C48500

CRL No. 85FR10R12 to 85FR10S66

SMO Traffic No. DE025301 to DE025313

CLP Laboratory: Cal Hrs. Required for Review: 13

Following are our findings.

Two samples contained 2,3,7,8-TCDD at ~2 ppb.
All criteria for identification met. Blank ok.
Surrogates ok Native Spike & P.E. Sample ok.
Partial Scan performed on P.E. sample - ok.
Sample DE025310 has a complex matrix and results may be biased low.
Duplicate results acceptable.
QC results for DE025310 (total tetra-octachloroxin/furans) have not been received due to high levels of contamination.

TB. 9/30/85

(X) Data are acceptable for use.
( ) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

EPA FORM 1320-6 (REV 3-76)

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

RECEIVED SEP 2 4 1985

1. Data Set No. SF 2486 ERRIS No. _____

2. Case No. 4669 Site Name: Nalco Chemical

3. Name of Laboratory: Cal Data User: FIT

4. No. of Samples: 13 Date Samples Received: 7-24-85

a. Have chain-of-custody records been received? YES ✓ NO ___

b. Have Traffic reports been received? YES ___ NO ✓

c. If no, are Traffic report numbers written on the chain-of-custody record? YES ___ NO ___

d. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___

6. Number of samples claimed: 13 Number of samples received: 13

7. Checked by: Sylvia Griffin Date: 7-25-85

8. Received by Contract Project Management Section: J Thomas Date: 7/25/85

9. Review Started: 9/12/85 Reviewer Signature: Thom M Bar

10. Total time spent on review: 13 Hrs. Date review completed: 9/20/85

11. Copied (xeroxed) by: _____ Date: _____

12. Mailed to Data User by: _____ Date: _____

TO DATA USERS:

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Arlene Grace Date: 9/25/85

14. Q.A. review received by: Arlene Grace Date: 9/25/85

15. Received by CRL - CPM Section for file by: _____

Date: _____

RECEIVED SEP 2 4 1985

California Analytical Laboratories, Inc.
2544 Industrial Boulevard • West Sacramento, CA 95691 • (916) 372-1393

July 22, 1985
Lab No. T3124-T3136
Received: 7/10/85
Case 4669
68-01-6916

RECEIVED
JUL 24 1985
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

SF2486

Mr. Curtis Ross
U.S. EPA Region 5 Laboratory
536 South Clark Street
Tenth Floor, CRL
Chicago, Illinois 60605

Dear Mr. Ross:

Enclosed are data summaries and documentation for the samples and QA/QC comprising Case 4669 which was received July 10, 1985. The samples were logged in under CAL Lab numbers T3124 through T3136 and analyzed for 2,3,7,8-TCDD under contract 68-01-6916. The correlation of ID numbers is shown on the data summary sheet (form B-1).

All of the samples were cleaned-up using Option D prior to injection. Sample DE025302 was analyzed as a native spike sample; recovery was 114%. Our mean surrogate accuracy was 109%. A partial scan was done on sample DE025303.

If you have any questions about the data, please don't hesitate to call.

Sincerely,

Paul A. Taylor, Ph.D.
President

Michael J. Miille, Ph.D.
Director of GC/MS Services

Teri J. Vergara
Data Specialist

cc SMO
EMSL

RECEIVED SEP 2 4 1985

QUALITY CONTROL SUMMARY

Case No. 4669

Mean Accuracy, Surrogate Measurements: 109% # of Data Points 15

Accuracy, Fortified/Spike Field Blank: 114% Sample # DE025302

Rel. Diff. (%), Duplicate Analysis: 0% Sample # DE025303

1% FB

$$\frac{7.9-7.8}{\frac{7.9+7.8}{2}} \times 100 = 1.3\% \approx 1\%$$

Prepared by: [signature]

Approved by: [signature] Date 7/23/85

FORM B-3A

TCDD DATA REPORT

California Analytical Laboratories
2544 Industrial Blvd.
W. Sacramento, CA 95691

Lab: California Analytical Laboratories
Case No. 4669
Batch/Shipment No.

Report Date: 7-22-85
Column: SP-2331

Data Validation Comments Code (R)

Cal Labs ID	Sample Number	C U	Aliquot Wet Wt. (grams)	PPB TCDD Meas	PPB TCDD Det. Lmt	Inst ID	Date	Time	320/322	332/334	PPB Surrg Meas	Surrg % Acc'c	320	322	257	328*	332	334	Comments
T3124MB	METHOD BLANK	Y	10.00	ND	0.027	8	07/18/85	21:39:00	1.00	0.81	1.05	105	-	-	-	239711	486216	601075	
T3124	DE025301	Y	9.94	ND	0.040	8	07/18/85	21:58:00	1.00	0.81	1.10	109	-	-	-	211681	414992	509434	
T3125NS	DE025302NS	Y	9.96	1.14	-	8	07/18/85	21:07:00	0.79	0.82	0.95	95	94438	120005	63700	199627	448167	549740	
T3126	DE025303	Y	9.95	7.9	-	8	07/18/85	22:17:00	0.79	0.86	1.06	105	565933	714004	392019	196460	397927	462595	
T3126D	DE025303D	Y	10.03	7.8	-	8	07/18/85	22:36:00	0.80	0.84	1.05	105	601200	754408	412742	209128	418067	497935	
T3127	DE025304	Y	10.05	ND	0.23	8	07/19/85	16:16:00	1.00	0.82	1.19	120	-	-	-	28473	51079	62423	
T3128RI	DE025305	Y	10.63	ND	0.65	8	07/22/85	09:50:00	1.00	0.73	0.83	88	-	-	-	7348	16725	22944	
T3129	DE025306	Y	10.05	1.9	-	8	07/19/85	16:54:00	0.75	0.81	1.14	115	12912	17164	11257	20613	38222	46912	
T3130	DE025307	Y	10.10	ND	0.32	8	07/19/85	17:50:00	1.00	0.76	1.20	121	-	-	-	24760	42102	55402	
T3131	DE025308	Y	10.04	ND	0.20	8	07/19/85	17:31:00	1.00	0.84	1.15	115	-	-	-	34121	64602	76605	
T3132	DE025309	Y	10.02	ND	0.12	8	07/19/85	18:29:00	1.00	0.77	1.14	114	-	-	-	55735	101450	131626	
T3133RI	DE025310	Y	10.03	2.2	-	8	07/22/85	11:33:00	0.68	0.74	1.27	127	1183	1750	1394	1893	2997	4033	Used Hts.
T3134	DE025311	Y	10.01	ND	0.10	8	07/19/85	19:23:00	1.00	0.78	1.07	107	-	-	-	62475	122141	156983	
T3135	DE025312	Y	10.04	ND	0.076	8	07/19/85	20:05:00	1.00	0.80	1.13	114	2358	2350	-	132211	245527	308640	
T3136	DE025313	Y	10.00	ND	0.079	8	07/19/85	20:41:00	1.00	0.82	0.97	97	-	-	-	65879	146077	177229	

