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AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

APPENDIX A
PERSONNEL RESUMES

ADMINISTRATIVE ORDER
Docket No. III-90-01-DC

Prepared for U.S. Environmental Protection Agency
Hazardous Waste Management Division

Region III

November 7, 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P.O. Box 1169
Front Royal, Virginia 22630

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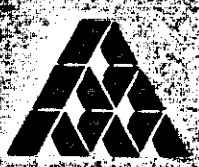
APPENDIX A

PERSONNEL RESUMES

This appendix contains resumes of personnel assigned to this project from the following companies:

Avtex Fibers Front Royal, Inc.
Alliance Technologies Corporation (Resumes included in Statement of Qualifications
S.D. Myers, Inc.
Conco
Chemical Waste Management, Inc.



ALLIANCE
Technologies Corporation

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AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

AVTEX FIBERS FRONT ROYAL INC.

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

C. KENNETH WAGNER
11 Portsmouth Road
Front Royal, VA 22630
Home phone (703) 636-2109
Office phone (703) 635-2141, Ext. 110

OBJECTIVE

Management responsibility in a position where my skills will be utilized; where commitment to my employer is required; and where there is an opportunity to make a meaningful contribution to the success of the operation.

SUMMARY:

I am an experienced professional with a solid record of promotion in the management of a large multi-product synthetic fibers producing corporation. Have training in maintenance management, project management, budget management, and a proven record of an ability to work well with people, supervisors, peers, and subordinates.

EXPERIENCE:

All experience has been with American Viscose Corporation and its successors, FMC Corporation and Avtex Fibers Inc. except for a two-year tour of duty in the U. S. Air Force.

AVTEX FIBERS FRONT ROYAL INC., Front Royal, VA

1/87 - Present **Vice President - Engineering**

Bottom line responsibility for all design, funding, procurement and cost control of capital projects and all maintenance functions in the Plant. Member of the Corporate operating committee. Extensive experience in negotiation with state and federal agencies, contractor firms, vendors and suppliers, and union negotiations both corporate and local. Coordinate purchase of capital and repair material with purchasing staffs to control cash flow and at the same time meet project deadlines. Develop and coordinate priority systems for allocation of personnel and equipment to maintain and operate the plant facilities within funds available. Develop and initiate cost reduction projects to provide additional capital to upgrade plant facilities. Responsible for directing activities of approximately 35 salary and 300 hourly employees and an annual budget of approximately $20,000,000.

8/79 - 1/87 **Assistant Plant Manager - Engineering**

Basically the same job description and functions as described above. Job title changed with reorganization of overall corporate structure making the Front Royal plant a separate corporation. During the past 6 years as either V.P. of Engineering or Assistant Plant Manager - engineering budgets were met to within ± 0.1% annually.

12/77 - 8/79 **Maintenance Manager**

Reported to Assistant Plant Manager - Engineering. Responsible for all maintenance functions within the Front Royal plant. Assisted in developing a meaningful work order system for the plant so as to determine priority, scope of work, cost estimating, plant and corporate approvals, and then overseeing material procurement and directing the implementation of the scope of work. Develop and administer a planning and scheduling function with the Engineering Department to coordinate the assignment of personnel to most efficiently execute the scope of work with minimum lost time and unnecessary expense. Direct responsibility for approximately 25 salary and 300 hourly employees.

EXPERIENCE
(Continued)

9/75 - 12/77 **Chief Plant Engineer**
This assignment was at our Radford, Virginia plant. It entailed establishing an engineering department in a relatively new plant. Planned and implemented preventative maintenance program, developed and implemented a job training program for hourly craftsmen, prepared and administered budgets and budget control systems. Developed and implemented training programs for foremen and supervisors to enhance their ability to lead and motivate personnel. During the period I served at the Radford plant, the maintenance costs were reduced by 50% and the machine running efficiency was increased by about 75%. It was during this period that FMC sold their fibers operations to Avtex Fibers Inc.

8/72 - 9/75 **Project Manager**
This assignment was at our FMC Fibers Division, Central Engineering group in Media, PA. Responsibilities covered all aspects of Project management from conception to fulfillment. Develop engineering scopes from manufacturing scopes, supervise all phases of the project design. Select equipment vendors and contractors, prepare bid requests, analyze bid returns and select successful vendors and prepare purchase requisitions. Develop critical path charts and develop project budgets. Develop follow-up procedures to insure project completion on schedule and within budget limitations. Project budgets ranged from $60,000 to $10,000,000 and up to 15 projects were being supervised simultaneously at several of our plants. All projects supervised were completed on schedule and within budget limits.

2/63 - 8/72 **Plant Engineer**
This position was at our Lewistown, PA plant. Duties were much the same as the Assistant Plant Manager - Engineering at the Front Royal plant as described above. Total responsibility for approximately 40 salary and 550 hourly personnel including approximately 6 graduate engineers. During this period, FMC Corporation purchased all physical assets of The American Viscose Corporation.

1/62 - 2/63 **Maintenance Engineer**
This position was at the Lewistown, PA plant. Duties included direct supervision of 2 Maintenance Supervisors, 1 Utility Supervisor, 5 office personnel and indirect supervision of approximately 700 hourly personnel and 25 foremen. Responsibilities included the manning distribution for all maintenance functions of the operating and service departments and all capital projects assigned by the Plant Engineer to plant forces. Acted as liason between plant personnel and contractor supervision on all capital projects assigned for contractor completion.

8/56 - 1/62 **Staff Engineer**
This position was at our Lewistown, PA plant. Duties included scoping and estimating both capital and maintenance work requests. Coordinate originations with plant staff members and/or department heads. Design with drafting department personnel. Select, procure and expedite materials required and coordinate with the maintenance engineer to insure efficient execution of the job or projects. Individual projects varied from budgets of $5,000 to $1,000,000. Up to 100 projects ongoing simultaneously.

EXPERIENCE
(Continued)

8/54 - 8/56 — United States Air Force
Aircraft Maintenance Officer
Responsible for total maintenance of seventeen B-47 aircraft and supervision of staff of approximately 74 non-commissioned officers and airmen. Attained the rank of 1st Lieutenant. This was one of three squadrons in the wing and I was successful in attaining the highest percentages of successful missions both routine and max efforts on unscheduled alerts of the three squadrons.

6/53 - 8/54 — **Junior Engineer**
This position was at our Lewistown, PA plant. This was entry level from college and my primary assignment was that of pipefitter foreman. Responsible for the day to day supervision of approximately 50 hourly personnel. This position gave me the opportunity to develop my managerial skills and my ability to work with other people successfully.

EDUCATION:

Massachusetts Institute of Technology
BS - Mechanical Engineering - 1953

U. S. Air Force Maintenance Officer School
Chanute AFB, Rantoul, IL - 1955

REFERENCES:

David A. Tousignant, President
Avtex Fibers Front Royal Inc.
P. O. Box 1874
Middleburg, VA 22117
(703) 687-5359

John N. Gregg
President & CEO
Avtex Fibers Inc.
221 South Aberdeen Avenue
St. David's, PA 19087
(215) 687-2348

John G. Knight
Vice President (Retired)
Avtex Fibers Front Royal Inc.
501 Ross Avenue
Front Royal, VA 22630
(703) 636-2702

C. Ray Enicks
Plant Manager (Retired)
139 Gloucester Road
Front Royal, VA 22630
(703) 635-7310

Eldon E. Campbell
Plant Manager (Retired)
1005 Horseshoe Drive
Front Royal, VA 22630
(703) 735-8176

Charles M. Huber, MD
315 West 10th Street
Front Royal, VA 22630
(703) 736-6131

Ralph S. Markee
Executive Vice President
Avtex Fibers Front Royal Inc.
Route 1, Box 3483
Front Royal, VA 22630
(703) 635-5714

A RESUME OF :

Paul J. Malina Jr.

EDUCATION:

BSME 1974, New Jersey Institute of Technology (NCE)
Society of Professional Advancement, Brunswick, NJ.
Pnuematic Conveying of Bulk Solids, Polymer Extrusion
Hercules Inc., Management School

EXPERIENCE:

5/89- Present — Avtex Fibers Front Royal, Inc.
Utilities Engineer:
Duties include all facets of Powerhouse Dept. Head for Steam Generation & Turbine operation. Proj. Mgr. EPA regulatory compliance on Underground Storage Tanks and PCB detection and clean-up. (Supervise 5 Sal. & 39 Hrly).

2/89- Present — Callaghan Consultants, Inc.
Owner:
Consulting Engineering work for local and national Industry. Continuing growth.

9/88- 2/89 — Murray Machinery, Inc.
Plant Manager:
Duties included total Plant management of 9.5 million dollars active fabrication work (pulp & paper machinery, chip mill equipment) Accountable for 40 wage-roll/salary personnel. Position consolidated and eliminated due to Corporate Take-over.

9/84- 7/88 — Hi-Line Machine, Inc.
Plant Engineer:
Accountable for all phases of manufacture (fabrication & machine shops). Design, Building modifications, Government estimating/contract bidding/contract administration (familiar with QAR, FAR, & MIL standards) Personnel relations (hiring, terminations/policy). Operating procedures, Corporate Safety, OSHA enforcement, R&D. Accountable for 40 wage-roll and salary personnel.
Lost employment due to Total Corporate lay-off and eventual

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Company closure.

7/74- Hercules Inc.
8/84 **Multi-Plant supervising Project Engineer:** $40,000/yr.
Accountable for capital expenditures for 3 plants ($6.5 million)
Supervised 11 Engineers/3 Draftsmen
(1/82-8/84)

Plant Engineer:
Accountable for Engineering and Maintenance for an Ammonium Nitrate and Nitric Acid Plant. ($1.5 million maintenance/$3.0 million capital) Accountable for 15 wage-roll /salary personnel.
11/80-1/82 Promoted

Project Engineer/Senior Design Engineer:
Project work $1k- 38.5 Million for polypropolene Fiber/Film Plant (Field engineer on construction of $38.5 million Film Plant, Equipment setting/start-up/trouble shoot, piping, HVAC, Structural installation. 2.5 yr. project)
7/74-11/80 Promoted.

74-75 Jackson River Vocatonal Center
Night School Automotive Instructor
85-86 Apprentice Blue Print Reading Instructor

PERSONAL:

Married, seven children
Purchasing home

SKILLS:

15 Years Automotive Mechanics
Custom Paint work (conventional-electro static)
Welding (MIG/Stick, FLuxcore, Sub-arc)
NDT (dye-penetant, mag-particle, X-ray)
Machine operation (Mills,Lathes,Punch presses,Brake press)
Drafting & Design
Woodworking/cabinet making
Government DOD Contracting
Affiliated with ASME & NSPE
EPA, PCB, and RCRA Project Management

REFERENCES UPON REQUEST

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AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

ALLIANCE
Technologies Corporation

Contractor qualifications and personnel resumes for ALLIANCE Technologies Corporation are included in APPENDIX F of this WORK PLAN.

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

S. D. MYERS / TRANSFORMER CONSULTANTS

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1159
Front Royal, Virginia 22630

RESUME OF

LYNN A. FRITZ

Mr. Fritz has twelve years of diversified experience in handling, labeling and transportation of hazardous materials for S.D. Myers, Inc. He is authorized by the state of Maryland to conduct Controlled Hazardous Substance Drivers Training Programs.

WORK EXPERIENCE

S.D. Myers, Inc.
180 South Ave.
Tallmadge, OH 44278

FIELD SERVICE MANAGER (7/87 - Present)

Responsibilities:

Interactions and negotiations with federal, state and local regulatory agencies.
Regulatory compliance with DOT and TSCA.
Development and implementation of hazardous waste handling and drivers training programs.
Inspections of outside carriers for compliance to regulations.
Semi-annual updating sessions with all drivers and crew to keep all practices in line with law changes.

FIELD SERVICE PRODUCTION SUPERVISOR (1/86 - 7/87)

Responsibilities:

Directing the movement of all hazardous waste material by the Field Service Division throughout the United States.
Monitor driver and jobsite personnel for compliance to all regulations.
Insure that all vehicles are maintained according to federal and state standards.

FIELD SERVICE CREW LEADER (1/80 - 1/86)

Responsibilities:

Direction of all onsite activities prior to and during the handling of hazardous waste.
Inspection of finished loads for proper labeling, loading and manifesting.

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Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

DAVID F. BICHSEL

AUGUST 8, 1982

Experience

Six years experience in fluid handling and PCB removal. David has supervised all types of PCB cleanup work in more than seven states. His responsibilities include labeling, manifesting, packaging, supervising of crews, and evaluating needs of the customer for compliance. He is also certified by the state of Maryland to haul hazardous waste.

MARK ROBERTS

JULY 28, 1986

Experience

Mark has completed all of the S. D. Myers safety and environmental training. He has supervised crews on jobs in Texas, Tennessee, New Jersey, Ohio, and Michigan. His responsibilities include all aspects of compliance as well as development of grid samples to determine the extent of customer contamination.

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AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

STEAM KAT HAZ MAT of VA

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

Corporate Summary:

STEAM KAT HAZ MAT OF VIRGINIA

Steam Kat Haz Mat of Virginia is one of three operational divisions of Clean America, Inc, of Baltimone, MD. As such it is has only one year existance but key personnel and total coporate history include five years environmental compliance contracting work. The corporate predecessor organization to Steam Kat Haz Mat completed projects in five states. These projects included compliance work under the Clean Water Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, Comprehensive Environmental Response, Compensation and Liability Act and Superfund Amendment and Reauthorization Act. Field crews of up to twelve men have worked on a 24-hour basis under all types of weather and terrain conditions. Crews have operated as far away from the corporate office in Richmond, VA, as Philadelphia and San Francisco. Compliance, recovery and clean up work has typically involved coordinating strategies and tactics with the client, various state and federal regulatory agencies and disposal facilities. Technical abilities include preparing a delisting petition under the Resouce Conservation and Recovery Act and drafting an environmental assessment under the California Department of Health polychlorinated biphenyl clean up standards.

W. BRYANT BARNES

EDUCATION:

J.R. Tucker High School. 1969

EXPERIENCE:

Eight years experience in all aspects of corporate environmental compliance from sales to project management to personal supervision of up to 40-man work crews involved in all aspects of compliance with Clean Water Act, Resource Conservation and Recovery Act, Toxic Substances Control Act and Comprehensive Environmental Response, Compensation and Liability Act. Projects and response actions include emergency response to oil spills, pipeline ruptures, train derailments, truck accidents, in-plant hazardous materials and waste spills; underground recovery and remediation and delisting of RCRA-regulated wastes. Over one dozen polychlorinated biphenyl (PCB) decontamination projects from Virginia and Maryland to California.

GEORGE C. WALTON

EDUCATION:

Penn State University. MS - Biology. 1974
U S Army Explosive Ordnance Disposal School. 1976
U S Environmental Protection Agency Response Manager Operations Course. 1985.

CERTIFICATIONS:

Certified Hazardous Materials Manager (Master Level)
Certified Safety Executive
Fellow, American Institute of Chemists

EXPERIENCE:

Fourteen years experience in all phases of emergency response and environmental compliance from recovery of military and commercial explosives to commercial hazardous materials and wastes. Served as part of an EPA Regional Response Team and worked on sixteen Superfund sites and over three hundred emergency response and hazardous waste disposal projects in 26 states. Conducted hazardous waste operation and emergency response (HazWOPER) training programs as well as compliance programs for the Virginia Emergency Management Association and the Virginia Environmental Health Association.

DONNIE B. BARNES

EDUCATION:

Randolph Henry. 1985
OSHA HazWOPER Training (40 CFR 1910.120). 1988

EXPERIENCE:

Five years operational experience in oil and hazardous waste clean up and disposal. One years experience as office manager of full service environmental response company. Specific duties included hands-on recovery of oil, hazardous chemical materials and polychlorinated biphenyls (PCBs). In addition, supervision of small field crews involved in all types of environmental operations under a wide variety of conditions and circumstances to include adverse access and weather.

JACKIE MC ALLISTER

EDUCATION:

Prince Edward Academy. 1960
OSHA HazWOPER Training (40 CFR 1910.120). 1988.

EXPERIENCE:

Five years experience managing field crews involved in hazardous waste and emergency response operations. Specific projects included recovery, identification, transportation and disposal of hazardous waste in accordance with Resource Conservation and Recovery Act (RCRA; 40 CFR 260-267). In addition, supervised crew decontaminating polychlorinated biphenyl's (PCBs) form a transformer facility in accordance with the Toxic Substance Control Act (TSCA; 40 CFR 760) and California health standards.

ERIC M. BANE

EDUCATION:

Fishburne Military School, Waynesboro, VA. 1982
Ferrum College, Ferrum, VA. 1987. BS - Envuironmental Science
OSHA HazWOPER Training (40 CFR 1910.120). 1988
Chlorine Safety Seminar. 1988

LICENSE:

Commonwealth of Virginia Class III Water/Wastewater Treatment Plant Operator.

EXPERIENCE:

Two and one-half years experience in environmental compliance. Experience includes operation of a 7 MGD (million gallons per day) wastewater treatment plant and independent operation of a 2 MGD drinking water filtration plant serving approximately 20,000 residents. Additional experience includes Resource Conservation and Recovery Act (RCRA) recovery, identification, transportation and disposal of hazardous waste and emergency response. Field duties included monitoring and sampling of air and water, preparing hazardous waste for transportation and supervision of small work crews. Supervision includes daily management of remediation crew decontaminating polychlorinated biphenyl's (PCBs) from an operational factory in accordance with federal (TSCA; 40 CFR 760) and California standards

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

CONCO

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

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U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1159
Front Royal, Virginia 22630

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

ROBINSON PIPE CLEANING COMPANY

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

ROBINSON PIPE CLEANING CO.