MB = Method Blank
P = Partial Scan/Confirmatory Analysis
NS = Native TCDD Spike
D = Duplicate/Fortified Field Blank
RI = Re-injection
FB = Field Blank
ND = Not Detected
DL = Detection Limit
RX = Re-extraction

*Corrected for contribution by native TCDD; 0.9% of m/z 322 subtracted

DE025303 is an EPA supplied PE sample

Lab: California Analytical Laboratories
Case No. 4669
Batch/Shipment No.

Cal Labs ID	Sample Number	C U	Aliquot Wet Wt. (grams)
T3124MB	METHOD BLANK	Y	10.00
T3124	DE025301	Y	9.94
T3125NS	DE025302NS	Y	9.96
T3126	DE025303	Y	9.95
T3126D	DE025303D	Y	10.03
T3127	DE025304	Y	10.05
T3128RI	DE025305	Y	10.63
T3129	DE025306	Y	10.05
T3130	DE025307	Y	10.10
T3131	DE025308	Y	10.04
T3132	DE025309	Y	10.02
T3133RI	DE025310	Y	10.03
T3134	DE025311	Y	10.01
T3135	DE025312	Y	10.04
T3136	DE025313	Y	10.00

FORM B-1

RECEIVED OCT 24 1985

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND FIT SAMPLING DATE 7/8,9/85 LAB ~~ARRIVAL~~ LOGIN DATE 7/18/85 DUE DATE 8/9/85

DU NUMBER 1905 DATASET NUMBER 2486 STUDY Dalco Chemical PRIORITY N CONTRACTOR CAL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS 2 3 7 8 - TCDD PPB TOX214524	SEDIMENTS SOLIDS 2 3 7 8 - TCDF PPB TOX214924	SEDIMENTS SOLIDS TOTAL DIOXINS 1 SUMER CLASSES PPT TOX215025	SEDIMENTS SOLIDS TOTAL FURANS 18 OMER CLASSES PPT TOX215125
85FR10R12	DE025301	✓			
85FR10556	DE025302	✓			
85FR10557	DE025303	✓			
85FR10558	DE025304	✓			
85FR10559	DE025305	✓			
85FR10560	DE025306	✓			
85FR10561	DE025307	✓			
85FR10D61	DE025308	✓			
85FR10562	DE025309	✓			
85FR10563	DE025310	✓			
85FR10564	DE025311	✓			
85FR10565	DE025312	✓			
85FR10566	DE025313	✓			

C48500
Case 4669

RECEIVED OCT 8 1985

CRL V.2; 3/85

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL 312-663 9415
International Specialists in the Environment

Date Received for Review: 12-2-85 Date Review Completed: 12-11-85

To: Mary Jane Ripp

From: Cynthia Pugh

Subject: Nalco Chemical Illinois
R05-8404-09

Sample Description: Case # 4669 one (1) low soil organics analysis

Project Data Status: waiting for dioxin, % moisture

FIT Data Review Findings:
See attached CRL review. Data acceptable for use.
Blank contained methylene chloride & acetone

Additional Comments:

Book No. 4
Page No. 284

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 11/26/85

RECEIVED DEC 0 2 1985

SUBJECT: Review of Region V CLP Data
Received for Review on 8/6/85

RECEIVED DEC 0 2 1985

FROM: Curtis Ross, Director (5SCRL) Francis Thomas
Central Regional Laboratory

TO: Data User: Fit

We have reviewed the data for the following case(s).

SITE NAME: Nalco Chemical SMO Case No. 4669

EPA Data Set No. SF-2486 No. of Samples: 1 D.U./Activity Numbers ~~1905~~ C48500

CRL No. 85FR10563

SMO Traffic No. EF 354

CLP Laboratory: Compu Chem Hrs. Required for Review: 8

Following are our findings.

Surrogates + Holding times - OK.

VOA + Post/PCB MS/MSD - OK

ABN MS/MSD - Pentachlorophenol + 4-Nitrophenol not recovered (0%) - Flagged as unuseable (R) for these compounds. (Matrix effect)

Blanks - OK but not analyzed on the same instrument for the Matrix Spike. Minimum impact on data - but this is a contract violation.

Matrix Spike Duplicate was exposed to large the tube extraction lab and contains excessive amounts of methylene chloride and acetone!

Note large amounts of aromatic compounds on ABN TIC page.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

TB
11/19/85

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

RECEIVED DEC 0 2 1985

DATA QUALIFIERS

Contractor: CompuChem

Case 4669

Below is a summary of the out of control audits and the possible effect on the data for this case:

Benzidine was not analyzed for. (NA)
Other detection limits have been flagged "UJ" due to % Difference between Response Factors of greater than 30%.
Methylene Chloride, + Acetone have been flagged UJ - estimated detection limit due to blank / Lab contamination.

Reviewed by: Thomas Barr

Phone: (312) 353-2313

Date: 11/19/85

5F2486

COMPUCHEM LABORATORIES

August 2, 1985

Mr. Richard Thacker
Deputy Project Manager
U.S. Environmental Protection Agency
HWI/Sample Management Office
300 North Lee Street
Post Office Box 818
Alexandria, VA 22313

RECEIVED DEC 0 2 1985

Re: Report of Data - EPA Contract # 68-01-6866

Dear Mr. Thacker:

Enclosed herewith are the results of analytical work performed in accordance with the referenced contract.

This report covers 1 samples and results associated with the analyses of the duplicate matrix spike results, received by CompuChem Laboratories on 7-10-85 identified as EPA Case Number 4669 . An extra copy of the QC Summary Data Package and Sample Summary forms are also enclosed.

If you have any questions regarding this package, please contact me at 1-919-549-8263.

Sincerely,

RECEIVED
AUG 5 1985
U.S. EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

for A. Marie Daniel
Pamela S. Carrington
Manager, Report Preparation

Enclosures

Note: Quality Control information contained in this report applies to:

EPA Numbers: EF354

C/C Numbers: 55708

cc: EPA Region
EMSL

DATA RECEIPT ACKNOWLEDGEMENT FOR SMO ONLY - Please sign, date, and return in envelope provided.

Case _____ was received on _____.

Signature _____

Date _____

CASE SUMMARY NARRATIVE -- #4669
(1 solid sample)

RECEIVED DEC 0 2 1985

s case consisted of one sample which was received in good condition and l zed for volatiles, semivolatiles and pesticides. The volatile fraction repared and analyzed as a Low Level Solid, while the latter two fractions e prepared as Medium Levels based upon screen results.

w levels of acetone and methylene chloride were observed in nearly all latile sample, spike and blank analyses, and have been flagged with the " footnote where appropriate (background contamination). Xylenes were u d in the sample which exceeded the upper linear range of the multipoint, w ver, the matrix spike and spike duplicate prepared from the sample had vels within this range. To provide the most meaningful analytical data, no l tion was performed (several other compounds were detected at low levels). ral non-priority pollutant compounds were also detected in the volatile action.

o nuclear aromatics were detected in the semivolatile fraction at levels p to 45000 ug/kg. Bis(2-ethylhexyl)phthalate was also found at a concentration f 54000 ug/kg. In addition, several non-priority pollutant compounds were e ected, mostly aromatics but also including some late-eluting hydrocarbons.

o priority pollutants were detected in the pesticide fraction of this sample.

A surrogate recoveries were within the acceptance limits in both the volatile and semivolatile fractions, but could not be accurately evaluated in the p sticide fraction due to severe matrix interferences (see Quality Assurance N tice in this section). Additionally, spike recoveries and relative percent differences met contract-mandated criteria for all three fractions.

Robert J. Whitehead 8/2/85
Robert J. Whitehead
Senior Quality Assurance Specialist
8-02-85

QUALITY ASSURANCE NOTICE
sample # 55712

RECEIVED DEC 0 2 1985

The method blank (# 55983) associated with the above volatile sample was analyzed on an instrument which required maintenance shortly afterward. As a result, this sample could not be analyzed on the same instrument as the blank. The instrument blank analyzed with this sample was used to evaluate background contributions. Both the method blank and the instrument blank data have been included in the "Raw QC" section of this case.

Bob Whitehead BW 8-2-85
Senior Quality Assurance Specialist

QUALITY ASSURANCE NOTICE
sample #55713

RECEIVED DEC 0 2 1985

The volatile fraction of this sample was reprepared after the raw sample container had been exposed to the laboratory atmosphere during preparation of the semivolatile extract. Methylene chloride and acetone are used as solvents in this laboratory, and probably contributed to the high levels of these components detected in the volatile analysis. The matrix spike duplicate and original sample had levels comparable to the method blank, and were flagged with the B footnote (these samples did not require repreparation, and were therefore not exposed to the lab atmosphere).

Bob Whitehead 8-1-85
Senior Quality Assurance Specialist

85FR01565

Environmental Protection Agency, CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 703/557-2490

Sample Number
EF324

RECEIVED DEC 0 2 1985

Organics Analysis Data Sheet
Page 1

Laboratory Name: Compuchem
Lab Sample ID No: GM055705-412
Sample matrix: solid
Data Release
Authorized By: _____

Case: 4668
QC Report No: _____
Contract No: 68-01-6699
Date Sample
Received: 07-10-85

Volatile Compounds
Concentration: low
Date extracted/prepared: 07-10-85
Date analyzed: 07-12-85
Conc/Dil Factor: 1.61
Percent moisture: 39%
Percent moisture (decanted):

pH: 9.1

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	16.	U	78-87-5	1,2-Dichloropropane	8.0	U
74-83-9	Bromomethane	16.	U	10061-02-6	trans-1,3-Dichloropropene	8.0	U
75-01-4	Vinyl Chloride	16.	U	79-01-6	Trichloroethene	8.0	U
75-00-3	Chloroethane	16.	U	124-48-1	Dibromochloromethane	8.0	U
75-09-2	Methylene Chloride	18.	B U	79-00-5	1,1,2-Trichloroethane	8.0	U
67-64-1	Acetone	21.	B U	71-43-2	Benzene	8.0	U
75-15-0	Carbon Disulfide	8.0	U	10061-01-5	cis-1,3-Dichloropropene	8.0	U
75-35-4	1,1-Dichloroethene	8.0	U	110-75-8	2-Chloroethyl Vinyl Ether	16.	U
75-35-3	1,1-Dichloroethane	8.0	U	75-25-2	Bromoform	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U	591-78-6	2-Hexanone	16.	U
67-66-3	Chloroform	8.0	U	108-10-1	4-Methyl-2-pentanone	16.	U
107-06-2	1,2-Dichloroethane	8.0	U	127-18-4	Tetrachloroethene	8.0	U
78-93-3	2-Butanone	12.	J	108-88-3	Toluene	14.	
71-55-6	1,1,1-Trichloroethane	8.0	U	108-90-7	Chlorobenzene	8.0	U
56-23-5	Carbon Tetrachloride	8.0	U	100-41-4	Ethyl Benzene	7.1	J
108-05-4	Vinyl Acetate	16.	U	100-42-5	Styrene	8.0	U
75-27-4	Bromodichloromethane	8.0	U		Total Xylenes	420	
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U				

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J)

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary sheet.