HAZARDOUS WASTE CLEANING

Robinson Pipe Cleaning Company has cleaned approximately 60,000' of 6" - 72" storm and sanitary sewers, removing Dioxin and other hazardous chemicals. This project covered the Love Canal area of Niagara Falls, New York, and took approximately four months to complete. All of our equipment had to be decontaminated before returning to our home base.

Robinson Pipe Cleaning Company is one of the most experienced environmental contractors in the nation.

ROBINSON PIPE CLEANING CO.

10/18/89

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 2

To Tom Malina	From Bill Burchell
Co. Autex Fibers	Co. Robinson Pipe Cleaning Co.
Dept.	Phone #
Fax # 703-635-2141	Fax # 412-228-5624

RESUME OF
ROBERT J. MCMILLEN

Started with Robinson Pipe Cleaning Company as a laborer in 1972 and worked his way up to Assistant Superintendent for all of our various services, specializing in closed-circuit television inspection. Bob McMillen spent several months supervising and working with the New York State Department of Environmental Conservation in the cleaning of storm and sanitary sewers in the Love Canal area of Niagara Falls, New York.

RESUME OF
WILLIAM A. BURCHELL

Started with Robinson Pipe Cleaning Company in 1986. 12 years prior experience in Coke Plant, By-Product Steel Making Facilities, Chemcial Plants and Power Stations at different levels of management - Foreman, Superintendent, Manager and Vice-President.

RESUME OF
MICHAEL J. LONG

Started with Robinson Pipe Cleaning Company in 1976. His capacity with Robinson Pipe Cleaning Company is supervisory at this time, promoted to general manager in January, 1979. Mr. Long is our safety co-ordinator; is involved in our sales and bid responsibilities.

RESUME OF
EVELYN N. FUNKA

Started with Robinson Pipe Cleaning Company as a secretary in 1958, Mrs. Funka is now Secretary-Treasurer of the Corporation. She also handles the duties of Controller and Office Manager.

RESUME OF
CLARENCE JONES

Has 13 years of experience in the field of storm and sanitary sewer cleaning as a working foreman. He also has years of experience in the rodding of conduit and placing of fiber optic cable for the telephone companies.

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

CONCO

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

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U. S. Environmental Protection Agency

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AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

CONCO CORP.
LAWNSIDE, N.J.

Prime contractor employed to install hydraulic cement in sump inverts throughout the sewer system. See detailed sketch. This firm is employed on the plant site for many typical construction projects in the concrete, insulation , and masonary areas.

The work plan consists of thirty (30) manholes locations from A-44 thru outfall 003. Two 12 hour shifts will be utilized until the scope of work is completed. Air monitoring and proper entry safety precautions will be utilized at all times. Pnuematic membranes will be used to plug flow into and out of the sumps until the concrete installation is complete.

Personnel and Qualifications

E. Fletcher - Superintendent

22 yrs. military service

20 yrs. construction, brick mason, concrete finisher, coatings specialist, foreman, and superintendent.

E. Noffsinger - Brick mason

15 yrs. concrete finisher and foreman

J. Lutek - Brick mason

5 yrs concrete finisher and foreman

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AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

CHEMICAL WASTE MANAGEMENT INC.

PERSONNEL AND QUALIFICATIONS

SECTION 8.2

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1999

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1160
Front Royal, Virginia 22630

TECHNICAL SERVICES JOB POSITION TRAINING REQUIREMENTS LIST

Position Title: Field Analyst/Project Leader

Prepared By: JOHN BAKER
(Name/Title/Signature)

Approvals:

1. General Manager: _____
(Name/Signature/Date)

2. Technical Services
Operations Manager: _____
(Name/Signature/Date)

A. GENERAL TRAINING

1.000	New Employee Orientation (mandatory for all new employees)
1.10	Introduction
1.20	Welcome to the Company
1.30	CWM's Environmental Policy
1.40	Regulation Compliance
1.50	CERCLA Overview
2.000	Basic Safety Training(1)
2.10	Environmental and Chemical Hazard Recognition
2.20	Hazardous Waste Characteristics and Basic Control Methods
2.21	Chemical Properties of Hazardous Materials
2.22	Basic Toxicology
2.23	TLVs and PELs
2.24	Hazard Communication Standards and Information Sources (2)(3)
2.25	Medical Surveillance Overview(2)
2.26	Employee and Environmental Monitoring
2.30	Personnel Protective Equipment(3)
2.31	Fundamentals of PPE(3)
2.32	Fundamentals of Respiratory Protection(3)
2.33	Air Purifying Respirators(3)
2.34	Basic Protective Equipment (Level C) Inspection, Donning and Removal(3)
2.35	Supplied Air Respirators(3)
2.36	Advanced Protective Equipment (Level B)(3)
2.40	Heat Stress and Dermatitis
2.50	Hearing Conservation Orientation
2.60	Generic Site Safety Plan Review
2.70	Site Control and Decontamination
2.80	Site Evaluation and Preparation Overview

2.90	Site Security
2.100	Communication Systems
2.110	General Safe Work Practices
3.000	Basic Emergency Response and Preparedness
3.10	Contingency Plan Review and Incident Reporting(3)
3.20	Fire/Explosion Prevention and Protection
3.21	Fire Extinguisher Practice(3)
3.30	First Aid(4)
3.40	CPR(3)
3.50	Emergency Medical Procedures
3.60	Basic Spill Response

(1) Mandatory for employees who will work at project sites full or part-time.
(2) Must be completed by office employees.
(3) Annual refresher training is required.
(4) Refresher training is required every 3 years.

B. JOB-SPECIFIC TRAINING

Record in the space provided the course descriptions from the Master List that are required for job position duties (attach additional pages listing these courses if necessary).

1.000	Waste Analysis Plan
1.20	Analysis Requirements
1.30	Sample Collection Procedures
1.40	Sample Analysis Methods
1.50	Container Marking
2.000	Materials Handling
2.10	Lifting Techniques
2.20	Drum Handling Safety
2.30	Drum Sampling, Classification, Staging and/or Transport
2.40	Liquids Pumping and Bulking
2.70	Lab-Pack Preparation and Shipment
2.80	Explosives Handling
2.90	Radioactive Materials Identification and Containment
2.100	Compressed Gas Cylinder Handling
2.110	Lockout (1)
2.140	Grounding and Bonding (2)
2.150	Confined Space Entry (3)
2.160	Operation of Hand and Power Tools
2.170	Air Compressor Care, Use and Limitations
2.200	On-Site Storage
3.000	Equipment/Vehicle Inspection, Operation of Forklifts, Over-the-Road Vehicles (Forklifts, Trucks, Fume Hood)
3.20	On-Site Storage Area (Forklifts)
3.50	Off-Site Transport Vehicles (Trucks)
4.000	Equipment/Vehicle Corrective Maintenance Including Inspection of (Forklifts, Trucks, Fume Hood)
4.20	On-Site Storage (Forklifts, Trucks, Fume Hood)
4.40	Off-Site Transport Vehicles (Trucks)
6.000	Phase I Regulatory Compliance Procedure Training (1)
6.20	On-Site Storage
	•PAP
	•Vehicle/Container Inspection RCRA
	•TSDF Waste Acceptance Standards
	•Lab-Pack Manual
	•EPA Standards

B. JOB-SPECIFIC TRAINING - (CONTINUED)

Record in the space provided the course descriptions from the Master List that are required for job position duties (attach additional pages listing these courses if necessary).

6.40	Off-Site Transport
	•DOT Hazardous Materials Shipment
	•PAP
	•Vehicle/Container Inspection RCRA
	•TSDF Waste Acceptance Standards
	•Lab-Pack Manual
6.50	Laboratory
	•PAP
	•Lab-Pack Manual
8.000	Project Management Procedures
8.15	Personnel Travel Arrangements
8.16	Project-Specific Contingency Plan Development
8.17	Operations Plan Review
8.20	Mobilization
8.25	Site Preparation
8.30	Project Activation and Completion According to Plans and Contracts
8.40	Demobilization
8.47	Site Shutdown
10.000	Hazard Assessment (4)
10.10	Explosimeter Capabilities, Calibration, Use, Limitations, Routine Maintenance
10.20	Toxic Gas Testing Instruments Capabilities, Calibration, Use Limitations, Routine Maintenance

(1) Complete before working under reduced supervision.
(2) Complete before transferring flammable liquids under reduced supervision.
(3) Complete before entering a confined space.
(4) Complete before using test equipment under reduced supervision of qualified employee.

C. SPECIAL SKILLS TRAINING

(Reserved for listing unique skills training based upon employee's assignment to special duties such as contingency plan emergency coordinator).

1.000 Contingency Plan Team Member Training
4.000 Defensive Driving*
5.000 Fingerprint Testing

*Within one year of hire.

D. MANAGEMENT TRAINING

(Reserved for Technical Services management down to the first-line supervisor to teach them personnel management and hazardous waste management skills).

1.000 Phase II Regulatory Compliance Training
4.000 Effective Supervision Program, if applicable.

E. PROJECT-SPECIFIC TRAINING

1.000 Operating Plan and Site Layout Review
2.000 Project-Specific Hazard Communication
3.000 Project-Specific Regulatory Review
6.000 Contingency Plan Review
8.000 Project-Specific On-the-Job Training

DO NOT LEAVE BLANKS. PUT N/A IF NOT APPLICABLE.

Waste Management, Inc.

POSITION DESCRIPTION

POSITION TITLE Project Leader / Field Analyst

DIVISION / LOCATION Technical Services- REPORTS TO Operations Manager (Title)

INCUMBENT Various Field Analysts (Employee's Name) APPROVAL _____ (Signature of Immediate Supervisor)

_____ Date

1) Basic Function (Briefly summarize the overall function and objective of the position omitting specific duties.)

Responsible for running jobs, supervising field technicians and analysts and contact with customers on a regular basis. Performs the manual and technical tasks necessary to safely handle hazardous waste through all phases of labpacking, sampling, and removal of waste material from each project site.

2) Specific Duties and Responsibilities (List each significant duty and responsibility, attach additional sheet if necessary.)

1. Classifies, segregates and packages hazardous wastes.
2. Performs analytical testing on unknown chemicals.
3. Maintains accurate, legible records.
4. Prepares labpacks and non-labpack drums for shipment. Preparation includes packaging, labeling, marking, and placarding according to DOT. Preparation also includes loading, blocking and bracing containers in vehicle.
5. Completes manifests for shipment.
6. Collects representative samples according to the Waste Analysis Plan. Delivers samples to Technical Manager.
7. Overpacks non-labpack containers in poor condition so they can be shipped.
8. Has working knowledge of safety equipment and requirements for use of equipment.
9. Drives trucks and forklifts.
10. Responsible for performing work to meet contract specifications.

11. Supervision of field analysts and technicians.
12. Responsible for enforcing safety policies.
13. Responsible for remaining in compliance with PAP and Regulatory Agencies.

3) Skills, Education and Qualifications Required (Indicate the skills, education, experience and qualifications required for this position.)

1. Education: B.S. in one of the sciences.
2. Experience: College chemistry background. Minimum one years experience as a field analyst.
3. The following skills are preferred:

   a. Good verbal and written skills..
   b. Ability to supervise other workers.
   c. Valid drivers license.

WASTE MANAGEMENT INCORPORATED
PHYSICAL EXAMINATION AUTHORIZATION AND REPORT

John Baker (Name) | 185-58-2823 (SS Number) | Field Analyst (Job Title)

Date and Time of Appointment: March 21, 1989 (Date) | 11:00 A.M. (Time)

Examination Type (circle one) A B C (D) E

Chemical Waste Mgmt.
Technical Services Division
41-85 Doremus Avenue
Newark, NJ 07105

Reason for Examination:
___ Pre-placement ✓ In Service
___ Return to Duty ___ Termination ___ Treatment

	Attached		In Medical Provider Guide		Not Required
Job Description:	_____	or	_____	or	_____
Exposure Data:	_____	or	_____	or	_____
PPE Required:	_____	or	_____	or	_____

Previous Medical Data Location: Note: Do not eat or drink twelve(12) hours prior to scheduled physical.

Site Designate | 3/14/89 (Date)

FROM: Dr. JAMES E. BELLAMY, D.O. (Examining Physician)

I have personally examined John Baker and have informed this person of the examination results and any conditions requiring further examinations and treatment in writing.

In addition, I have personally evaluated the described job duties, required personal protective equipment (including a respirator), the results of the required ancillary studies and I have determined that this person:

Y Is medically qualified for the job described and can wear a respirator and personal protective equipment.
___ Is NOT medically qualified for the job described.
___ Is medically qualified for the job described with the following limitations: _____

Limitations effective until: _____

PHYSICIAN NAME: James E. Bellamy, D.O.
ADDRESS: EnviroCare Health Services
135 Raritan Center Parkway
Edison, New Jersey 08837
TELEPHONE NUMBER: (201) 225-5454

DATE: 3-21-89
(Physician's Signature)

WM-HR03
5/87

Chemical Waste Mgmt.
Technical Services Division
41-85 Doremus Avenue
Newark, NJ 07105

101213

JOHN BAKER
PROJ. MGR

CERTIFICATION OF ROAD TEST

Driver's Name: John T. Baker Jr.
Social Security No.: 185-58-2823
Operator's or Chauffeur's License No.: B-260-429-792-159
State
Type of Power Unit: Volvo Straight Truck
Type of Trailer(s): N/A
If Passenger Carrier, Type of Bus: N/A

This is to certify that the above-named driver was given a road test under my supervision on 9-29-88
19 88 consisting of approximately 12 miles of driving.
It is my considered opinion that this driver possesses sufficient driving skill to operate safely the type of commercial motor vehicle listed above.

Andrew Rosen — Ops. Mgr.
Signature of examiner — Title

CWM - 41-85 Doremus Ave
Newark, NJ 07105
Organization and address of examiner

68-C(RT) (REV. 8/87)

CERTIFICATION OF WRITTEN EXAMINATION

This is to certify that the person whose signature appears below has completed the written examination under my supervision in accordance with provisions of 391.35 of the Federal Motor Carrier Safety Regulations.

John T. Baker Jr. — 07/13/88
Signature of person taking examination — Date of examination

Bldg E5864 Hoadley Rd / Edgewood Area Aberdeen Proving Grounds MD 21010
Location of examination

Andrew Rosen — Ops. Mgr.
Signature of examiner — Title of examiner

CWM - 41-85 Doremus Ave
Newark, NJ 07105
Organization and address of examiner

MOTOR CARRIER: CHEMICAL WASTE MANAGEMENT

MEDICAL EXAMINER'S CERTIFICATE

I certify that I have examined

JOHN BAKER
(DRIVER'S NAME — Print)

in accordance with the Federal Motor Carrier Safety Regulations (49 CFR 391.41 - 391.49) and with knowledge of his duties, I find him qualified under the regulations.

- Qualified only when wearing corrective lenses
- Qualified only when wearing a hearing aid
- Medically unqualified unless accompanied by a waiver

A completed examination form for this person is on file in my office at

135 RARITAN CTR PKY EDSION NJ
(ADDRESS)

3-21-89 — DR BELLAMY
(DATE of EXAMINATION) — (NAME of EXAMINING DOCTOR — Print)

Bellamy
(SIGNATURE of EXAMINING DOCTOR)

John T. Baker Jr.
(SIGNATURE of DRIVER)

523 CROWNWOOD CT EDGEWOOD MD
(ADDRESS of DRIVER)

CARD NO. 28-C

J. J. Keller & Associates, Inc.

Hereby Certifies That
JOHN BAKER

has satisfactorily completed training
in
THE SAFE TRANSPORTATION OF HAZARDOUS WASTE
AS REQUIRED BY MARYLAND AND NEW JERSEY

8/15/88
Date

Instructor

STATE OF MARYLAND
CHS VEHICLE OPERATOR'S CERTIFICATE

Certificate #: 5563
Issued to: John Baker Jr.
Driver License No.: B260 429 792 159 (MD)
Certified By:
Expiration Date: 12/30/89
Driver's Signature: John T. Baker Jr.

DEPARTMENT OF THE ENVIRONMENT

Ronald — Director, WMA

101214

CHEMICAL WASTE MANAGEMENT
EASTERN REGION
TECHNICAL SERVICES DIVISION
RESPIRATOR FIT TEST RECORD

Date of Test: June 7, 1989

Name of Employee: John Baker

Location of Fit Test: Newark, N.J.

	Respirator Selection		
	1	2	3
Manufacturer	MSA		
Face Piece (half or full)	Half		
Size	Medium		
Cartridge Used	GMC-H		
Positive/Negative Pressure	Yes		
Isoamyl Acetate	Yes		
Irritant Smoke	—		
Other (Explain)	—		

EMPLOYEE ACKNOWLEDGE AND DOCUMENTATION:

1) I have been informed about the nature of respiratory hazards and the reasons for using the respirator. [X] Yes [ ] No

2) I have been instructed in the proper use, limitations, inspection and maintenance of the respirator. [X] Yes [ ] No

Person Tested: John T. Baker Analyst
Signature/Title

Fit Test Performed By: Martin K. Campbell, Health + Safety Manager
Signature/Title

COMMENTS:

TEST EXERCISES:
Breath normally, breath deeply. Move head in all directions (side to side, up and down) inhaling when full range of motion is achieved. Talking. Jogging in place.

101215

We, the undersigned, have attended an informal training session addressing and discussing the following topics: Customer Relations, Vehicle Inspection Reports, Trip Reports, Waste Profiles, Special Waste Profiles, and Profile Recertifications. Session conducted at the CWM office located at the Aberdeen Proving Ground, Friday November 11, 1988.

James H. Love, Jr.
Scott C. Shaw
John T. Baker, Jr.
Barry K. Stone
Keith Gosse
Marilyn Goldberg
Eugene A. Isaac
Eric Rostine

Trainers Signature James Love 11/14/88

AR101216

101216

Certificate of Completion

this is to certify that

JOHN BAKER

has successfully completed the

Chemical Waste Management, Inc.