Environmental Protection Agency, CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 703/557-2490

Sample Number
EF354 FE

Laboratory Name: Compuchem

Organics Analysis Data Sheet
(Page 2.
Semivolatile Compounds

Concentration: medium
Date extracted/prepared: 07-16-85
Date analyzed: 07-17-85
Conc/Dil Factor: 3260.00

RECEIVED DEC 0 2 1985

CAS Number		ug/kg		CAS Number		ug/kg	
62-75-9	N-Nitrosodimethylamine	33000	U	99-09-2	3-Nitroaniline	1.6E+05	U
108-95-2	Phenol	33000	U	83-32-9	Acenaphthene	33000	U
62-53-3	Aniline	33000	U J TB	51-28-5	2,4-Dinitrophenol	1.6E+05	U
111-44-4	bis(2-Chloroethyl) ether	33000	U	100-02-7	4-Nitrophenol	1.6E+05	U TB R TB
95-57-8	2-Chlorophenol	33000	U	132-64-9	Dibenzofuran	33000	U
541-73-1	1,3-Dichlorobenzene	33000	U	121-14-2	2,4-Dinitrotoluene	33000	U
106-46-7	1,4-Dichlorobenzene	33000	U	606-20-2	2,6-Dinitrotoluene	33000	U
100-51-6	Benzyl Alcohol	33000	U J TB	84-66-2	Diethylphthalate	33000	U J TB
95-50-1	1,2-Dichlorobenzene	33000	U	7005-72-3	4-Chlorophenyl Phenyl ether	33000	U
95-48-7	2-Methylphenol	33000	U	86-73-7	Fluorene	20000	J
39638-32-9	bis(2-Chloroisopropyl) ether	33000	U	100-01-6	4-Nitroaniline	1.6E+05	U
106-44-5	4-Methylphenol	33000	U	534-52-1	4,6-Dinitro-2-methylphenol	1.6E+05	U
621-64-7	N-Nitroso-Dipropylamine	33000	U	86-30-6	N-nitrosodiphenylamine (1)	33000	U
67-72-1	Hexachloroethane	33000	U	101-55-3	4-Bromophenyl Phenyl ether	33000	U
98-95-3	Nitrobenzene	33000	U	118-74-1	Hexachlorobenzene	33000	U
78-59-1	Isophorone	33000	U	87-86-5	Pentachlorophenol	1.6E+05	U R
88-75-5	2-Nitrophenol	33000	U	85-01-8	Phenanthrene	45000	
105-67-9	2,4-Dimethylphenol	33000	U	120-12-7	Anthracene	22000	J
65-85-0	Benzoic Acid	1.6E+05	U	84-74-2	Di-n-butylphthalate	33000	U
111-91-1	bis(2-Chloroethoxy) methane	33000	U	206-44-0	Fluoranthene	33000	U
120-83-2	2,4-Dichlorophenol	33000	U	92-87-5	Benzidine	1.6E+05	U NA TB
120-82-1	1,2,4-Trichlorobenzene	33000	U	129-00-0	Pyrene	18000	J
91-20-3	Naphthalene	33000	U	85-68-7	Butyl Benzyl Phthalate	33000	U
106-47-8	4-Chloroaniline	33000	U J TB	91-94-1	3,3'-Dichlorobenzidine	65000	U
87-68-3	Hexachlorobutadiene	33000	U	56-55-3	Benzo(a)anthracene	33000	U
59-50-7	4-Chloro-3-methylphenol	33000	U	117-81-7	bis(2-ethylhexyl)phthalate	54000	
91-57-6	2-Methylnaphthalene	33000	U	218-01-9	Chrysene	33000	U
77-47-4	Hexachlorocyclopentadiene	33000	U	117-84-0	Di-n-octyl Phthalate	33000	U
88-06-2	2,4,6-Trichlorophenol	33000	U	205-99-2	Benzo(b)fluoranthene	33000	U
95-95-4	2,4,5-Trichlorophenol	1.6E+05	U	207-08-9	Benzo(k)fluoranthene	33000	U
91-58-7	2-Chloronaphthalene	33000	U	50-32-8	Benzo(a)pyrene	33000	U
88-74-4	2-Nitroaniline	1.6E+05	U	193-39-5	Indeno(1,2,3-cd)pyrene	33000	U
131-11-3	Dimethyl Phthalate	33000	U	53-70-3	Dibenz(a,h)anthracene	33000	U
208-96-8	Acenaphthylene	33000	U	191-24-2	Benzo(g,h,i)perylene	33000	U J TB

(1) Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 703/557-2490

Sample Number
EF55-

Organics Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Laboratory Name: CompuChem

Concentration: medium
Date extracted/prepared: 07-16-85
Date analyzed: 07-20-85
Conc/Dil Factor: 1.60

RECEIVED DEC 0 2 1985

CAS Number		ug/kg	
319-84-6	alpha-BHC	190	U
319-85-7	beta-BHC	190	U
319-86-8	delta-BHC	190	U
58-89-9	gamma-BHC (Lindane)	190	U
76-44-8	Heptachlor	190	U
309-00-2	Aldrin	190	U
1024-57-3	Heptachlor Epoxide	190	U
959-98-8	Endosulfan I	190	U
60-57-1	Dieldrin	380	U
72-55-9	4,4'-DDE	380	U
72-20-8	Endrin	380	U
33213-65-9	Endosulfan II	380	U
72-54-8	4,4'-DDD	380	U
7421-93-4	Endrin Aldehyde	380	U
1031-07-8	Endosulfan Sulfate	380	U
50-29-3	4,4'-DDT	380	U
53494-70-5	Endrin Ketone	380	U
72-43-5	Methoxychlor	1900	U
57-74-9	Chlordane	1900	U
8001-35-2	Toxaphene	3800	U
12674-11-2	AROCLOR-1016	1900	U
11104-28-2	AROCLOR-1221	1900	U
11141-16-5	AROCLOR-1232	1900	U
53469-21-9	AROCLOR-1242	1900	U
12672-29-6	AROCLOR-1248	1900	U
11097-69-1	AROCLOR-1254	3800	U
11096-82-5	AROCLOR-1260	3800	U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.0 V_t 2000 V_i _____

Environmental Protection Agency, CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 703 557-2490

Sample Number
EF2E4

Organics Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Laboratory Name: CompuChem

Concentration: medium
Date extracted/prepared: 07-16-85
Date analyzed: 07-25-85
Conc/Dil Factor: 1.60