Safety Training Program on

OSHA 1910.120 HAZARDOUS WASTE SITE OPERATIONS (40 HOURS)

on this 22nd day of March, 1988

Walter R. Campbell
Instructor

General Manager

ATTENDANCE RECORD

DATE: 3/21/88 LOCATION: NEWARK, N.J.

INSTRUCTOR: WALT CAMPBELL/CAL WILLIAMS

CWM-ORIENTATION & INDOCTRINATION

NAME PRINTED	SIGNATURE	AFFILIATION
ELAINE BRAKOWSKI	Elaine Brakowski	EMPLOYEE- ACCOUNTING
DENISE RANCATI	Denise Rancati	EMPLOYEE - CLERICAL
JOHN BAKER	John Baker	FIELD ANALYST
DAVID FANCHER	David Fancher	EMPLOYEE - ACCOUNTANT

101218

Chemical Waste Management

ORIENTATION

DATE: March 21, 1988 LOCATION/TIME Newark, N.J. / 2:00 pm

The following employees were given an orientation of Chemical Waste Management. The people were shown general Chemical Waste Management policies as related to their job. They were also shown how to properly don and remove Level C Protection.

The employees understand their responsibilities in regard to company policies, as outlined in the seminar, and will practive these on the job.

PRINT YOUR NAME	SIGNATURE
John Baker	John T. Baker, Jr

TRAINER'S SIGNATURE Walter R Campbell

101219

16

HAZARD COMMUNICATION STANDARDS AND INFORMATION SOURCES

DATE: March 21, 1989 LOCATION/TIME: Newark, N.J./10:00 AM

The following employees successfully completed this course. The course covered employeee Right-to-Know as per OSHA Hazard Communication Standard, information on labels, MSDS's (Material Safety Data Sheets), routes of entry and types of exposure. A three(3) volume set of binders which contain information on all State Right-to-Know laws, reference guides and information and special reports pertaining to the same. A Right-to-Know booklet was given to each person attending the course.

PRINT YOUR NAME	SIGNATURE
John Baker	John T. Baker, Jr.

101220

TRAINER'S SIGNATURE Walter R. Campbell

Chemical Waste Management

RESPIRATORY PROTECTION

DATE: March 22, 1988 LOCATION/TIME: Newark/N.J./2:30 pm

The following people were trained on both Level B and Level C Breathing Protection (Filtered Air and Supplied Air). All the following people will wear appropriate breathing protection on the job site that is required and will maintain, sanitize and store their respiratory equipment properly as defined by CWM Safety Policies as instructed.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

TRAINER'S SIGNATURE Walter L. Campbell

101221

Chemical Waste Management, Inc.

SPILL RESPONSE/FIRE FIGHTING

DATE: March 22, 1988 LOCATION/TIME: Newark, NJ / 3:00 pm

The following employees have been instructed on the basis of spill response and fire fighting. The course gave the employees a basic knowledge of what to do in a spill or fire situation. Employees were told that in a spill or fire situation if initial response, by them, cannot control the situation, they should call appropriate help.

The employees understand the basic types of spill response and fire fighting that they are required to perform on their job.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

TRAINER'S SIGNATURE Walter C. Campbell

101222

TRAINING SIGN IN SHEET

TRAINING

NEWARK N.J. FACILITY

DATE: March 22, 1988

SUBJECT: Portable Fume Hoods

SUMMARY: Proper procedures for operation of portable fume hoods and velometers.

VISUAL AIDS USED Portable fume hood, velometer

PASSOUTS N/A

ATTENDEES

PRINT NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

COMMENTS: 15 minutes of training

INSTRUCTOR's SIGNATURE(s)

101223

Chemical Waste Management Inc

STATE AND LOCAL REGULATORY AWARENESS

DATE: March 22, 1988 LOCATION ~~DATE~~ Time: Newark, NJ / 11:00

The following people were made aware of state and local laws and regulations which control hazardous waste management and the protection of people and the environment.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

TRAINER'S SIGNATURE [signature]

101224

INTRODUCTION TO REGULATION AWARENESS

DATE: March 22 1988 LOCATION/TIME: Newark NJ / 10:00 am

The following people successfully completed this Compliance Awareness course. This course gave an overview of key federal environmental laws such as the Clean Water Act, RCRA and TSCA. Employees learned the purpose and structure of each law; the difference between rules and permits; and the responsibility of each person, as well as the corporation to comply with federal, state and local laws and regulations (as well as WMI/CWM policies) related to hazardous waste management and the protection of people and the environment.

PRINT YOUR NAME	SIGNATURE
John T. Baker, Jr.	John T. Baker, Jr.

TRAINER'S SIGNATURE Walter E. Campbell

101225

RCRA OVERVIEW AND FACILITY COMPLIANCE ACTIONS

DATE: March 22, 1988 LOCATION/TIME: Newark, NJ / 9:00 am

The following people successfully completed this RCRA orientation. This orientation included: RCRA Interim Status standards for a TSDF; the status of our Part B application; overview of the site's layout and waste handling processes; a review of our internal waste management control system, PAP B-900 and our Waste Analysis Plan; site security measures; the site inspection system; alarm systems and emergency equipment; our contingency plan and evacuation routes; the purpose of hazardous waste manifests; and the responsibilities of employees in helping to comply with the RCRA standards.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

TRAINER'S SIGNATURE [signature]

101226

Chemical Waste Management, Inc.

FUNDAMENTAL CHEMISTRY

DATE: March 22, 1988 LOCATION/TIME: Newark, N.J./ 8:00 AM

The following employees were given a seminar in fundamental chemistry dealing with properties and hazard of different classes of chemicals. Each employee understands their responsibility to use their knowledge of chemical properties and hazards when working with chemicals on their job.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker

TRAINER'S SIGNATURE Walter K Campbell

101227

HAZARDOUS WASTE CHARACTERISTICS
AND
BASIC CONTROL METHODS

DATE: March 21, 1988 LOCATION/TIME: Newark, NJ / 1:00 pm

The following people successfully completed this Hazardous Waste Characteristics and Basic Control Methods course. The course gave the employees an awareness of the hazardous properties of wastes such as flammability, explosivity, corrosivity, and oxidation. Employees were also made aware of two common hazard warning labeling systems: the National Fire Protection Association (NFPA) and the Department of Transportation (DOT) systems. Finally, employees learned the dose/response concept concerning exposure to potentially harmful substances, the routes of exposure, the difference between acute and chronic effects, basic personal hygiene methods and how to research information on MSDS's and our own Waste Profile sheets.

PRINT YOUR NAME	SIGNATURE
John T. Baker	John T. Baker, Jr.

TRAINER'S SIGNATURE Walter L. Campbell

101228

TECHNICAL SERVICES JOB POSITION TRAINING REQUIREMENTS LIST

Position Title: Field Analyst/Project Leader

Prepared By: PHILLIP LAWHON
(Name/Title/Signature)

Approvals:

1. General Manager: _____
(Name/Signature/Date)

2. Technical Services
Operations Manager: _____
(Name/Signature/Date)

A. GENERAL TRAINING

1.000	New Employee Orientation (mandatory for all new employees)
1.10	Introduction
1.20	Welcome to the Company
1.30	CWM's Environmental Policy
1.40	Regulation Compliance
1.50	CERCLA Overview
2.000	Basic Safety Training(1)
2.10	Environmental and Chemical Hazard Recognition
2.20	Hazardous Waste Characteristics and Basic Control Methods
2.21	Chemical Properties of Hazardous Materials
2.22	Basic Toxicology
2.23	TLVs and PELs
2.24	Hazard Communication Standards and Information Sources (2)(3)
2.25	Medical Surveillance Overview(2)
2.26	Employee and Environmental Monitoring
2.30	Personnel Protective Equipment(3)
2.31	Fundamentals of PPE(3)
2.32	Fundamentals of Respiratory Protection(3)
2.33	Air Purifying Respirators(3)
2.34	Basic Protective Equipment (Level C) Inspection, Donning and Removal(3)
2.35	Supplied Air Respirators(3)
2.36	Advanced Protective Equipment (Level B)(3)
2.40	Heat Stress and Dermatitis
2.50	Hearing Conservation Orientation
2.60	Generic Site Safety Plan Review
2.70	Site Control and Decontamination
2.80	Site Evaluation and Preparation Overview

2.90	Site Security
2.100	Communication Systems
2.110	General Safe Work Practices
3.000	Basic Emergency Response and Preparedness
3.10	Contingency Plan Review and Incident Reporting(3)
3.20	Fire/Explosion Prevention and Protection
3.21	Fire Extinguisher Practice(3)
3.30	First Aid(4)
3.40	CPR(3)
3.50	Emergency Medical Procedures
3.60	Basic Spill Response

(1) Mandatory for employees who will work at project sites full or part-time.
(2) Must be completed by office employees.
(3) Annual refresher training is required.
(4) Refresher training is required every 3 years.

B. JOB-SPECIFIC TRAINING

Record in the space provided the course descriptions from the Master List that are required for job position duties (attach additional pages listing these courses if necessary).

1.000	Waste Analysis Plan
1.20	Analysis Requirements
1.30	Sample Collection Procedures
1.40	Sample Analysis Methods
1.50	Container Marking
2.000	Materials Handling
2.10	Lifting Techniques
2.20	Drum Handling Safety
2.30	Drum Sampling, Classification, Staging and/or Transport
2.40	Liquids Pumping and Bulking
2.70	Lab-Pack Preparation and Shipment
2.80	Explosives Handling
2.90	Radioactive Materials Identification and Containment
2.100	Compressed Gas Cylinder Handling
2.110	Lockout (1)
2.140	Grounding and Bonding (2)
2.150	Confined Space Entry (3)
2.160	Operation of Hand and Power Tools
2.170	Air Compressor Care, Use and Limitations
2.200	On-Site Storage
3.000	Equipment/Vehicle Inspection, Operation of Forklifts, Over-the-Road Vehicles (Forklifts, Trucks, Fume Hood)
3.20	On-Site Storage Area (Forklifts)
3.50	Off-Site Transport Vehicles (Trucks)
4.000	Equipment/Vehicle Corrective Maintenance Including Inspection of (Forklifts, Trucks, Fume Hood)
4.20	On-Site Storage (Forklifts, Trucks, Fume Hood)
4.40	Off-Site Transport Vehicles (Trucks)
6.000	Phase I Regulatory Compliance Procedure Training (1)
6.20	On-Site Storage
	°PAP
	°Vehicle/Container Inspection RCRA
	°TSDF Waste Acceptance Standards
	°Lab-Pack Manual
	°EPA Standards

B. JOB-SPECIFIC TRAINING - (CONTINUED)

Record in the space provided the course descriptions from the Master List that are required for job position duties (attach additional pages listing these courses if necessary).

6.40	Off-Site Transport
	•DOT Hazardous Materials Shipment
	•PAP
	•Vehicle/Container Inspection RCRA
	•TSDF Waste Acceptance Standards
	•Lab-Pack Manual
6.50	Laboratory
	•PAP
	•Lab-Pack Manual
8.000	Project Management Procedures
8.15	Personnel Travel Arrangements
8.16	Project-Specific Contingency Plan Development
8.17	Operations Plan Review
8.20	Mobilization
8.25	Site Preparation
8.30	Project Activation and Completion According to Plans and Contracts
8.40	Demobilization
8.47	Site Shutdown
10.000	Hazard Assessment (4)
10.10	Explosimeter Capabilities, Calibration, Use, Limitations, Routine Maintenance
10.20	Toxic Gas Testing Instruments Capabilities, Calibration, Use Limitations, Routine Maintenance

(1) Complete before working under reduced supervision.
(2) Complete before transferring flammable liquids under reduced supervision.
(3) Complete before entering a confined space.
(4) Complete before using test equipment under reduced supervision of qualified employee.

C. SPECIAL SKILLS TRAINING

(Reserved for listing unique skills training based upon employee's assignment to special duties such as contingency plan emergency coordinator).

1.000 Contingency Plan Team Member Training
4.000 Defensive Driving*
5.000 Fingerprint Testing

*Within one year of hire.

D. MANAGEMENT TRAINING

(Reserved for Technical Services management down to the first-line supervisor to teach them personnel management and hazardous waste management skills).

1.000 Phase II Regulatory Compliance Training
4.000 Effective Supervision Program, if applicable.

E. PROJECT-SPECIFIC TRAINING

1.000 Operating Plan and Site Layout Review
2.000 Project-Specific Hazard Communication
3.000 Project-Specific Regulatory Review
6.000 Contingency Plan Review
8.000 Project-Specific On-the-Job Training

DO NOT LEAVE BLANKS. PUT N/A IF NOT APPLICABLE.

Waste Management, Inc.

POSITION DESCRIPTION

POSITION TITLE Project Leader / Field Analyst

DIVISION / LOCATION Technical Services- REPORTS TO Operations Manager (Title)

INCUMBENT Various Field Analysts (Employee's Name) APPROVAL _____ (Signature of Immediate Supervisor)

_____ Date

1) Basic Function (Briefly summarize the overall function and objective of the position omitting specific duties.)

Responsible for running jobs, supervising field technicians and analysts and contact with customers on a regular basis. Performs the manual and technical tasks necessary to safely handle hazardous waste through all phases of labpacking, sampling, and removal of waste material from each project site.

2) Specific Duties and Responsibilities (List each significant duty and responsibility, attach additional sheet if necessary.)

1. Classifies, segregates and packages hazardous wastes.
2. Performs analytical testing on unknown chemicals.
3. Maintains accurate, legible records.
4. Prepares labpacks and non-labpack drums for shipment. Preparation includes packaging, labeling, marking, and placarding according to DOT. Preparation also includes loading, blocking and bracing containers in vehicle.
5. Completes manifests for shipment.
6. Collects representative samples according to the Waste Analysis Plan. Delivers samples to Technical Manager.
7. Overpacks non-labpack containers in poor condition so they can be shipped.
8. Has working knowledge of safety equipment and requirements for use of equipment.
9. Drives trucks and forklifts.
10. Responsible for performing work to meet contract specifications.

AR101235

101235

11. Supervision of field analysts and technicians.
12. Responsible for enforcing safety policies.
13. Responsible for remaining in compliance with PAP and Regulatory Agencies.

3) Skills, Education and Qualifications Required (Indicate the skills, education, experience and qualifications required for this position.)

1. Education: B.S. in one of the sciences.
2. Experience: College chemistry background. Minimum one years experience as a field analyst.
3. The following skills are preferred:

   a. Good verbal and written skills..
   b. Ability to supervise other workers.
   c. Valid drivers license.

STATE OF MARYLAND

CHS VEHICLE OPERATOR'S CERTIFICATE

Certificate # 5361

Issued to Phil

Driver License No. [illegible]

Certified By

Expiration Date

Driver's Signature

DEPARTMENT OF THE ENVIRONMENT

Director, WMA

Control No.

101237

Certificate of TRAINING

Philip Lawhon - Chemical Waste Management, Inc.

HAS SUCCESSFULLY COMPLETED A HAZARDOUS WASTE (CHS) TRANSPORTERS TRAINING PROGRAM ADMINISTERED BY BOGERT CONSULTING SERVICES AND APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.

Charles R. Bogert

CHARLES R. BOGERT

March 26, 1988

AR101238

101238

Length Approx 8hrs

TITLE OF COURSE: HAZARDOUS MATERIALS & WASTE (CHS) TRANSPORTATION COURSE

DATE: 3/24/88

INSTRUCTOR: Charles R Boget - Boget Consulting

MATERIALS, HANDOUTS, FILMS: 1987/1988 HAZARDOUS MATERIALS, SUBSTANCES & WASTE GUIDE, J.J. Kelly HAZARDOUS MATERIALS DRIVERS POCKET GUIDE, FEDERAL MOTOR CARRIER SAFETY Regulations. Copies of manifest, EMERGENCY phone Numbers etc

ATTENDANCE RECORD

NAME (PRINT PLEASE)	JOB TITLE	SIGNATURE
G. Thomas Peery Jr	Project Mgr	G Thomas Peery Jr
EARNEST L TAYLOR	DRIVER	Earnest L Taylor
Frances D Jones	Tech. SERVICES	Frances D Jones
Philip Lawhon	Tech Services	Philip Lawhon
Earl ROY	DRIVER	Earl Roy
Charles A Beamer	Driver	Charles A Beamer
BOB BROWN	Field Analyst	Bob Brown
Bruce Wawrzyniak	Field Technician	Bruce Wawrzyniak
Kenneth Webb	Operations Mgr	Kenneth Webb
Lee Richardson	Field Tech.	Lee Richardson

101239

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

PROTECTIVE BREATHING EQUIPMENT FIT TEST RECORD

DATE: Jan. 5, 1989 LOCATION: King George

NAME: Philip Lawhon DEPART.: Field Analyst

BREATHING APPARATUS:

BRAND MSA MODEL _____ SIZE Mdm.

HALF FACE Comfo II FULL FACE Ultra Twin

TEST METHOD:

POSITIVE/NEGATIVE PRESSURE TEST ✓

ISOMAYL ACETATE ✓

SMOKE NA

OTHER(Explain) NA

Has this person been instructed on the proper use, limitations, and care of this unit? YES ✓ NO ____

Was written instructions for this unit provided?
YES ✓ NO ____

TESTED BY: Philip Lawhon
Signature

PERSON TESTED: Laura A. Paton
Signature

DATE: Jan. 5, 1989

TURN IN UNIT:

REASON(Explain) _____

SAFETY OFFICER: Laura A. Paton
Signature

NOTE: This record will be filed by the Safety Officer.

This certificate expires 3 years from date and is renewable only through enrollment in and completion of another Multimedia Standard First Aid Course.