RECEIVED DEC 0 2 1985

CAS Number		ug/kg	
319-84-6	alpha-BHC	190	U
319-85-7	beta-BHC	190	U
319-86-8	delta-BHC	190	U
58-89-9	gamma-BHC (Lindane)	190	U
76-44-8	Heptachlor	190	U
309-00-2	Aldrin	190	U
1024-57-3	Heptachlor Epoxide	190	U
959-98-8	Endosulfan I	190	U
60-57-1	Dieldrin	380	U
72-55-9	4,4'-DDE	380	U
72-20-8	Endrin	380	U
33213-65-9	Endosulfan II	380	U
72-54-8	4,4'-DDD	380	U
7421-93-4	Endrin Aldehyde	380	U
1031-07-8	Endosulfan Sulfate	380	U
50-29-3	4,4'-DDT	380	U
53494-70-5	Endrin Ketone	380	U
72-43-5	Methoxychlor	1900	U
57-74-9	Chlordane	1900	U
8001-35-2	Toxaphene	3800	U
12674-11-2	AROCLOR-1016	1900	U
11104-28-2	AROCLOR-1221	1900	U
11141-16-5	AROCLOR-1232	1900	U
53469-21-9	AROCLOR-1242	1900	U
12672-29-6	AROCLOR-1248	1900	U
11097-69-1	AROCLOR-1254	3800	U
11096-82-5	AROCLOR-1260	3800	U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.0 V_t 2000 V_i _____

RECEIVED DEC 0 2 1985

Case: 4669

Contractor: Compu Chem

TENTATIVELY IDENTIFIED COMPOUNDS MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Environmental Protection Agency, CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 703/557-2490

Sample Number
GH055740B13
Blk #1

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 55740
Sample matrix: solid
Data Release
Authorized By: _____

Case:
QC Report No: _____
Contract No:
Date Sample
Received:

RECEIVED DEC 0 2 1985

Volatile Compounds

Concentration: low
Date extracted/prepared: 07-10-85
Date analyzed: 07-11-85
Conc/Dil Factor: 1.00 pH:
Percent moisture: 0%
Percent moisture (decanted):

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.0	U
74-83-9	Bromomethane	10.	U	10061-02-6	trans-1,3-Dichloropropene	5.0	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.0	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.0	U
75-09-2	Methylene Chloride	6.7		79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	7.0	J	71-43-2	Benzene	5.0	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethyl Vinyl Ether	10.	U
75-35-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U	591-78-6	2-Hexanone	10.	U
67-66-3	Chloroform	5.0	U	108-10-1	4-Methyl-2-pentanone	10.	U
107-06-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	10.	U	108-88-3	Toluene	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-90-7	Chlorobenzene	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U	100-41-4	Ethyl Benzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-42-5	Styrene	5.0	U
75-27-4	Bromodichloromethane	5.0	U		Total Xylenes	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U				

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J)

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Environmental Protection Agency. CLP Sample Management Office
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
GH055740B13

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED DEC 0 2 1985

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	None	VOA	—	UG/KG
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.				
27.				
28.				
29.				
30.				

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

Date Received for Review: 12/19/85 Date Review Completed: 12/19/85

To: Mary Jane Ripp

From: Cynthia Pugh

Subject: Nalco Chemical (Illinois)
(R05-8404-9)

Sample Description: Case # 4669: SAS1812E: 2,4,5 TCP, Tetra-Octa Dioxins & Furans pr % moisture for 1812E01

Project Data Status: COMPLETE

FIT Data Review Findings:

DATA ACCEPTABLE - See qualifications on attached review sheet

Additional Comments:

Book No. 4
Page No. 284

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12/17/85

RECEIVED DEC 19 1985

SUBJECT: Review of Region V CLP Data
Received for Review on 9/23/85

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Thomas

TO: Data User: SF

We have reviewed the data for the following case(s).

SITE NAME: Nalco Chemical SMO Case No. 3A5 1812E

EPA Data Set No. SF 2496 No. of Samples: 1 D.U./Activity Numbers 1905 / C48500

CRL No. 85 FR 10563

SMO Traffic No. 1812E01

CLP Laboratory: Cal Hrs. Required for Review: 30

Following are our findings.

Tetra-octa Dioxin Furan Analysis:
Blank is acceptable even with positive values for hepta + octa CDD. The values reported in the samples are 3-5 orders of magnitude greater than the values found in blank. Surrogate - OK. - Matrix Spike levels were spiked at 2-3 orders of magnitude lower than the amounts found in sample. No useful spike information. Precision between sample and duplicate acceptable except for hepta/octa CDD/CDF. This is due to problems (matrix) in recovering the 13C-OCDD Int. Std., sample inhomogeneity, at these high levels of contamination, and instrument detector saturation for the Hepta chloro dioxin. As a result, these four classes of compounds have been flagged "J" (estimated) and should be considered biased low. 2,3,7,8-TCDD was confirmed and reported as 5.2 ppb on a dry weight basis (wet weight basis 3.1 ppb - compare to RAS dioxin which is reported on a wet weight basis). 2,3,7,8-TCDF confirmation results may also contain another TCDF isomer.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

(Trichlorophenol results on Next page)

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

TB.
12-16-85

EPA FORM 1320-6 (REV. 3-78)

DATA QUALIFIERS

Contractor: CAL

Case SAS 1912E

Below is a summary of the out of control audits and the possible effect on the data for this case:

2,4,5-Trichlorophenol results are estimated ("J") at 24 ppm (mg/kg) on a dry weight basis. The value is estimated because no matrix spike was run and sample holding times were exceeded. Lab did not run this analysis initially and was instructed only to provide this estimated value. Pentachlorophenol (and other HSL compounds) are tentatively reported on a raw quantition report at 125 ppm on a dry weight basis. These results are not confirmed by the lab and should be used as advisory only.

Reviewed by: Thomas Bauer

Phone: (312) 353-2313

Date: 12-16-85

SF 2486

California Analytical Laboratories, Inc.
2544 Industrial Boulevard • West Sacramento, CA 95691 • (916) 372-1393

September 19, 1985
Lab No.: S6534
Received: 7/10/85
SAS 1812E

RECEIVED
SEP 23 1985
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Curtis Ross
US EPA Region V
Central Regional Laboratory
10th Floor
Chicago, IL 60605

Dear Mr. Ross:

Enclosed are data summaries and documentation for the sample and QA/QC comprising SAS 1812E which we received July 10, 1985. The soil sample was logged in under CAL Lab number S6534 and analyzed for 2,3,7,8-TCDD, 2,3,7,8-TCDF, Total Tetra through Octa Dioxins and Furans and percent moisture.