Name of Chapter	PORTSMOUTH, VIRGINIA
Chapter Representative	
Instructor	Walter E Campbell
Holder's Signature	Philip Lawhon

-42 Cert. 1730 (Rev. 6-81)

American Red Cross

This certifies that

PHILLIP A. LAWHON

has completed the
MULTIMEDIA STANDARD FIRST AID
course of instruction

at CHEMICAL WASTE MANAGEMENT
CHESAPEAKE, VIRGINIA
OCT. 18, 1988
Date course completed

Jerome H. Holland
Chairman, American Red Cross

101241

CERTIFICATE OF TRAINING

In Accordance with Federal & State

HAZARD COMMUNICATION LAWS

This is to certify that

PHILIP LAWHON

has attended a training session on the pertinent right-to-know law and the hazardous materials used at the facility and date shown below.

facility C.W.M. TECHNICAL SERVICES

dated SEPTEMBER 11 19 89 JOHN KELSEY

HAZCO TRAINER

REFRESHER TRAINING

The following have attended the HEAT STRESS & PREVENTION refresher training class for 30 MIN. (length of time) on MAY 26, 1989.

	PRINT NAME	SIGNATURE
1)	Kevin Sall	Kevin Sall
2)	John Garst	John Garst
3)	D Knutson	D Knutson
4)	Anne Spaulding	Anne Spaulding
5)	Philip Lawhon	Philip Lawhon
6)	Matthew Woods	Matthew Woods
7)	Laura A. Patton	Laura A. Patton
8)	Pamela Linger	Pamela Linger
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
21)		

INSTRUCTOR(S): Dr. J. T. Ryan

101243

American Red Cross

COURSE RECORD: FIRST AID / CPR

- Complete and process records promptly. Certificates are issued to instructors only upon receipt of a completed course record.
- Contact the local Red Cross chapter for information concerning supplies, activity recording, certificates, and insignia.
- If teaching in a location that is not serviced by a chapter, contact the appropriate division headquarters office.

NUMBER	COURSE NAME
3	MMSFA

NAME OF INSTRUCTOR (Last, First, Middle): Campbell, Walter, R. — TELEPHONE NUMBER: 201-754-3936

STREET ADDRESS: 1165 Route 22 Apt. 163 — CITY, STATE: North Plainfield, N.J. — ZIP CODE: 07060

NAME OF INSTRUCTOR'S CHAPTER OF AUTHORIZATION: Essex Chapter 106 Washington St. East Orange, N.J. 07019

NAME OF CO-INSTRUCTOR (Last, First, Middle): -N/A- — TELEPHONE NUMBER:

STREET ADDRESS: — CITY, STATE: — ZIP CODE:

NAME OF CO-INSTRUCTOR'S CHAPTER OF AUTHORIZATION — CITY, STATE:

NAME OF CHAPTER WHERE COURSE WAS CONDUCTED: Portsmouth Chapter 700 London Blvd, Portsmouth VA 23704 — CITY, STATE:

NAME AND ADDRESS OF ORGANIZATION WHERE COURSE WAS CONDUCTED: Chemical Waste Management 804-424-1198
825-M Greenbrier Circle, Chesapeake, Va. 23320

NO.	COURSE	NO.	COURSE
1	Basic First Aid	1R	Basic First Aid Review
2	Standard First Aid and Personal Safety	2R	Standard First Aid and Personal Safety Review
3	Multimedia Standard First Aid	3R	Multimedia Standard First Aid Review
4	Advanced First Aid and Emergency Care	4R	Advanced First Aid and Emergency Care Review
5	CPR (Lecture Method)	5R	CPR (Lecture Method) Review
6	CPR (Modular System)	6R	CPR (Modular System) Review
7	CPR: Race for Life (Lecture Method)		
8	CPR: Race for Life (Modular System)		

DATE COURSE STARTED	DATE COMPLETED	TOTAL HOURS	NUMBER ENROLLED	NUMBER PASSED
10/18/88	10/18/88	7.5	5	5

SEND CERTIFICATES TO ▶ ☐ ORGANIZATION ADDRESS ☐ INSTRUCTOR'S ADDRESS ☐ INSTRUCTOR WILL CALL FOR

NAMES OF ASSISTING INSTRUCTORS OR AIDES	CHAPTER OF AUTHORIZATION	TYPE OF INSTRUCTOR RATING	TYPE OF AIDE RATING
-N/A-			

I certify that this course has been conducted in accordance with requirements and procedures established by the American Red Cross.
NOTE. If a co-instructor is listed, the co-instructor must also sign the course record.

Walter R. Campbell — SIGNATURE OF INSTRUCTOR

-N/A- — SIGNATURE OF CO-INSTRUCTOR

THIS SPACE FOR DIVISION USE

NOTE. LIST NAMES, ADDRESS, AND GRADES OF ALL PARTICIPANTS. LISTING IS OPTIONAL FOR BASIC FIRST AID COURSES TAUGHT IN SCHOOLS. UNDER "GRADE," MARK "P" FOR PASSING, "F" FOR FAILING, AND "INC" FOR INCOMPLETE.

	PARTICIPANT'S NAME (Last Name First)	ADDRESS (Number, Street, City, State, Zip Code)	GRADE
1	Bias, Charles, M.	2464 Carnation Lane, Chesapeake, Va., 23325	P
2	Duncan, Daniel, J.	4509 Marlwood Way, Virginia Beach, Va., 23462	P
3	Gomot, Francois, D.	6808 Wildturkey Drive, Spotsylvania, Va. 22553	P
4	Lawhon, Philip, A.	5505 D Steeplechase Dr, Fredricksburg, Va, 22401	P
5	Mistr, Alfred, F.	2768 B Ocean Shore Ave., Virginia Beach, Va, 23451	P
6	End	Of List	
7			
8			
9		101244	
10			

American Red Cross Form 5721 (Rev. 12-8

American Red Cross

COURSE RECORD: FIRST AID / CPI

Complete and process records promptly. Certificates are issued to instructors only upon receipt of a completed course record.
- Contact the local Red Cross chapter for information concerning supplies, activity recording, certificates, and insignia.
- If teaching in a location that is not serviced by a chapter, contact the appropriate division headquarters office.

NUMBER	COURSE NAME
	Adult CPR

NAME OF INSTRUCTOR (Last, First, Middle): Campbell, Walter, R. — TELEPHONE NUMBER: 201-754-3936
STREET ADDRESS: 1165 Route 22 Apt. 163 — CITY, STATE: North Plainfield, N.J. — ZIP CODE: 07060
NAME OF INSTRUCTOR'S CHAPTER OF AUTHORIZATION: Essex Chapter 106 Washington St. East Orange, N.J. 07019
NAME OF CO-INSTRUCTOR (Last, First, Middle): -N/A- — TELEPHONE NUMBER:
STREET ADDRESS: — CITY, STATE: — ZIP CODE:
NAME OF CO-INSTRUCTOR'S CHAPTER OF AUTHORIZATION — CITY, STATE:
NAME OF CHAPTER WHERE COURSE WAS CONDUCTED: Portsmouth Chapter 700 London Blvd. Portsmouth, VA. 23704 — CITY, STATE:
NAME AND ADDRESS OF ORGANIZATION WHERE COURSE WAS CONDUCTED: Chemical Waste Management 804-424-1198
825-M Greenbrier Circle, Chesapeake, Va. 23320

NO.	COURSE	NO.	COURSE
1	Basic First Aid	1R	Basic First Aid Review
2	Standard First Aid and Personal Safety	2R	Standard First Aid and Personal Safety Review
3	Multimedia Standard First Aid	3R	Multimedia Standard First Aid Review
4	Advanced First Aid and Emergency Care	4R	Advanced First Aid and Emergency Care Review
5	CPR (Lecture Method)	5R	CPR (Lecture Method) Review
6	CPR (Modular System)	6R	CPR (Modular System) Review
7	CPR: Race for Life (Lecture Method)		
8	CPR: Race for Life (Modular System)		

DATE COURSE STARTED	DATE COMPLETED	TOTAL HOURS	NUMBER ENROLLED	NUMBER PASSED
10/17/88	10/17/88	7.5		

SEND CERTIFICATES TO ▶ ☐ ORGANIZATION ADDRESS ☐ INSTRUCTOR'S ADDRESS ☐ INSTRUCTOR WILL CALL FOR

NAMES OF ASSISTING INSTRUCTORS OR AIDES	CHAPTER OF AUTHORIZATION	TYPE OF INSTRUCTOR RATING	TYPE OF AIDE RATING
-N/A-			

I certify that this course has been conducted in accordance with requirements and procedures established by the American Red Cross.
NOTE. If a co-instructor is listed, the co-instructor must also sign the course record.

Walter R Campbell — SIGNATURE OF INSTRUCTOR
-N/A- — SIGNATURE OF CO-INSTRUCTOR

THIS SPACE FOR DIVISION USE

NOTE. LIST NAMES, ADDRESS, AND GRADES OF ALL PARTICIPANTS. LISTING IS OPTIONAL FOR BASIC FIRST AID COURSES TAUGHT IN SCHOOLS. UNDER "GRADE," MARK "P" FOR PASSING, "F" FOR FAILING, AND "INC" FOR INCOMPLETE.

	PARTICIPANT'S NAME (Last Name First)	ADDRESS (Number, Street, City, State, Zip Code)	GRADE
1	Bias, Charles, M.	2464 Carnation Lane, Chesapeake, Va., 23325	P
2	Duncan, Daniel, J.	4509 Marlwood Way, Virginia Beach, Va. 23462	P
3	Gamot, Francois, D.	6808 Wild Turkey Drive, Spotsylvania, Va. 22553	P
4	Knutson, David, A.	1703 Aberdeen Ct., Crofton, Md. 21114	P
5	Lawhon, Philip, A.	5505 D Steeplechase Dr., Fredricksburg, Va. 22401	P
6	Mistr, Alfred, F.	2768 B Ocean Shore Ave., Virginia Beach, Va. 23451	P
7	End	Of List	
8			
9			
10			

101245

American Red Cross

This certifies that

Charles M. Bias

has completed the ADULT CPR course of instruction

at Chemical Waste Mgmt Chesapeake, Va.

Oct. 17, 1988

Date course completed

Chairman, American Red Cross

American Red Cross

This certifies that

Daniel J. Duncan

has completed the ADULT CPR course of instruction

at Chemical Waste Mgmt. Chesapeake, Va.

Oct. 17, 1988

Date course completed

Chairman, American Red Cross

American Red Cross

This certifies that

Alfred F. Mistr

has completed the ADULT CPR course of instruction

at Chemical Waste Mgmt. Chesapeake, Va.

Oct. 17, 1988

Date course completed

Chairman, American Red Cross

American Red Cross

This certifies that

Francois D. Gomot

has completed the ADULT CPR course of instruction

at Chemical Waste Mgmt. Chesapeake, Virginia

Oct. 17, 1988

Date course completed

Chairman, American Red Cross

American Red Cross

This certifies that

Philip A. Lawhon

has completed the ADULT CPR course of instruction

at Chemical Waste Mgmt. Chesapeake, Va.

Oct. 17, 1988

Date course completed

Chairman, American Red Cross

101246

NOTE: Training in Cardiopulmonary Resuscitation (CPR) is valid for one year from the course completion date.

Name of Chapter PORTSMOUTH, VIRGINIA

Chapter Representative [signature]

Instructor [signature]

Holder's Signature [signature]

Cert. 3212 (2-87)

NOTE: Training in Cardiopulmonary Resuscitation (CPR) is valid for one year from the course completion date.

Name of Chapter PORTSMOUTH, VIRGINIA

Chapter Representative [signature]

Instructor [signature]

Holder's Signature [signature]

Cert. 3212 (2-87)

NOTE: Training in Cardiopulmonary Resuscitation (CPR) is valid for one year from the course completion date.

Name of Chapter PORTSMOUTH, VIRGINIA

Chapter Representative [signature]

Instructor [signature]

Holder's Signature [signature]

Cert. 3212 (2-87)

NOTE: Training in Cardiopulmonary Resuscitation (CPR) is valid for one year from the course completion date.

Name of Chapter PORTSMOUTH, VIRGINIA

Chapter Representative [signature]

Instructor [signature]

Holder's Signature [signature]

Cert. 3212 (2-87)

NOTE: Training in Cardiopulmonary Resuscitation (CPR) is valid for one year from the course completion date.

Name of Chapter PORTSMOUTH, VIRGINIA

Chapter Representative [signature]

Instructor [signature]

Holder's Signature [signature]

Cert. 3212 (2-87)

REFRESHER TRAINING

The following have attended the HNu ~~refresher~~ training class for 1 hr. 30 min. (length of time) on Feb. 2, 1989.

	PRINT NAME	SIGNATURE
1)	Kevin S. Sall	Kevin S. Sall
2)	Chris E. Seymour	Chris E. Seymour
3)	John Garst	John Garst
4)	Francois Gomot	Francois Gomot
5)	CHARLES CASSAGNOL	Charles Cassagnol
6)	Philip Lawhon	Philip Lawhon
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
21)		

INSTRUCTOR(S): Ed VandenBoogaard
HNU SYSTEMS

101248

REFRESHER TRAINING

The following have attended the Personal Protective Equipment _____ refresher training class for _____ (length of time) on Feb. 2, 1989.

	PRINT NAME	SIGNATURE
1)	CHARLES CASSAGNE	Charles Cassagne
2)	Philip Lawhon	Philip Lawhon
3)	John Garst	John Garst
4)	Chris Seymour	Chris Seymour
5)	Kevin S Sacc	Kevin S. Sacc
6)	FRANCOIS GOMOT	François Gomot
7)	Matthew Woods	Matthew Woods
8)	Eric Spoulcier	Eric Spoulcier
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
21)		

INSTRUCTOR(S): Lynn A. Patton

101249

REFRESHER TRAINING

The following have attended the Respiratory Protection refresher training class for 8 hours (length of time) on Jan. 5, 1989.

	PRINT NAME	SIGNATURE
1)	Kevin S. Coll	Kevin S Coll
2)	Philip Lawhon	Philip Lawhon
3)	Charles Cassagnol	Charles Cassagnol
4)	John C. Garst	John Garst
5)	FRANCOIS D GOMOT	Francois D Gomot
6)	Chris Seymour	Chris E Seymour
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
21)		

INSTRUCTOR(S): [signature]
S. SCHMIDT MS

131250

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

PROCEDURES FOR SENDING SAMPLES TO DISPOSAL FACILITIES

DATE: 11-23-87 LOCATION: _____

Training on the proper procedures for sending samples to disposal facilities. Training included packing of samples for shipment, proper labeling of the packages, and the proper shipping company to use.

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Anne E. Spaulding

101251

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

SITE SAFETY RULES

DATE: 11-23-87 LOCATION: _____

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Lynne E. Spaulding

DESCRIPTION OF TRAINING: _____

101252

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

BASIC PERSONAL PROTECTIVE EQUIPMENT

DATE: 11-23-87 LOCATION: _____

Training includes donning and removal of basic personal protective equipment.

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Lane E Spaulding

101253

Chemical Waste Management, Inc.

TECHNICAL SERVICES DIVISION
SAFETY MEETING/TRAINING

DATE: 12-8-87
INSTRUCTOR: Raymond C. Riccitelli
SUBJECT: General EPA & DOT Guidelines
HOURS:

PRESENT:
1. D-listed Material
2. F-listed Material
3. Samples of Hazardous classes
4.
5. Philip Earnhart
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.
21.

101254

TECHNICAL SERVICES DIVISION
SAFETY MEETING/TRAINING

DATE: 1/23/87
INSTRUCTOR: Hobe Spaulding
SUBJECT: Protective Clothing
HOURS: 1½ Training

PRESENT:
1. Philip Lackan
2.
3.
4.
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19.
20.
21.

101255

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

HEALTH & ENVIRONMENTAL AWARENESS

DATE: 12-1-87 LOCATION: Sealston

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: [signature]

DESCRIPTION OF TRAINING:

101256

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

SITE SAFETY RULES

DATE: 12-1-87 **LOCATION:** Sealston

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Lawhon

DESCRIPTION OF TRAINING:

101257

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

FIRE EXTINGUISHER & LEVELS OF RESPIRATOR PROTECTION AND EMERGENCY SPILL RESPONSE

DATE: 12-1-87 **LOCATION:** Sealston

ATTENDED BY:

Printed Name	Signature
Philip Lawton	Philip Lawton

TRAINER'S SIGNATURE: [illegible]

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

BASIC PERSONAL PROTECTIVE EQUIPMENT

DATE: 12-1-87 LOCATION: Sealston

Training includes donning and removal of basic personal protective equipment.

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: [signature]

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

HAZARDOUS WASTE CLASSIFICATION

DATE: 12-1-87 **LOCATION:** Sealston

Training and discussion of hazardous waste classification. Subjects include DOT hazard classes and proper shipping names, EPA waste classifications (F,K,U, and P lists), proper shipping names for PCB materials (state "B" codes), and the use of reference materials including the applicable parts of 40 and 49 CFR and the Condensed Chemical Dictionary. The relevance of the EPA and DOT regulations to labpacking and manifesting is also included.

ATTENDED BY:

Printed Name	Signature
Philip Lawton	Philip Lawton

TRAINER'S SIGNATURE: [illegible]

101260

Chemical Waste Management, Inc.
Technical Services Division
PO Box 96
Sealston, Virginia 22547
703/775-9000

PROCEDURES FOR SENDING SAMPLES TO DISPOSAL FACILITIES

DATE: 12-1-87 **LOCATION:** Sealston

Training on the proper procedures for sending samples to disposal facilities. Training included packing of samples for shipment, proper labeling of the packages, and the proper shipping company to use.