The correlation of sample ID's is shown below:

CAL ID	EPA ID
S6534	1812E-01

The results for this single sample SAS need a number of explanations. The analysis of this sample was accompanied by several problems, all caused by extremely high levels of hepta dioxin and furan present in the sample. The problems we encountered are outlined below:

1) Despite re-extraction at smaller sample sizes (5 gram), we were unable to get any 13C-OCDD recovery. All of the values are calculated off the tetra internal standards and must be considered estimates.

2) Low hepta and octa levels persisted in our blanks--no doubt due to the high ppm levels present in the sample.

3) The hepta dioxins saturated the detector in S6534 and S6534 Duplicate, adding to the uncertainty of the values reported for the hepta's.

4) The native spike results indicate the sample is quite non-homogeneous when taking 5 gram samples, having values well below those in the sample and the duplicate.

5) No 2,3,7,8-TCDD or 2,3,7,8-TCDF was confirmed on the SP-2331 column because attempts to do so resulted in no 13C-TCDD or 13C-TCDF recovery.

6) No 2,4,5-Trichlorophenol data is included because we overlooked this analysis by mistake. Since the data package is already late and filled with problems, we decided to send out the data we had and put the 2,4,5-TCP analysis on hold until we hear from you.

In summary, we put a great deal of effort and work into this sample with only limited success. We feel that the results we are reporting, while only estimates, will be quite useful, and that the problems are matrix related.

If you have any questions about the data, please don't hesitiate to call.

Sincerely,

Michael J. Miille, Ph.D.
Director GC/MS Services

Michael Orbanosky
Senior Chemist

cc: SMO

RECEIVED
DEC 2 1985
U.S. EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

November 26, 1985
Lab No. S6534DRX2
SAS No. 1812E

Mr. Tom Bauer
USEPA Region 5 Laboratory
Central Regional Laboratory
536 South Clark Street
10th Floor
Chicago, IL 60605

Dear Mr. Bauer

Enclosed is the data summary and documentation for sample S6534D, SAS 1812E which you requested. Original data was analyzed on a DB-5 column. Confirmation data for the 2,3,7,8-TCDD/TCDF was run on a SP-2331 column. The sample was concentrated to 10ul prior to confirmation. The responses were still weak, but did give results comparable to the DB-5 results.

The correlation of sample ID's is shown below:

CAL ID	EPA ID
S6534	1812E-01

If you have any questions about the data, please don't hesitate to call.
Sincerely,

Paul A. Taylor for
Michael J. Miille, Ph.D.
Director of GC/MS Services

Michael Orbanosky
Senior Chemist

cc SMO

California Analytical Laboratories, Inc.
2544 Industrial Boulevard • West Sacramento, CA 95691 • (916) 372-1393

December 5,1985
Lab No: S6534
SAS No: 1812E

Mr. Tom Bauer
USEPA Region 5 Laboratory
Central Region Laboratory
536 South Clark Street
10th Floor
Chicago, IL 60605

Dear Mr. Bauer

Enclosed are the 2,4,5-Trichlorophenol results for SAS 1812E. The sample was analyzed by the organic IFB procedure for semi-volatiles.

If you have any questions, please give us a call.

Sincerely,

Michael J. Miille, Ph.D.
Director of GC/MS Services

cc: SMO

California Analytical Laboratories, Inc.
2544 Industrial Boulevard • West Sacramento, CA 95691 • (916) 372-1393

December 11, 1985

Mr. Tom Bauer
USEPA Region 5 Laboratory
Central Region Laboratory
536 South Clark Street
10th Floor
Chicago, IL 60605

Dear Mr. Bauer:

Enclosed are the hardcopies of the 2,4,5-Trichlorophenol standard used to calculate the results of SAS 1812E. If you have any additional questions, please give us a call.

Sincerely,

Michael J. Miille, Ph.D.
Director GC/MS Services

RECEIVED
DEC 13 1985
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

cc:SMO

California Analytical Laboratories, Inc.

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

CASE NO. 1812E

EPA ID: METHOD BLANK

CAL ID: S6547MBRX2

Date Analyzed: 9/5/85 Column: DB-5
Wet Weight: 1.0 g
Dry Weight: 1.0 g
Percent Moisture: NA

FURANS	AMOUNT FOUND (ng/g)	DETECTION LIMIT (ng/g)
tetra (total)	ND	0.023
(2,3,7,8*)	ND	0.023
penta	ND	0.041
hexa	ND	0.046
hepta	ND	0.17
octa	ND	0.78
DIOXINS		
tetra (total)	ND	0.033
(1234 + 2378)	ND	0.033
penta	ND	0.14
hexa	ND	0.18
hepta	2.2	-
octa	8.0	-

% Accuracy 37Cl-TCDD = 97%

ND = Not Detected
RX2 = 2nd Re-extraction
* Includes 1,2,4,9; 1,2,7,9; 2,3,4,6; 2,3,4,7; 2,3,4,8

All calculations based on dry weight.

PREPARED BY: _____

APPROVED BY: _____ DATE: 9-17-85

California Analytical Laboratories, Inc.

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

CASE NO. 1812E

EPA ID: 1812E-01

CAL ID: S6534RX2

Date Analyzed: 9/5/85 Column: DB-5
Wet Weight: 5.03 g
Dry Weight: 2.87 g
Percent Moisture: 43%

FURANS	AMOUNT FOUND (ng/g)	DETECTION LIMIT (ng/g)
tetra (total)	33.9	-
(2,3,7,8*)	6.1	-
penta	556	-
hexa	8810	-
hepta	41200 J	-
octa	1330 J	-
DIOXINS		
tetra (total)	5.4	-
(1234 + 2378)	4.0	-
penta	430	-
hexa	9490	-
hepta	81200a J	-
octa	7540 J	-

% Accuracy 37Cl-TCDD = 93%

ND = Not Detected
RX2 = 2nd Re-extraction
a = Detector saturated; value reported is minimum
* Includes 1,2,4,9; 1,2,7,9; 2,3,4,6; 2,3,4,7; 2,3,4,8

All calculations based on dry weight.

PREPARED BY: [signature]

APPROVED BY: [signature] DATE: 9-17-85

California Analytical Laboratories, Inc.

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

CASE NO. 1812E

EPA ID: 1812E-01 DUPLICATE

CAL ID: S6534DRX2

Date Analyzed: 9/5/85
Wet Weight: 5.29 g
Dry Weight: 3.02 g
Percent Moisture: 43%

Column: DB-5

FURANS	AMOUNT FOUND (ng/g)	(RPD)	DETECTION LIMIT (ng/g)
tetra (total)	45.1	(28%)	-
(2,3,7,8*)	8.2		-
penta	465	(18%)	-
hexa	7070	(34%)	-
hepta	25400 J	(47%)	-
octa	1320 J	(1%)	-
DIOXINS			
tetra (total)	6.0	(11%)	-
(1234 + 2378)	4.0		-
penta	444	(3.2%)	-
hexa	9540	(1%)	-
hepta	104000a J	(25%)	-
octa	8930 J	(17%)	-

% Accuracy 37Cl-TCDD = 95%

ND = Not Detected
RX2 = 2nd Re-extraction
a = Detector saturated; value reported is minimum
* Includes 1,2,4,9; 1,2,7,9; 2,3,4,6; 2,3,4,7; 2,3,4,8

All calculations based on dry weight.

PREPARED BY: [signature]

APPROVED BY: [signature]

DATE: 9-17-85

California Analytical Laboratories, Inc.

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

CASE NO. 1812E

EPA ID: 1812E-01 DUPLICATE

CAL ID: S6534DRX2

Date Analyzed: 9/5/85 Column: DB-5
Confirmation: SP-2331

Wet Weight: 5.29 g
Dry Weight: 3.02 g
Percent Moisture: 43%

FURANS	AMOUNT FOUND (ng/g)	(RPD)	DETECTION LIMIT (ng/g)
tetra (total)	45.1	(28%)	-
(2,3,7,8*)	8.2		-
2378 Confirmation:	11.8		-
penta	465	(18%)	-
hexa	7070	(34%)	-
hepta	25400 J	(47%)	-
octa	1320 J	(1%)	-
DIOXINS			
tetra (total)	6.0	(11%)	-
(1234 + 2378)	4.0		-
2378 Confirmation:	5.2		-
penta	444	(3.2%)	-
hexa	9540	(1%)	-
hepta	104000a J	(25%)	-
octa	8930 J	(17%)	-

% Accuracy 37Cl-TCDD = 95%

ND = Not Detected
RX2 = 2nd Re-extraction
a = Detector saturated; value reported is minimum
* Includes 1,2,4,9; 1,2,7,9; 2,3,4,6; 2,3,4,7; 2,3,4,8

All calculations based on dry weight.

PREPARED BY: [illegible]

APPROVED BY: [illegible] DATE: 11-26-85

California Analytical Laboratories, Inc.

POLYCHLORINATED DIOXIN/FURAN ANALYSIS

CASE NO. 1812E

EPA ID: 1812E-01NAT.SPK.

CAL ID: S6534NSRX2

Date Analyzed: 9/5/85
Wet Weight: 5.31 g
Dry Weight: 3.03 g
Percent Moisture: 43%

Column: DB-5

FURANS	AMOUNT FOUND (ng/g)	DETECTION LIMIT (ng/g)
tetra (total)	40.7	-
(2,3,7,8*)	13.0	-
penta	263	-
hexa	2300	-
hepta	12600	-
octa	1260	-
DIOXINS		
tetra (total)	14.9	-
(1234 + 2378)	12.6	-
penta	289	-
hexa	7390	-
hepta	11700	-
octa	2070	-

% Accuracy 37Cl-TCDD = 93%

ND = Not Detected
RX2 = 2nd Re-extraction
* Includes 1,2,4,9; 1,2,7,9; 2,3,4,6; 2,3,4,7; 2,3,4,8

All calculations based on dry weight.

PREPARED BY: _____

APPROVED BY: _____ DATE: 9-17-85

California Analytical Laboratories, Inc.

2,4,5-TRICHLOROPHENOL RESULTS

SAS No: 1812E

SAMPLE ID	EPA ID	2,4,5-TRICHLOROPHENOL DETECTED (ug/kg)
METHOD BLANK	-	< 400 PPb
S6534	1812E-01	14,000 PPb wet wt. 24,000 PPb dry wt.

Prepared By: _____

Approved By: _____ Date: 12/5/85

LAB NUMBER: S653401AB
SAMPLE ID.: 1812E-01, 10.3G/20ML

mgf

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND NAME	N.	ION TO QUANT.	AREA	QUAN LIST	UG/KG
8	1,2,4-TRICHLOROBENZENE		180		ND	
55	NAPHTHALENE	6	128	2586.	1.4	2689.0
C7	4-CHLOROANILINE		127		ND	
52	HEXACHLOROBUTADIENE		225		ND	
22	4-CHLORO-3-METHYLPHENOL	8	144	270.	2.3	4501.5
C9	2-METHYLNAPHTHALENE	0	142	1816.	1.7	3365.1
57	ACENAPHTHENE-D10	925	164	26506.	40.0	40.0 *
53	HEXACHLOROCYCLOPENTADIENE		237		ND	
21	2,4,6-TRICHLOROPHENOL	~~124~~	~~196~~	~~599.~~	~~2.6~~	~~5070.8~~
976	2-FLUOROBIPHENYL	1	172	2275.	2.7	108.8 %
C4	2,4,5-TRICHLOROPHENOL	829	196	1797.	7.3	14097.3
20	2-CHLORONAPHTHALENE		162		ND	
C10	2-NITROANILINE		138		ND	
77	ACENAPHTHYLENE		152		ND	
71	DIMETHYL PHTHALATE		163		ND	
36	2,6-DINITROTOLUENE	2	165	230.	1.2	2401.6
1	ACENAPHTHENE		154	2382.	2.9	5667.7
59	2,4-DINITROPHENOL		184		ND	
8	DIBENZOFURAN	3	168	2442.	2.3	4449.9
35	2,4-DINITROTOLUENE	0	89	409.	2.3	4451.0
8	4-NITROPHENOL	7	109	126.	1.8	3403.6
C11	3-NITROANILINE		138		ND	
80	FLUORENE	3	166	3594.	4.7	9159.7
0	4-CHLOROPHENYL PHENYL ETHER		204		ND	
70	DIETHYL PHTHALATE		149		ND	
C 2	4-NITROANILINE		138		ND	
955	2,4,6-TRIBROMOPHENOL	2	[illegible]	[illegible]	[illegible]	