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Lane Spaulding

101261

Chemical Waste Management, Inc.
Technical Services Division
P.O. Box 96
Sealston, Virginia 22547
703/775-9000

LABPACK GUIDELINES

DATE: 12-1-87 LOCATION: Sealston

Training and discussion to provide a brief overview of the methods and regulations which apply to labpacking. Subjects include Model City and Emelle landfill packing requirements, TWI incineration packing requirements, marking and labeling of containers, and handling of reactives. Some specific considerations for discussion include picric acid, short-chained ethers and other potentially explosive compounds, aerosols, and gas cylinders, biologicals, radioactives, and dioxin containing compounds.

ATTENDED BY:

Printed Name	Signature
Philip Lawhon	Philip Lawhon

TRAINER'S SIGNATURE: Lane Lawhon

101262

ALLIANCE
Technologies Corporation

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

APPENDIX B
SCOPE AND HISTORY

ADMINISTRATIVE ORDER
Docket No. III-90-01-DC

Prepared for U.S. Environmental Protection Agency
Hazardous Waste Management Division

Region III

November 7, 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P.O. Box 1169
Front Royal, Virginia 22630

APPENDIX B

SCOPE AND HISTORY

This appendix contains a chronological summary of activities undertaken by Avtex Fibers Front Royal, Inc. aimed at clean up of sites within the facility potentially contaminated with PCBs. In addition a copy of the Administrative Order addressed by this work plan and relevant correspondence including previous Administrative Orders by Consent are included as references.

SCOPE OF WORK:

Avtex Fibers is a rayon fibers manufacturing plant located in Front Royal, Virginia. The plant site is approximately 440 acres , with 55-60 acres under roof. Much of the original process capacity is now abandoned. This PCB clean-up project was initiated by the Engineering Department of Avtex Fibers. The project was assigned to P. J. Malina Jr. on 22 JUNE 89. The following is a summary of the progress of project work. A daily log has not been kept to date, however; upon approval of EPA docket No. III-90-01-DC Administrative Consent Order (ACO) a detailed log will be maintained.

26 JUNE 89:

Joe Burza , of S.D. Myers,Inc. , was contacted to make a site visit to discuss the possibility of PCB clean-up on Plant site. S. D. Myers, Inc. has been on the plant site since 1972 monitoring all transformers for maintenance and PCB levels. P.O. isssued today FR9-10992. Joe Burza to be on plant site 28 JUNE 89.

28 JUNE 89:

Joe Burza on plant site to walk thru possible PCB areas and retrieve soil samples from R. H. Hughes, Avtex Executive Vice President.

5 JULY 89:

Joe Burza returned call with data on soil samples. No. 2 - 320 ppm and No. 5 2 ppm. The number two sample is from the Polyester dock area. S. D. Myers scheduled to take samples from the "Box Shop" roof transformers (75) and the polyester dock areas along with Sub 1A and Compressor room roof.

18 JULY 89:

Joe Burza called to notify Avtex of sample testing. Data due 21 JULY 89 after QA approval.

21 JULY 89:

Rick Barret called to discuss test results. Power House roof confirmed high PCB presence. Sub 1A pure askarel, therefore, high PCB concentration. Polyester dock area positive. "Box Shop" roof transformers clean, as tested in DEC 82.

101266

1 AUG 89:

Rick Barret confirmed the sending of a crew to begin clean-up in areas of PCB detection. Mark Roberts and Leroy Franklin due on plant.

15 AUG 89:

Manifest document No. 89294 documents the removal of one Askarel transformer and one mineral oil transformer from Sub 1A.

17 AUG 89:

Manifest document No. 89295 documents the removal of capacitors and drummed askarel oil.

28 AUG 89:

State Water Control Board personnel on plant site along with the State Police. See memo dated 28 AUG 89 P.J. Malina to C. K. Wagner.

1 SEPT 89:

Manifest No. 89340 documents the further removal of capacitors and solid waste.

See memo to F.L. Wickham dated 1 Sept 89.

21-23 SEPT 89:

Construct temporary wood roof over the Compressor room roof to facilitate PCB clean-up.

25 SEPT 89:

S.D. Myers begins concentrated effort to remove Compressor room roof. See S.D. Myers project progress chart. Began clean-up in Polyester area.

26 SEPT 89:

EPA personnel on plant site, see memo to R. G. Histing dated 26 SEPT 89.

27 SEPT 89:

See memo to C. K. Wagner dated 27 SEPT 89.

28 SEPT 89:

See memo to C. K. Wagner dated 28 SEPT 89.
Initial load of waste from Compressor room roof, manifest No.89381.
Installed Silt fence at Polyester site.

29 SEPT 89:

See memo to C. K. Wagner dated 29 SEPT 89.

30 SEPT 89:

Manifest No. 89395 load of waste from Compressor room roof.

2 OCT 89:

Manifest No. 89381 load of waste from Compressor room roof.

5 OCT 89:

Manifest No. 89394 load of waste from Compressor room roof.
S.D. Myers begins cleaning process of sewers at A-44. Robinson Pipe Cleaning Co. videos sewer lines. See drawing number FR-41361-5 as marked to test data and dates of progress.

7 OCT 89:

Manifest number 89388 load of waste from Compressor room roof.

9 OCT 89:

Began Drum sampling and consolidation through out plant.

10 OCT 89:

S. D. Myers begins removal of soils at Sub 1A. Begins sampling procedure for manhole testing. Tested roof for effectiveness of clean-up.

11 OCT 89:

Manifest No. 89407 last load of waste from Compressor room roof. Test transformer storage area outside of Sub 2A. Data received on roof shows that two (2) spots still "hot" at 173 and 41 ppm. All other sample points on the grid were ND (non-detect) and or below 10 ppm. The two hot

spots will be recleaned. Administrative Consent Order (ACO) received.

12 OCT 89:

Manifest numbers 89410 and 89411 removal of soils at Sub 1A. Drained transformer 4C on Power House roof. Test (3) transformers at the old Allied Chemical plant.

13 OCT 89:

Test data from transformers at the Allied plant shows a reading of 4.2 ppm in each. A clean-up will be done of the area and surrounding soils. Repair of the leaking transformers is scheduled for 20 OCT 89.

17 OCT 89:

Recleaned roof over Compressor room. Samples sent out.

18 OCT 89:

Retest soils at Sub 1A and the Compressor room dumpster site. Begin cleaning of Process sewers from manhole MHI to waste treatment. Conco begins encapsulating manholes as discussed with the Judge and EPA. See sketch detailing process of encapsulation.

19 OCT 89:

Re-sample roof areas that were cleaned, and clean concrete walkway. Begin the process of removing Thermonal from the Abbey dryer system in Polyester and cleaning of all equipment.

20 OCT 89:

Prep transformers from spare storage area and 2A/5A units for disposal. Partially drained the Abbey dryer system in Polyester area. All areas of project progress hindered by weather (excessive rain).

21 OCT 89:

Drained two (2) askarell units (2A & 5A) for disposal. Removed earth from the sub station at the old Allied Chem plant. Steam Kat began clean-up of process sewer from MHI to waste treatment. Loosened manhole covers and unplugged sewers.

22 OCT 89:

Began draining holding tank in fenced in area of Polyester dock, and cleaned a small portion of the fenced in area. Steam Kat consolidated waste materials.

23 OCT 89:

Loaded truck with transformers from the storage area plus 2A and 5A units. Material manifested and sent out for disposal. Drained askarel oil from unit 4A on Power House roof. Cleaned some in the ployester area. Steam Kat assisted Conco in the encapsulation process for manholes A-44 thru NA-11 including A-31, A-28 , and A-26.

EPA and State personnel on plant for tour, see memo to C.K. Wagner dated 23 OCT 89.

24 OCT 89:

The EPA team toured the CS_2 ponds for structural integrity of concrete , piping, and sampled water. See memo to C. K. Wagner dated 24 OCT 89. OSHA rep on plant today, see above referenced memo.

S. D. Myers began repairs on transformers in the "old Allied" plant today. The condition of the internal windings is such that the units should be abandoned (entirely too much rust). These transformers will be prepared for disposal. A capacitor bank within the confines of the sub station will also be disposed of. Mr. Histing and Mr. Snipes will notify Bill Knepp of the condition and remediation. S. D. Myers will research the availability of a 3-phase unit 2300 › 480v. Mr. Histing will research the possibility of having the power company run direct.

N&W and USPCI reps. were on plant site today to review loading of gondola cars. It was realized that the present gondola cars are not unloadable at the USPCI site in Utah , due to a high bulk head at each end. Four new type gondola cars will be sent in within 2-3 days. One car loaded and covered with plastic and sand bags. RANT continued to scrape and stockpile earth.

Steam Kat transported waste slurry from waste treatment. The cleaning of MH1 to MHJ continued. CONCO was assisted by Steam Kat personnel in the process of sewer floor encapsulation. A-45, A-46, A-30, and A-32 manholes were completed on daylight. A-21, A-22 , A-16, and A-50 will be completed tonight. Na-11 to A-39 will be handled 25 OCT 89.

25 OCT 89:

Prepared transformers at the spare storage area for transport. S. D. Myers cleaned Polyester area, packed sand bags for rail service, and covered railcar with plastic. Steam Kat assisted Conco in encapsulating manhole number 39, and retrieved 7 samples and one removed brick sample wipe. Encapsulated A-39, A-40, and A-42 manholes.

26 OCT 89:

Failure of ASH pump system in power house caused delay in encapsulation process due to excess water. Encapsulated A-41 and sump , along with A-8. S. D. Myers continued to prepare transformers for shippment. Sampled at sub 1A area.

27 OCT 89:

S.D. Myers continued to drain Abbey dryer system in polyester. Cleaned in the polyester area. No rail cars to date, therefore contractor sent home for weekend. A-55 encapsulated. Steam Kat assisted with encapsulation process and hauled water for waste treatment.

28 OCT 89:

S. D. Myers continued to drain Abbey dryer system.

29 OCT 89:

S. D. Myers continued to drain Abbey system and transformers for shippment. Eighteen (18) capacitors at Allied plant will be shipped in cabinet as one unit. Steam Kat continued to clean manholes I through Q in the process sewer.

30 OCT 89:

S. D. Myers shipped four (4) transformers from the spare storage area. The area is now ready for soil excavation down twelve inches. Steam Kat continued cleaning in the process sewers. A-33 and A-9 encapsulated today. Soil consolidated at the polyester area in preparation for the four railcars received. Steam Kat continued cleaning effort in the process sewers.

"old Allied Plant" to a staging area for disposal shipment. One rail car loaded for shipment. This excavation work held up due to rain. Continued removal of oil from Abbe dryer system. New EPA personnel on plant today. Roger Claff and Brian Hillis of SAIC (Science Applications International Corp.) were given a tour of the plant and all project work. Removal of the four roof drain pipes at the Compressor room roof was detailed and scheduled work to begin 1 NOV 89. Conco completed A-11 manhole encapsulation. Steam Kat continues cleaning of process sewers. Waste is being drummed.

1 NOV 89:

S. D. Myers loaded one railcar. Ron Sharp of the N&W railroad was on plantsite to witness loading cars. Steam Kat continued cleaning in the process sewer line. Final wipe samples were initiated in the storm sewer lines begining at A-44. Conco encapsulated A-10. S. D. Myers relocated the transformers from the "old Allied plant". Riggs continued removal of roof drain lines in the compressor room.

The consent order became effective today.

2 NOV 89:

Conco encapsulated A-23, all manholes except A-51 and A-54 are presently encapsulated. The aforementioned are N.D. and on "hold". S.D. Myers began cleaning of the compressor room walkway, in preparation for total encapsulation. The encapsulation process will entail an airless applied concrete sealer coat, an intermediate coat of "red" paint and a "top" coat of gray. All coatings will be applied by the "airless" process to eliminate any possibility of propagating contamination. One additional rail car has been filled. This is a total of four (4), the fifth car is "unacceptable" due to lack of integrity in the bulkhead. Ten additional railcars are scheduled to arrive on plantsite within three to four days. A tour of the "project" areas was conducted for Mr. Harry Daw; EPA project coordinator.

3 NOV 89:

S. D. Myers began final clean-up of Compressor room roof concrete walkway. A silt fence was put up around the excavated transformer storage area. The dumpster site at the compressor room was filled in with "N.D. fill". The roof drains from the "transformer" side of the compressor room roof are being removed and rerouted to eliminate the possibility of further contamination.

Steam Kat finished all wipe samples of storm sewers. Samples forwarded to S. D. Myers lab for analysis.

4 NOV 89:

S. D. Myers completed final clean of Compressor room walkway and wipe sampled per grid pattern. The first "sealer coat" of encapsulation was applied to the walkway. Removed ramp from compressor room roof.

Intermediate "red" coat applied on second shift. Sampled sub 5A per grid pattern.

5 NOV 89:

S. D. Myers continued application of final coat of encapsulation of Compressor room roof walkway. Cleaned the "old Allied" transformer site and removed (18) capacitors.

Sample data revealed a need to continue cleaning the sewer lines in the storm sewer system. Steam Kat actively involved in the recleaning process, samples taken as work progresses.

6 NOV 89:

S. D. Myers completed encapsulation of Compressor room roof walkway. Steam Kat continues recleaning of storm sewer lines. The cleaning process will follow the original cleaning procedure as detailed in the WP, along with a "sandblasting" of joint areas and cracks. The etched areas will then be cleaned and sealed with a grout. Final cleaning and wipe samples will be done as work progresses.

The shipment of anything from the plant site has been stopped by the EPA until the WP is approved. This will obviously impact detrimentally on the progress of work as it now exists. Schedules can not be met during this aimless period of "limbo".

The Work Plan Administrative Order manual is complete and will be submitted for review and approval per the requirement of the Order , on 7 NOV 89, exactly within the required time span for submission.

Let it be noted that the delay caused by the verbal restraint of oil/water shipments issued by the EPA Project Coordinator will result in a cost increase as follows. Avtex will be charged $845/day demurage per tank trailer and $2128/tractor return trip. At present this will result in $2535/day for trailer demurage starting 6 NOV 89 and continuing untill EPA approval of WP. A one time charge of $4256 will result in the return trip for the two tractors. S. D. Myers has also turned away one trailer which was to have picked up surplus transformers not included in the AO.

AVTEX FIBERS FRONT ROYAL INC.
Box 1169, Kendrick Lane, Front Royal, VA 22630-1169 (703) 635-2141

CERTIFIED

FAXED 11/6/89

November 6, 1989

Mr. Harry T. Daw
Enforcement Project Manager
U. S. Environmental Protection Agency
Enforcement and Title III Section (3HW33)
841 Chestnut Building
Philadelphia, PA 19107

Dear Mr. Daw:

During your visit to Front Royal last week, you asked that we not ship out anything for disposal until you had received our Workplan. However, when Mr. Caron was on site, he specifically told us not to hold up any clean up activity awaiting either an Administrative Order or a Court Order.

Therefore, we contracted with Chem Waste Management Inc. to dispose of certain empty drums and a quantity of drums of used oil and water. Today, they brought in two (2) trucks to begin removal of the oil and water. If these trucks are not permitted to leave, the cost to Avtex will be excessive.

I have tried since early this morning to contact either you or Karen Walper concerning the need to release these trucks and since oil and water mixtures are not considered hazardous material, we plan to release this shipment as of 2:00 p.m. today (11/6/89).

Sincerely,

C. Kenneth Wagner
Executive Vice President - Engineering
Avtex Fibers Front Royal Inc.
Front Royal, VA 22630

CKW/ms

cc: Karen Walper - EPA - Philadelphia
Paul Malina - Avtex
Ralph Markee - "
Pat Hughes - "

I certify that the information contained in or accompanying this letter is true, accurate and complete.

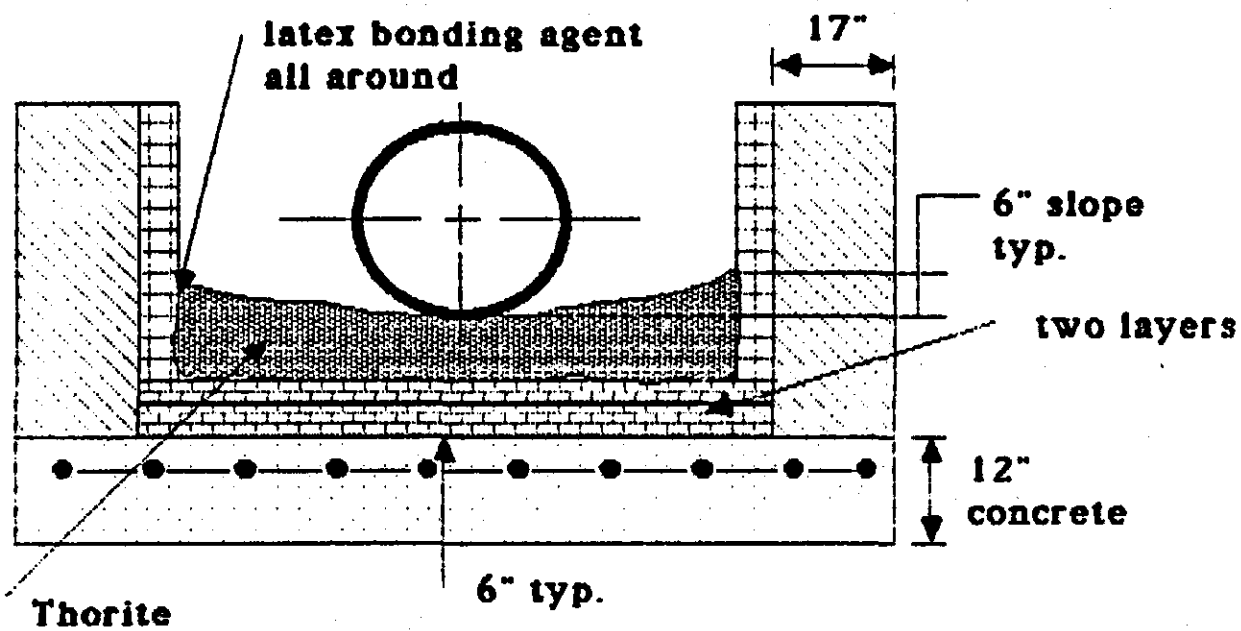
Signature _____

Name: C. K. Wagner

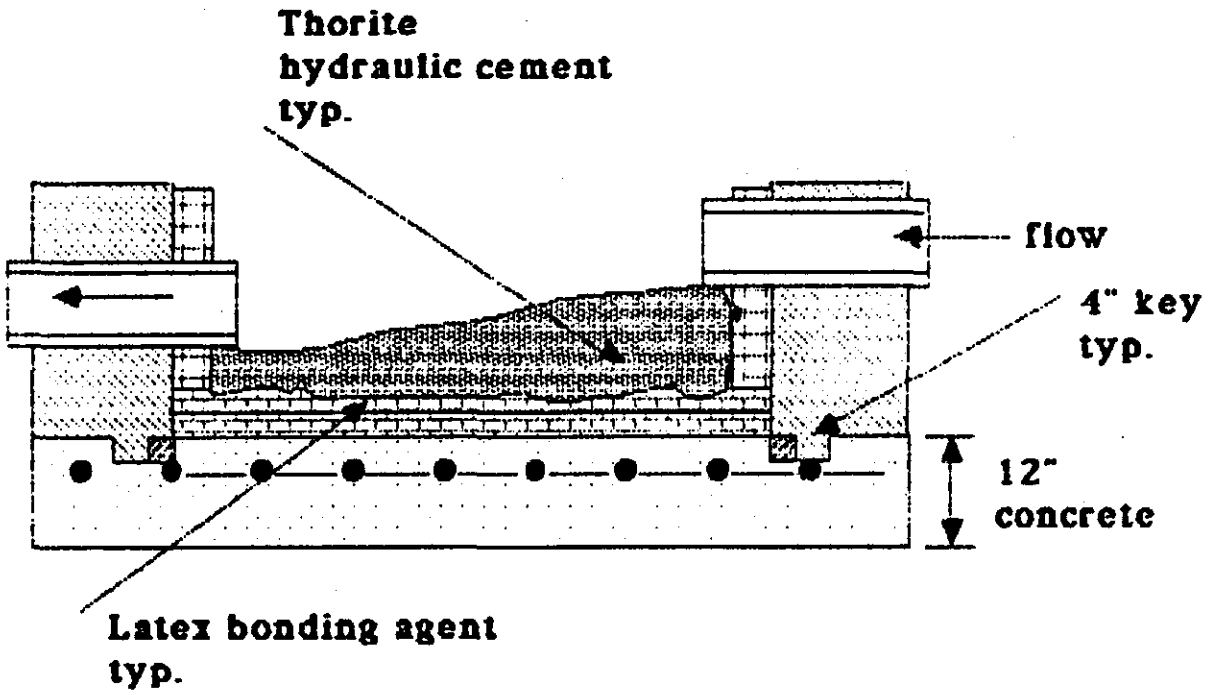
Title: Ex. Vice President - Engineering

101274

TYPICAL SUMP DETAILS
Total 30 sumps



Section view parallel to Sewer



Typical section view perpendicular

101275

30 AUG 89

Virginia Water Control Board
2107 N. Hamilton St.
P.O. Box 11143
Richmond, Virginia
23230

Attn: Mr. Thomas M. Felvey- Program Manager

Dear Sir:

This letter is being written to inform you of the answers obtained by Avtex personnel, to the questions posed by William G. Maddox during his site visit 28 AUG 89.

During his visit Mr. Maddox stated that Avtex had recently (within the past few weeks) received a PCB laden transformer from our former Nitro,W. Va. plant. This statement is erroneous and is easily proven by records now in the possession of your board. Transformer Consultants Number 57 is a Kulman (s/n 2-40661) 1000 KVA/468 gal. transformer originally tested on plant site 12/82 and determined to be Non-PCB.

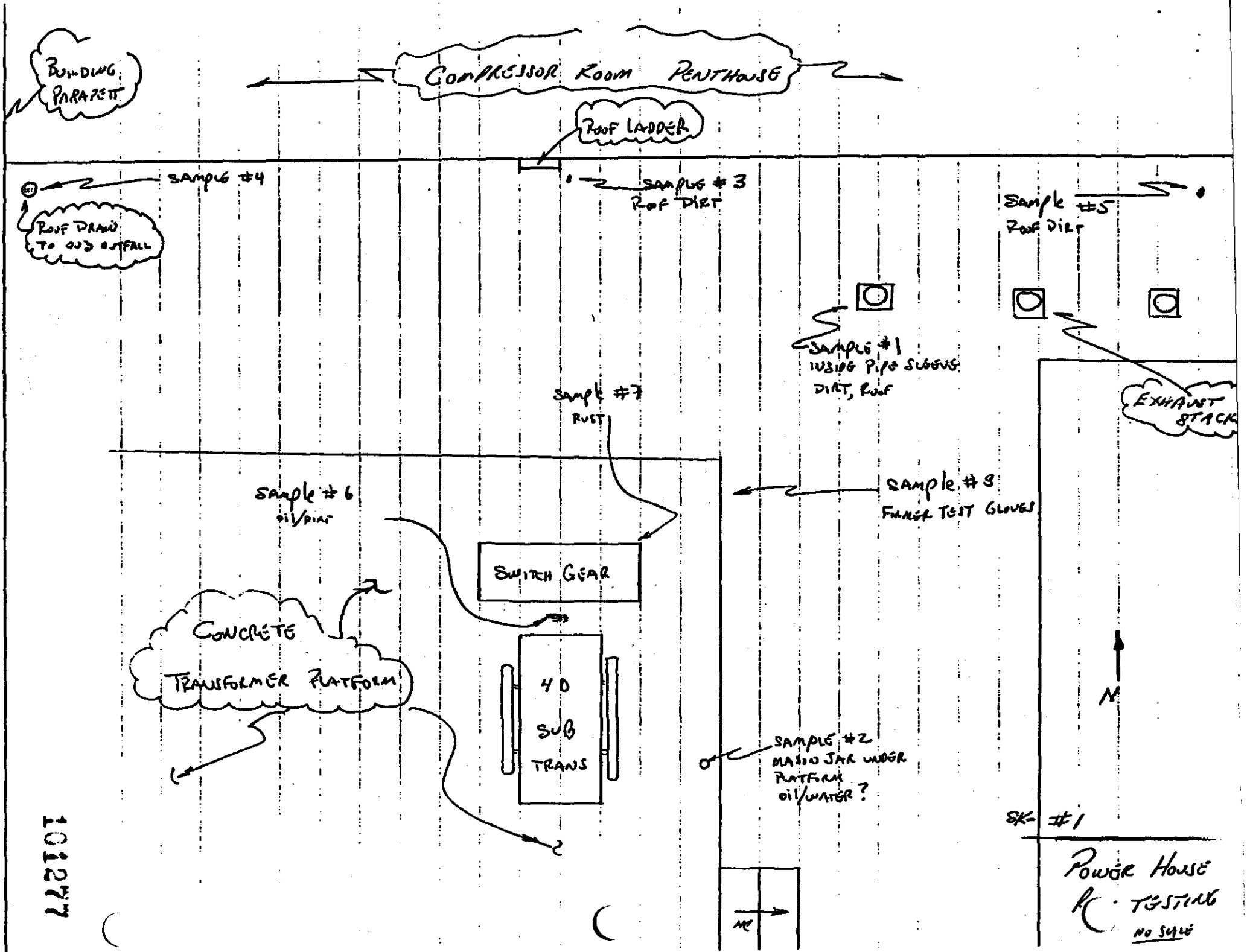
The second point is relative to the test site at the polyester dock and two (2) "sump pits" and accompanying piping. The piping has been unearthed and determined that it empties into a "process sewer" which is directed to the Waste Treatment area of the Plant. Based on data from testing previously initiated by Avtex ,the area is a PCB contaminated area and clean-up per EPA approved measures is in progress now. The pipe will be removed during the removal process of contaminated soils and the access to the sewer blanked off. Further testing and clean-up will continue.

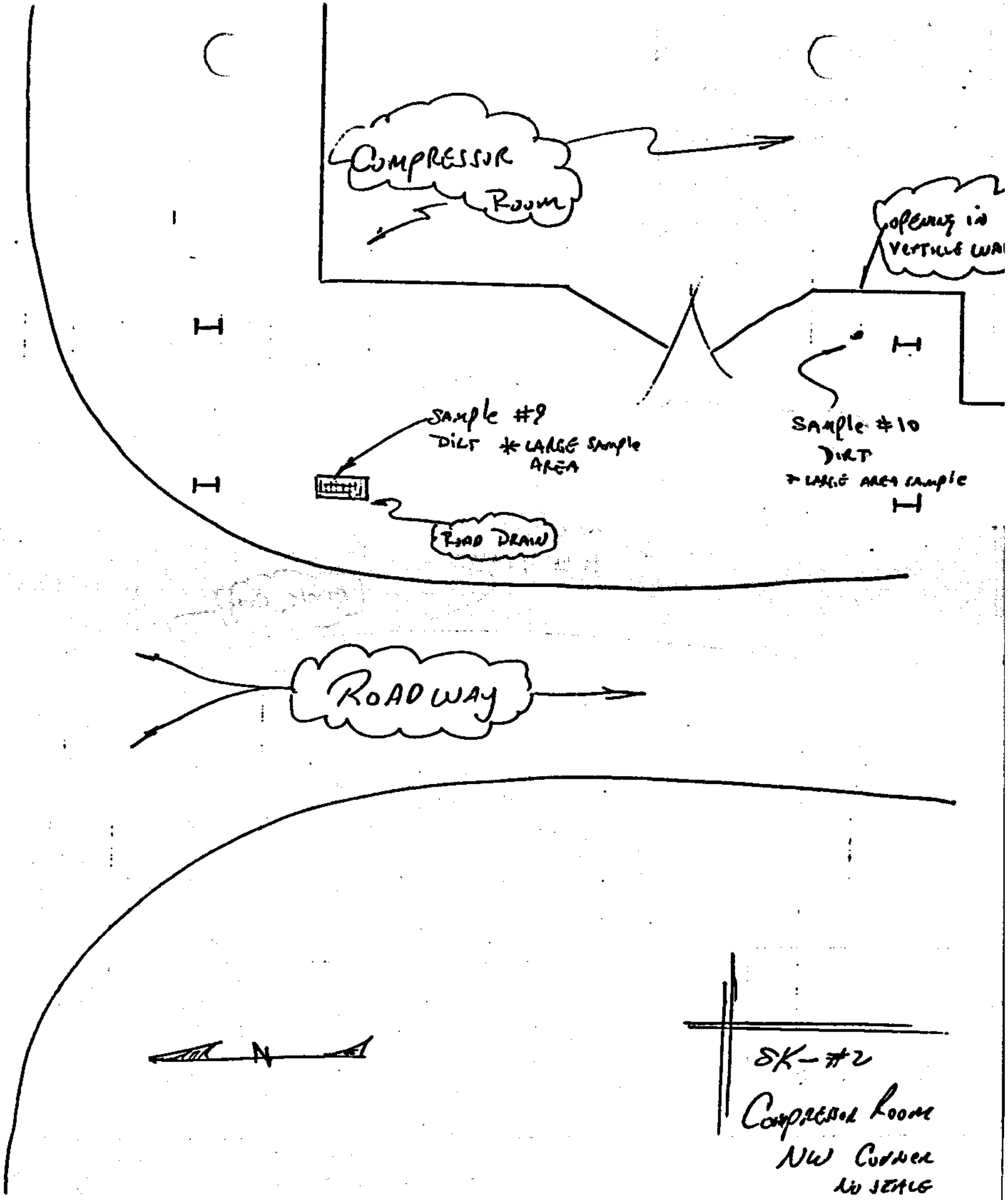
We trust this information is acceptable. Should there be any further information required please contact the writer.

Respectfully yours;

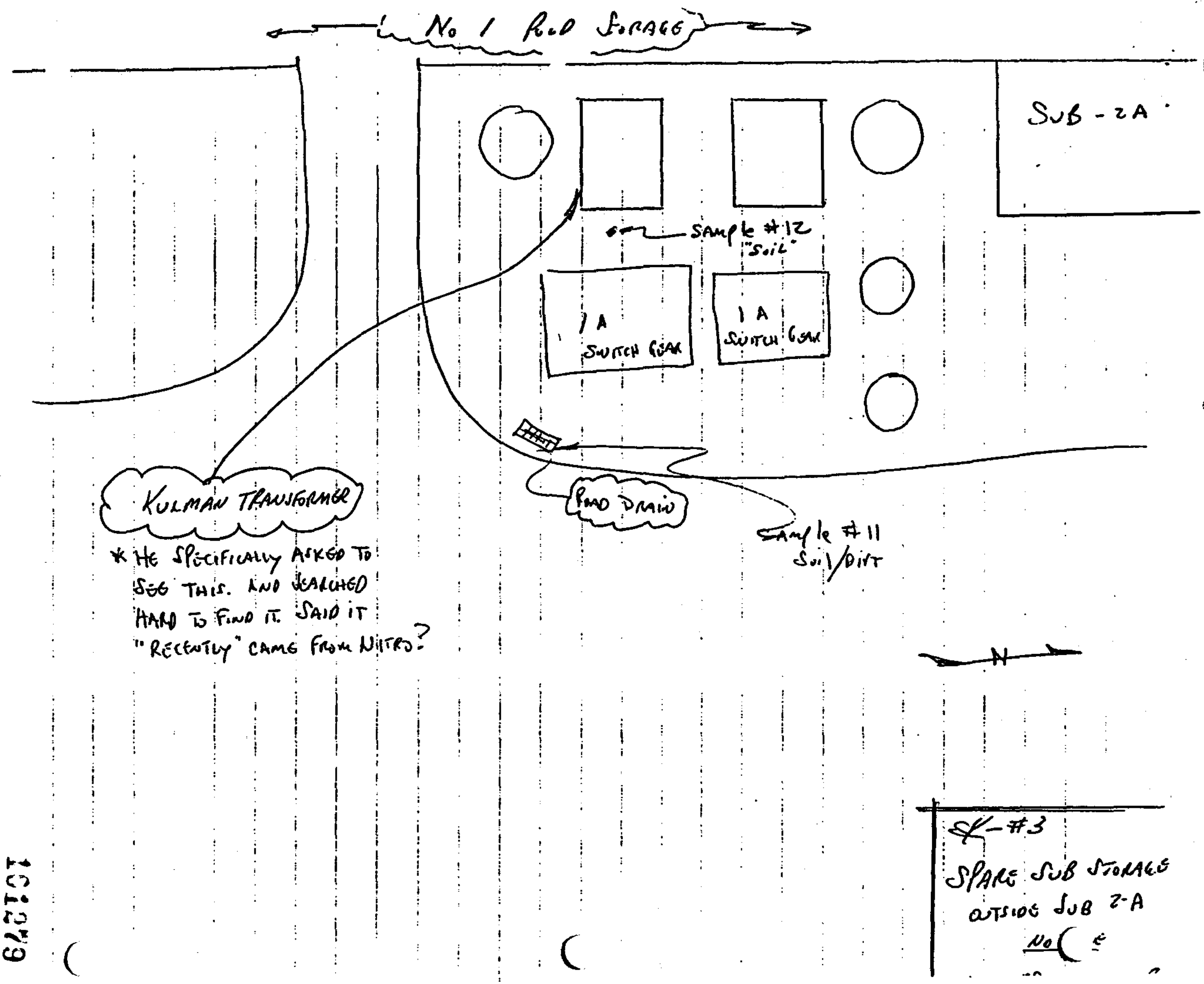
Paul J. Malina Jr.
Utilities Engineer

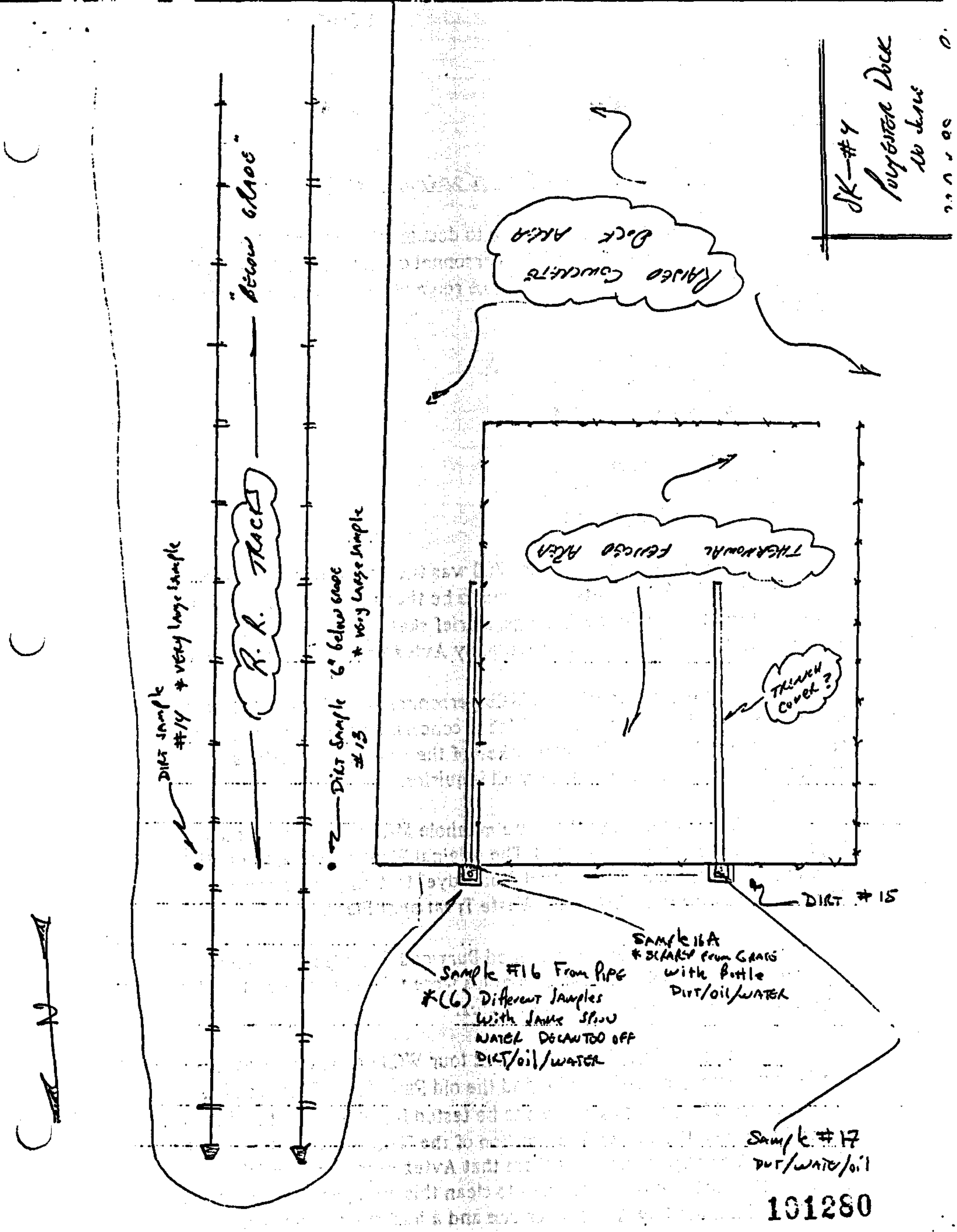
101276


BUILDING PARAPETT
COMPRESSOR ROOM PENTHOUSE
ROOF LADDER
SAMPLE #4
ROOF DRAW TO OUTFALL
SAMPLE #3
ROOF DIRT
SAMPLE #5
ROOF DIRT
SAMPLE #1
INSIDE PIPE SLEEVE DIRT, ROOF
EXHAUST STACK
SAMPLE #7
RUST
SAMPLE #6
OIL/DIRT
SAMPLE #8
FINGER TEST GLOVES
SWITCH GEAR
CONCRETE TRANSFORMER PLATFORM
40 SUB TRANS
SAMPLE #2
MASON JAR UNDER PLATFORM
OIL/WATER?
SK- #1
POWER HOUSE
TESTING
NO SCALE