$\frac{1797}{26506} \frac{40\,mg/ml}{.36} \frac{(20ml)}{(.0103\,kg)}$

= 14627 mg/kg wet wt. (÷.6)

= 24378 µg/kg dry wt

= 24,000 ppb
Dry wt

LAB NUMBER: S653401AB
SAMPLE ID.: 1812E-01, 10.3G/20ML

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND NAME	N.	ION TO QUANT.	AREA	QUAN LIST	UG/KG
962	D10-PHENANTHRENE	8	188	34363.	40.0	40.0
60	4,6-DINITRO-2-METHYLPHENOL		198		ND	
62	N-NITROSODIPHENYLAMINE	0	169	4364.	14.4	27904.3
41	4-BROMOPHENYL PHENYL ETHER		248		ND	
9	HEXACHLOROBENZENE		284		ND	
64	PENTACHLOROPHENOL	6	266	3550.	38.3	74362.6
81	PHENANTHRENE	2	178	13010.	13.1	25473.4
78	ANTHRACENE		178		ND	
68	DI-N-BUTYL PHTHALATE	7	149	1711.	1.4	2665.7 B
39	FLUORANTHENE	5	202	4856.	6.4	12481.1
954	TERPHENYL-D14	9	244	1204.	2.8	113.5 %
961	CHRYSENE-D12	5	240	15929.	40.0	40.0 *
34	PYRENE	6	202	4466.	6.4	12331.8
5	BENZIDINE		184		ND	
7	BUTYL BENZYL PHTHALATE	1	149	584.	1.6	3079.2
72	BENZO(A)ANTHRACENE	2	228	1441.	3.0	5902.2
76	CHRYSENE	8	228	1135.	2.4	4695.4
[illegible]	3,3'-DICHLOROBENZIDINE		252		ND	
66	BIS(2-ETHYLHEXYL)PHTHALATE	4	149	9075.	18.0	34955.0
5	PERYLENE-D12	1	264	15488.	40.0	40.0 *
69	DI-N-OCTYL PHTHALATE		149		ND	
7[illegible]	BENZO(B&/ORK)FLUORANTHENE	1	252	760.	1.8	3413.8
7[illegible]	BENZO(A)PYRENE	8	252	581.	1.6	3136.6
33	INDENO(1,2,3-C,D)PYRENE		276		ND	
3[illegible]	DIBENZO(A,H)ANTHRACENE		278		ND	
9	BENZO(GHI)PERYLENE	4	276	264.	1.0	1847.0

CASE NO.: 1812E EPA JECT LAB NUMBER: S653401AB
STD ID.: ST5851202 SAMPLE ID.: 1812E-01, 10.3G/20ML
INJECTED: 12/02/85 13:01 CONC. FACTOR ACID (WET WT.): 1940.00
DATE EXTRACTED: CONC. FACTOR B/N (WET WT.): 1940.00

SEMIVOLATILES (ABN) SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND NAME	N.	ION TO QUANT.	AREA	QUAN LIST	UG/KG
964	D4-1,4-DICHLOROBENZENE	4	150	36655.	40.0	40.0 *
982	2-FLUOROPHENOL	2	112	3818.	4.4	88.3 %
61	N-NITROSODIMETHYLAMINE		74		ND	
C5	ANILINE		93		ND	
83	PHENOL-D5	5	99	5308.	5.4	108.2 %
65	PHENOL		94		ND	
18	BIS (2-CHLOROETHYL) ETHER		93		ND	
24	2-CHLOROPHENOL		128		ND	
26	1,3-DICHLOROBENZENE		146		ND	
27	1,4-DICHLOROBENZENE		146		ND	
25	1,2-DICHLOROBENZENE		146		ND	
42	BIS(2-CHLOROISOPROPYL)ETHER		121		ND	
12	HEXACHLOROETHANE	3	117	415.	1.2	2398.9
C6	BENZYL ALCOHOL		108		ND	
3	N-NITROSO-N-PROPYLAMINE		130		ND	
C2	2-METHYL PHENOL		108		ND	
3	4-METHYL PHENOL		108		ND	
977	NAPHTHALENE-D8	3	136	72553.	40.0	40.0 *
988	NITROBENZENE-D5	1	128	776.	2.4	94.8 %
6	NITROBENZENE		123		ND	
54	ISOPHORONE	9	82	1723.	1.1	2138.2
7	2-NITROPHENOL		139		ND	
4	2,4-DIMETHYLPHENOL		122		ND	
43	BIS(2-CHLOROETHOXY)METHANE		93		ND	
1	2,4-DICHLOROPHENOL		162		ND	
C1	BENZOIC ACID		122		ND	

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

CRL Data Set No. 3F 2486 ERRIS No. _____

SMO Case No. SAS 1812E Site Name: Nelco Chemical

Name of Laboratory: Cal Data User: Fit

No. of Samples: 1 Date Samples Received: 9/23/85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ___ NO ✓
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 1 Number of samples received: 1
7. Checked by: Nidia Feliciano Date: 9/23/85
8. Received by Contract Project Management Section: T. Bano Date: 9/23/85
9. Review Started: Oct. 7, 1985 Reviewer Signature: [illegible]
10. Total time spent on review: 20hrs Date review completed: 12-16-85
11. Copied (xeroxed) by: _____ Date: _____
12. Mailed to Data User by: Nidia Feliciano Date: 12/28/85

TO DATA USERS:

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, 5SCRL

13. Data received by: _____ Date: _____
14. Q.A. review received by: _____ Date: _____
15. Received by CRL - CPM Section for file by: _____

Date: _____