COMPRESSOR Room
opening in vertical wall
Sample #9
DIRT * LARGE Sample AREA
Road Drain
Sample #10
DIRT
* LARGE AREA sample
ROADWAY
N
SK-#2
Compressor Room
NW Corner
No Scale

101278


No 1 Rod Storage
SUB - 2A
Sample #12
"Soil"
1 A
Switch Gear
1 A
Switch Gear
Road Drain
Sample #11
Soil/Dirt
Kulman Transformer
* He specifically asked to see this. And searched hard to find it. Said it "recently" came from Nitro?
N
#3
Spare Sub Storage
outside Sub 2-A
No


SK-#4
Polyester Dock
No Scale
Raised Concrete Dock Area
"Below Grade"
R.R. Tracks
Dirt Sample #14 * Very large sample
Dirt Sample #13 6" below grade * Very Large sample
Thermal Fenced Area
Trench Cover?
Dirt #15
Sample 16A
* Scraped from Grass
with Bottle
Dirt/oil/water
Sample #16 From Pipe
*(6) Different Samples
With Same Spoon
Water Decanted off
Dirt/oil/water
Sample #17
Dirt/water/oil
N

101280

1 SEPT 89

To: F. L. Wickham

From: P. J. Malina Jr.

Subject: Virginia Water Control Board Visit

This letter is being written to document the transactions of today, concerning the (8) eight WCB personnel on the Plant site. A brief meeting was had in the Main conference room with the following personnel in attendance:

William G. Maddox - VWCB
Durwood Willus - VWCB
Anne Field - VHWM

F. L. Wickham - Avtex
R. E. Licklider - Avtex
P. J. Malina Jr.- Avtex

The main concern of the WCB was the Avtex activity at the Polyester dock area. Curiosity appeared to be the main concern. A plant map was used to explain the findings, a brief sketch was drawn to show the area, and a brief verbal explanation by Avtex personnel was presented.

This did not satisfy the WCB personnel and a formal site visit was given. Questions from Audrey Weber concerning the procedures and findings at the Polyester site were asked of the writer. The writer's explanation was sufficient to satisfy all inquiries.

At the request of the State manhole MHI was opened and a "dye" test run to determine outfall. The original Plant drawing, the initial meeting explanation, and the actual State "dye" test all proved the same. The outfall of manhole MHI is the Waste Treatment Plant.

Roger Licklider accompanied Durwood Willus in the taking of samples at MH A8. Soil and water samples were taken at MHH and MHI. Duplicate soil samples were given to Avtex.

At some time during the Plant tour WCB personnel discovered the "empty drum storage" area behind the old Paint Shop. This area has been identified by Avtex as an area to be tested for PCB content and then properly cleaned thereafter. The position of the WCB was that this must be cleaned up. The writer informed them that Avtex personnel are fully aware of this fact and that measures to clean this area per EPA regulations have been instituted by Avtex, over one and a half months ago. This

information came as a surprise to the State

The writer informed them of Chemical Waste Management Inc.'s involvement in this portion of our clean-up efforts and they were satisfied. A request was made by the writer, as to any further information being needed at this time. The reply of the State was a thank you, however; no further information was needed.

The VWCB people left the Plant approximately 5:00 PM.

cc: C. K. Wagner
P. Hughes
R. G. Histing

23 OCT 89
cc: R. H. Hughes
F. L. Wickham
T. Allen

To: C. K. Wagner

From: P. J. Malina Jr.

Subject: EPA / State Water Control Board Visit

This letter is being written to document the activities of today (23 OCT 89), relative to the visitors on plant site. The following were n attendance:

EPA
R. E. Caron
W. F. Lee,Ph.D- Enforcement Officer
T. Naquin- TAT
M. Kaarlela- TAT

State
T. M. Felvey- Program Manager
M. G. Ferguson- Permits Program Manager
J. V. Roland- Assistant Direct of Operations (Office of Enforcement)
Derwood Willus
Suzanne Bambacus
Melanie Donahue

Avtex
M. Carrol
B. Zawatowski
P. J. Malina Jr.

The tour was conducted in two locations simultaneously. Kaarlela, Naquin, and Lee walked the Allied Chemical plant unattended for the most part. It was explained to the writer that they were to walk through and video the plant site.

The remainder of the group was directed by R. E. Caron, and intercepted by the writer ,at the Polyester dock area. Ferguson,from the WCB, was armed with a video camera and Donahue with a 35mm. The excavation site at polyester was videod and photographed. A duplicate sample was taken at MHI, sampling the effluent coming in from the CS_2 No. 2 basin. The sample was handed over to T. Allen by the writer.

The tour continued to the drum storage area behind the "old paint shop". Again video and photos were taken of this area. A brief explaination of the Chemical Waste Management work was discussed.

Next we reviewed and documented on cellulose the "hazardous waste" storage area. A point was made by Mr. Caron concerning the proper labeling of PCB drum waste and photos taken.

The excursion continued to the Power House where the parapet wall outfall was noted and photos taken. The dumpster site was reviewed and photos taken also. Next we proceeded to the roof area and once again captured it all on film.

The final step in the tour was to peer down into A-44 manhole to observe the encapsualtion of the sump floor. The tour ended with the group returning to F.L. Wickham and the waste treatment plant.

27 SEPT 89

cc: R. G. Histing

To: C. K. Wagner

From: P. J. Malina Jr.

Subject: EPA Visit 27 SEPT 89

This letter is being written to document the visit of EPA and Virginia State Waste Management personnel. The team took samples and reviewed "in house" progress on PCB clean-up, and reviewed the Chemical Waste Management clean-up effort. Those in attendance were:

Robert E. Caron EPA - Region III
John Fellinger - CCJM (EPA consultant)
Chris Zuiebel - RAI (EPA consultant)
Rosann Park-Jones - ICF (EPA consultant)
Randolph P. Lathrop - Va. Dept. of Waste Management

Avtex

E. Zawistowski
P. Ehlers
P. J. Malina Jr.

The day commenced with a brief meeting in the Engineering Conference room to discuss the day's agenda. Initial points were made , based on the tour of 26 SEPT 89. It was confirmed the effort and committment of Avtex ,in this clean-up, is clearly apparent and should continue. More aggressiveness must be put forth in the handling of the contractor, S. D. Myers; to provide the needed data and manpower to complete this clean-up in a timely fashion.

Three key points were made:

1.- the area of contamination must be contained

2.- the affected area must be surveyed to determine the impact to the environment (Example: Storm sewer contamination over the years & Waste Treatment contamination, therefore possible river outfall:)

3.- Schedule in detail for total project control

It was noted that point one is clearly defined , however; in the Polyester area a "silt fence" must be installed around the perimeter. This was relayed to S. D. Myers and it will be accomplished no later than Friday of this week.

101283

The other two points were relayed to S. D. Myers and are being addressed. A detail schedule of all work must be completed and submitted

detailed follow up of clean-up work. Robert Caron of the EPA will over see the work on plant site until Harold Daws takes responsibility as Project Manager.

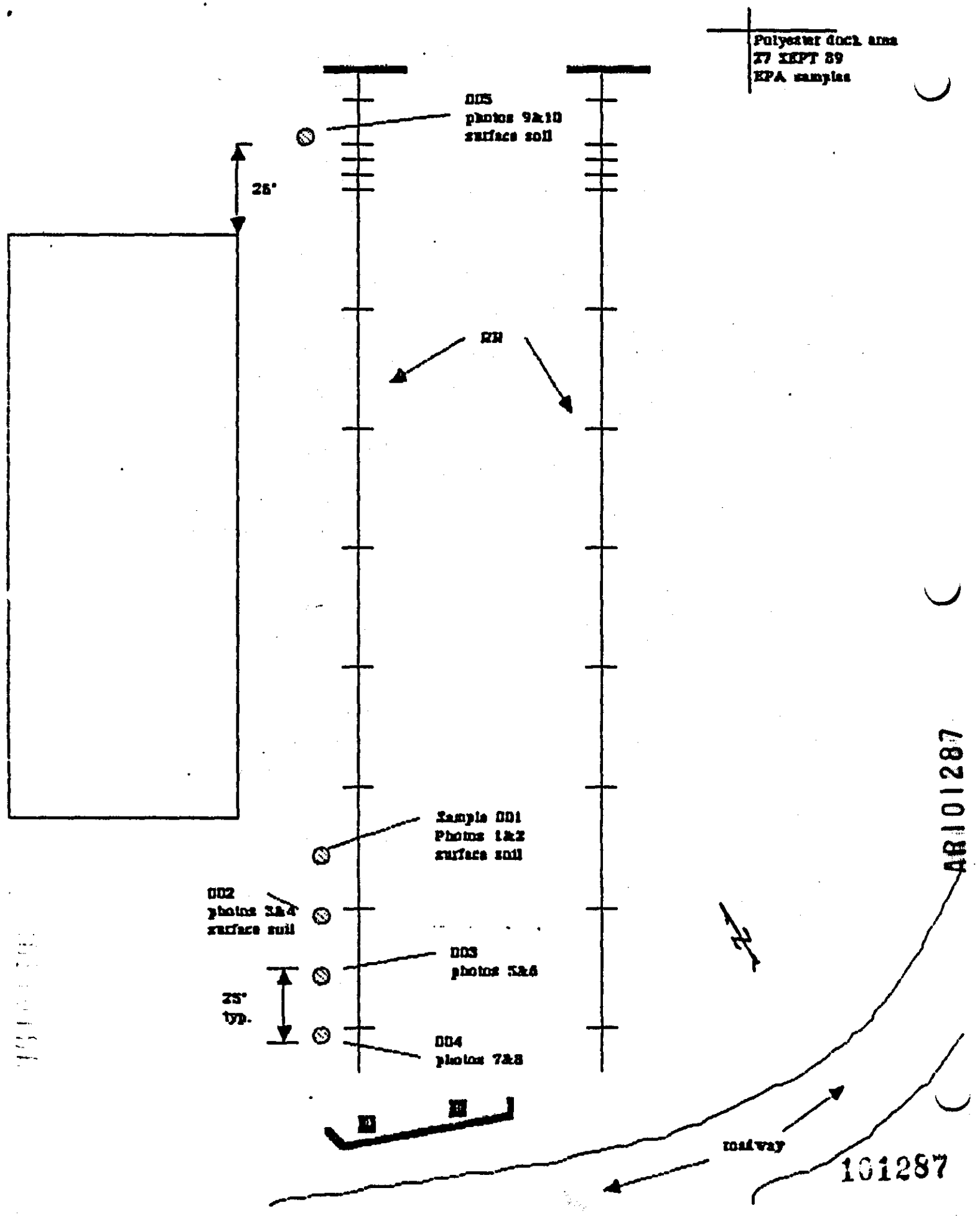
A tour was had to investigate the "bulk" storage areas for CS_2 storage, Soda storage, and Acid storage. Points were made of the eventual requirement for sufficient dike measures around the storage tanks.

The remediation procedures for CS_2-1 and AR-2 areas were discussed at the site and received a positive response from both the EPA and The State Waste Management personnel. R. Lathrope is the contact on all the clean-up slated for the Chemical Waste Management contract. The present approach taken by Avtex appears to be satisfactory in the opinion of Mr. Lathrope. He will forward, to the writer ,the Virginia Hazardous Waste regulations tomorrow. Written approval of clean-up plans is recommended, however; not required to initiate the clean-up effort. Turn around times on written authorization is 2- 4 weeks. Should a "hazardous" condition be discovered during clean-up it MUST be reported to the State and EPA and the proper clean-up effected.

The new "waste storage" area was reviewed in detail and deemed acceptable by both the EPA and the State. A recommendation was made that any "hazardous waste" NOT be stacked.

Five samples in the Polyester area were taken in duplicate with one set going to the EPA and the other to Avtex. Ms. Zawatowski accepted the samples. The attached sketch details location, ten photos were taken at the sample sites.

It the impression of the writer that the last two days have been positive and Avtex can "work" with the EPA and State regulatory commissions to effect a resolution.


Polyester dock area
27 SEPT 89
EPA samples
005
photos 9&10
surface soil
25'
RR
Sample 001
Photos 1&2
surface soil
002
photos 3&4
surface soil
003
photos 5&6
25'
typ.
004
photos 7&8
roadway
AR101287
101287

29 SEPT 89

cc: R. G. Histing

To: C. K. Wagner

From: P. J. Malina Jr.

Subject: EPA and State Plant Visit 29 SEPT 89

This letter is being written to document the activities of the EPA and State personnel on plant site today. Those in attendance for site tours were as follows:

R. E. Caron - EPA
P. E. Herrera - TAT
S. Guille - TAT
M. Kaarlela - TAT
G. J. McCoy - Va. Dept. of Waste Management
L. Fritz - S. D. Myers

Avtex

P. J. Malina Jr.

The tour consisted of a familiarity with the areas of clean-up for S. D. Myers and a brief review of the Chem Waste scope. A meeting was held to discuss the required scope of work necessary to satisfy EPA. Lynn Fritz was present to better understand EPA requirements in this particular clean-up.

The scope of work for the manhole clean-up and the sewer piping requirement was reviewed. Clean-up will be to 1 ppm. Wipe samples of pipe internals are sufficient to prove 1ppm in piping.

The Clean-up will be proposed as "manual", with options ranging upto the use of "suction" equipment and "sewer rats" to brush internals. S. D. Myers will supply the necessary paperwork the week of 2 OCT 89.

The TAT personnel will be on plant during the weekend and return Monday 2 OCT 89. Gerould McCoy , State waste management , will return Monday 2 OCT 89. Bruce McGlauglin , Chem Waste manager, will be on plant site Monday , 2 OCT 89. R. E. Caron , EPA, will return to the plant site Tuesday, 3 OCT 89.

Chem Waste will "tank tightness" test UST's Tuesday and Wednesday of next week. The State Boiler inspector will be on plant site to check #2 Boiler 4 OCT 89 and review pressure vessels due

29 SEPT 89 cc: R. G. Histing

To: C. K. Wagner

From: P. J. Malina Jr.

Subject: EPA / VWCB visit 28 SEPT 89

This letter is being written to document today's activities with the EPA and State personnel. Those present were as follows:

R. E. Caron - EPA
M. W. Kaarlela - EPA TAT (independent consultant)
P. E. Herrera - EPA TAT (independent consultant)
S. Guilles - EPA TAT (independent consultant)

W. G. Maddox - VWCB
J. Hartman - VWCB

Avtex

C. K. Wagner
P. J. Malina Jr.

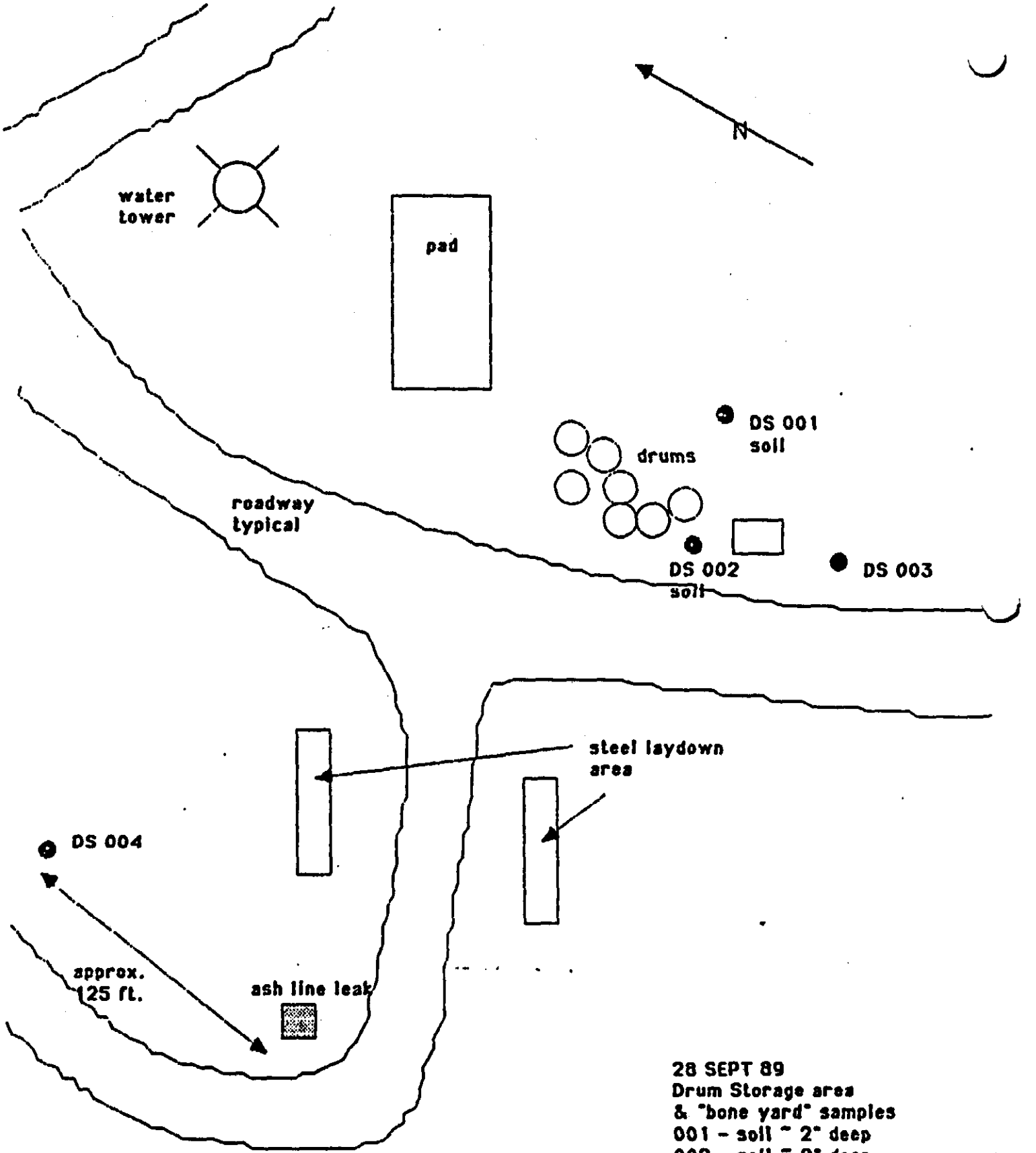
The State Water Control personnel were shown the three areas of process water repiping. The three areas being Soda Cooling water, Soft water backwash, and Power House process water. Other areas of investigation were presented by R. Lichliter. The State people did have a brief conversation with Mr. Caron of the EPA (content unknown).

The EPA personnel were concerned with sample taking in the old drum storage area. A sketch is attached detailing location of the four samples. Avtex received a duplicate soil sample of each. It should be noted that these samples, as was the case yesterday, are going to be sampled not only for PCB content, but the complete array of "hazardous waste" requirements. Should Avtex also sample for the same? This would require split samples to S. D. Myers and Chem Waste. Please advise.

R. Caron and the writer reviewed all process areas of clean-up on plantsite. He approves of the S. D. Myers and Chem Waste work in progress and has commented ..."things look good". He suggested that the "hydrocarbon waste" in areas of spills could be handled more economically in a biological manner. This remediation process is satisfactory with the EPA, however; it must be approved by the State. The writer feels this approach should at least be investigated.

oil" drums are unsuitable for shippment. This is an acknowledged fact and Chem Waste will either re-drum or bulk load out after sampling. It should also be noted that during the relocation process a pallet failed and one drum "burst" spilling its contents. The EPA was present and sampled at the location.

The EPA will return tomorrow to further sample, observe, and investigate outfalls 003 & 004. The EPA TAT personnel will be on plantsite during the weekend to observe the S. D. Myers work. Lynn Fritz , R. E. Caron, and the writer will meet tomorrow to firm up a schedule for completion of the S. D. Myers work.



28 SEPT 89
Drum Storage area
& "bone yard" samples
001 - soil ~ 2" deep
002 - soil ~ 2" deep
003 - soil ~ 2" deep
004 - soil & water low spot in field

101291

24 OCT 89
cc: R. H. Hughes
F. L. Wickham
T. Allen
J. Cosgrove

To: C. K. Wagner

From: P. J. Malina Jr.

Subject EPA and OSHA site visit 24 OCT 89

This letter is being written to document the EPA and OSHA tours on plant site. Those in attendance:

EPA
R. E. Caron
M. Kaarlela
T. Naquin
W. F. Lee
R. E. Claff-Science Applications International Corp. (new TAT)

P. J. Hawes, Jr.- OSHA

Avtex
D. Clark
N. Reed
C. Hinson
P. J. Malina Jr.

The tour began at No. 2 CS_2 pond , with R. E. Caron absent. Walter Lee brought up points about "violations" such as leaking valves, improper/illegable signs, severly washed out rail sections, concrete spalling and cracks in the pond walls. Mr. Lee feels the ponds are going to fall under RCRA laws and thereby require eventual remediation. His justification is the "possible" CS_2 laden water which is recycled back to the ponds during normal operation. This point would put Avtex in violation of Virginia law for operating a RCRA impoundment without a permit.

Matt Kaarlela and Troy Naquin sampled water at the outfall (staircase trough). A total of four samples were taken Avtex received two. Matt and Troy also videod and photograghed sample points and points of contention; such as concrete spalling and hoses draining to the ground. At the outfall of these hoses definite signs of "stressed vegetation" exists.

We proceeded to the No. 1 pond where samples, video footage and photographs were taken. A "biased sample" was taken of and oil slick

and debris floating atop the pond pool. The writer received a second set of samples for a total of four. These samples were turned over to Dr. Allen immediately after receipt.

It was noted and logged on film, that the west side of the pond wall is severely decayed and spalled to the point , several large gaps exist in the concrete. One is leaking profusely. A sample was taken here also.

R. E. Caron was present for this tour and stressed Mr. Lee's opinion of a RCRA violation. He stated , should the samples prove high in CS_2 content remediation will have to be according to RCRA laws and it will become part of the consent order. He suggested both ponds be eliminated and an above ground storage be set up with "state of the art" storage / handling facilities provided.

An OSHA representitive was on plant site due to a "complaint" that asbestos was present and posing a danger during the removal of the compressor room roof. A site visit proved this not to be the case. He apologized, photograhed an encapsulated pipe, and stated there "was no problem". He continued to harass Plant and contractor personnel through his own apparent ignorance, for several hours after this visit. The ordeal was settled to his satisfaction when Conco personnel supplied him with copies of sample data proving beyond a doubt that no asbestos was present in the "cork insulation" and its wrappings.

A new person from the EPA TAT team was on plant today to follow the TAT personnel around and become familiar with the scope of work past, present , and future. He, or someone from his firm will be on plant daily as soon as the ACO is signed and the present TAT personnel leave.

S. D. Myers found the transformers at the Allied plant to be unrepairable. They are being readied for disposal along with the capacitor bank within the sub station fence.

FR-577

R. Markee Carg

AVTEX FIBERS FRONT ROYAL INC. INTEROFFICE

October 26, 1989

Memo to: Guards

cc: Staff & Dept. Heads
L. Osborne
M. Schryver

From: Dave Clark

Subject: Procedure for Handling Plant Visitors

Due to the plant's recent downsizing and subsequent reduction in force, it is necessary to re-emphasize the Plant's Visitor Policy.

The following procedures will be in force.

1. The names of those individuals requesting entry to the plant must be submitted to either Ms. Schryver (Ext. 179) or Ms. Osborne (Ext. 112) along with the following information:

   a. Name of company/agency they are representing;
   b. date and time of visit;
   c. Avtex contact person; and
   d. nature of visit.

2. Guards will be responsible for:

   a. Stopping and logging in all visitors;
   b. notifying Avtex contact person of their visitor's arrival and clearance;
   c. issue plant visitors pass with Visitor's name, date, time issued so indicated;
   d. Avtex contact person should either go to the gate to pick up their visitor or make arrangements to meet them at a central location;
   e. visitor should return their pass to the Guard on leaving the plant; and
   f. visitor's log sheet should continue to show time of arrival and departure for each visitor.

3. Visitor protocol for regulatory agencies as follows:

   a. GSX (consultants for Commonwealth of Virginia) to be handled per memo T.C. Allen dated 10/23/89.

AR101293a

b. EPA and their contractors are to be allowed into the plant, but upon exiting the plant need to state when they will be returning or who will be taking their place.
c. State regulatory agencies will be kept at the Guard house until an Avtex employee or their consultant arrives to escort them into the plant.

4. Visitor protocol for Avtex consultants as follows:

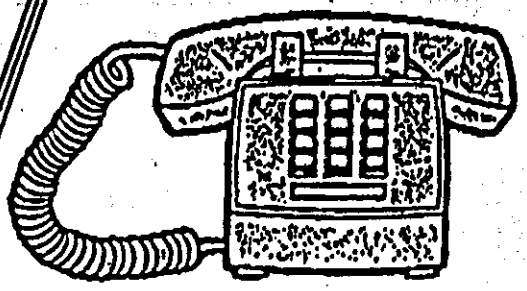
a. Avtex consultants are requested to submit the names of their personnel who will be on site to Ms. Schryver (Ext. 179) or Ms. Osborn (Ext. 112) for notification to the Guards.
b. Daily passes are to be issued and returned for all consultant personnel with drive-in privileges.

If questions arise, please contact the writer.

David E. Clark
Vice President of Manufacturing
and Human Resources

Distribution:
Ahlers, E.W.(40)
Allen, T.C.(R&D)
Bowen, L.B.(40)
Brinklow, T.(40)
Clark, D.E.(Visc.)
Cooper, R.A.(Visc.)
Coverston, J.J.(40)
Ehlers, P.W.(Mgr's)
Hicks, W.T.(Ship.)
Hinson,C.(Safety)
Histing, R.(40)
Hughes, P.(Corp.)
Knepp, W.H.(Purch)
Licklider,R.(PrdSe)
Markee, R.S.(Corp.)
Mills, D.W. (PP)
Reed, A.K. (E.R.)
Smith, C.H.(Acid)
Snapp, H.A.(Tech.)
Stevens, R.(Accnt)
Toothman,D.(Stores)
Tousignant,D.(Corp)
Wagner, C.K.(Corp.)
Wickham, F.(Corp.)
Woodson, L. (D/D)
Radomsky,S Tech.
Brinklow-ACTWU
Guards
Beulke, M.(Tech)
Jackson,R.(Spin.

AVTEX FIBERS FRONT ROYAL INC.
Box 1169, Kendrick Lane, Front Royal, VA 22630-1169 (703) 635-2141



TELECOPIER COVER SHEET

DATE: 23 OCT 89

TO: Tim Mock

FROM: P. J. MALUNA JR.

PAGES: 2 INCLUDING COVER SHEET

IF THERE ARE ANY PROBLEMS AND/OR QUESTIONS, CALL 703/635-2141 AND ASK FOR THE SENDER.

HAVE A GOOD DAY!

101295

AVTEX FIBERS FRONT ROYAL INC.

PURCHASE ORDER

FORM 184 REV. 9/84

Ship to and Bill in Duplicate
AVTEX FIBERS FRONT ROYAL INC.

PO BOX 1109 KENDRICK LANE
FRONT ROYAL, VA. 22630

Important—All shipping papers, invoices and bills of lading must bear Order Number and be sent direct to Consignee at destination.

PURCHASE ORDER NO. FR9-10996
RELEASE NO. 000

TO: CHEMICAL WASTE MANAGEMENT INC.
100 NASSAU PARK BLVD

PRINCETON NJ 08540

Purchase Order Date	9/08/89
Vendor Number	00277 01
Terms of Payment	AS ARRANGED
F.O.B.	DELD
Ship Via	N/A
Shipping terms	YOUR ACCOUNT PREPAID

QUANTITY & UNIT	ARTICLE	UNIT PRICE	TOTAL
1 LOT	CONTRACT TO PERFORM NECESSARY ENVIRONMENTAL CLEAN-UP & UNDERGROUND STORAGE TANK COMPLIANCE TO EPA REGULATIONS. • EACH PHASE WILL NOT BEGIN UNTIL A BUDGET ESTIMATE IS SUBMITTED AND APPROVED BY AVTEX FIBERS. W/O 08399 7-8842-50100-070 SYMBOL> MS-04-7090	.00	.00
E/O 1 LOT			

DELIVERY DATE: 1990
TO: P J MALINA JR.
USE: PLANT WIDE

//
//
\\ CONFIRMING TO: MOLLY CLARK 8/31/89
•
NOTE: INVOICE EVERY TWO (2) WEEKS DIRECTLY TO: C. K. WAGNER

☐ Taxes applicable ☒ Tax exempt 300-996301-5
Exemption certificate number

P/O TOTAL .00

101296

Address all correspondence relating to this order to:
AVTEX FIBERS FRONT ROYAL INC.
P.O. address
Attn: Purchasing Department

Purchasing
W. H. KNEPP

The Equal Opportunity clause in Section 202 of Executive Order 11246, or as may be amended, relative to equal employment opportunity and such implementing Rules and Regulations as may be issued by the Secretary of Labor are incorporated herein by specific reference.

Please read the reverse side hereof carefully. By shipping the above goods or by acknowledging receipt of this order or by performing the above work you agree to the terms and conditions of sale set forth on the reverse side hereof as well as those set forth on the face hereof. These terms and conditions constitute an offer by the buyer and may only be accepted on the exact terms set forth and no other terms and conditions shall be controlling; and these terms and conditions supersede the terms and conditions of your proposal or acknowledgment form, if any.

STEAM KAT HAZ MAT

OF VIRGINIA

STORM SEWER CLEANING PROJECT

Interim Report

AVTEX FIBERS

Front Royal, VA

Storm Sewer Cleaning Project

Interim Report

1. Purpose:

The purpose of this interim report is to describe the operations of Steam Kat during the storm sewer cleaning at Avtex Fibers, Front Royal, VA, from October 5 through October 18, 1989.

2. Description of Operations:

Storm sewer cleaning operations were coordinated closely with in-plant maintenance personnel to block storm sewers, divert water and provide support such as water and electricity. Water was diverted primarily by blocking specific storm sewers with air bags and pumping water to other sewer systems.

Personnel and equipment were mobilized on October 5 and 6. Beginning on October 6, manholes were checked with a combined gas monitor (oxygen level, toxic gases and explosive atmospheres) and an H Nu photoionization trace gas analyzer then entered for cleaning. Work crews wore EPA/OSHA Level C or Level B personal protective equipment (PPE) depending on the task to be completed. High pressure hydro cleaning equipment was used to clean manholes and connecting storm sewers. Removal of water and debris was done with vacuum trucks. All surfaces were triple rinsed with commercial cleaning products designed to remove oils, greases and other hydrocarbons from concrete and brick surfaces. Solids removed from manholes and storm sewers were bulked and staged in a contaminated area on-site for later disposal with other materials. Water removed from the system was placed in an on-site storage tank for later treatment or disposal as appropriate. Twenty-four hour operations began at 8:00 AM Friday, October 6, and continued until all storm sewers and manholes between the plant and the outfall at the river were cleaned. The outfall was reached at approximately 6:00 AM, Thursday, October 12. Sampling was completed as cleaning progressed. Originally, one sample was taken from the center of each manhole. If contamination was found, the manhole was recleaned and sampled on a seven point hexagonal grid in accordance with EPA guidance documents. Samples were delivered to S.D. Myers personnel on-site for shipment and analysis.

Designated areas were recleaned with both high pressure and hand scrubbing. Contamination in some manholes was reduced to below detectable levels. Other manholes have residual contamination as of the date of this report. Work continues.

One section, approximately 700 feet long, in the coal yard on the east side of the power plant was cleaned by Jet Blast of Hopewell, VA, to remove the bulk of the coal dust and calcium deposits prior to chemical cleaning by Steam Kat.

Before being demobilized from the site, all vacuum trucks, pumps

and any other equipment that had been used to handle contaminated or suspect-contaminated debris or water from the storm sewers was decontaminated by high pressure equipment or hand cleaning. Residues from this decontamination as well as used PPE was staged for later disposal.

ALLIANCE
Technologies Corporation

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

APPENDIX C
MANIFESTS/WASTE MATERIAL REMOVAL STATEMENTS
AND MATERIAL SAFETY DATA SHEETS

ADMINISTRATIVE ORDER
Docket No. III-90-01-DC

Prepared for U.S. Environmental Protection Agency
Hazardous Waste Management Division

Region III

November 7, 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P.O. Box 1169
Front Royal, Virginia 22630

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

WORK PLAN

WASTE REMOVAL STATEMENT

Section 8.13

Avtex will not remove any waste materials from the Site except in conformance with the terms of this order and any applicable Federal, state or local laws or regulations.

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

Monsanto MATERIAL SAFETY DATA

MONSANTO PRODUCT NAME

Polychlorinated Biphenyls (PCBs)

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MO 63167

Emergency Phone No.
(Call Collect)
314-694-1000

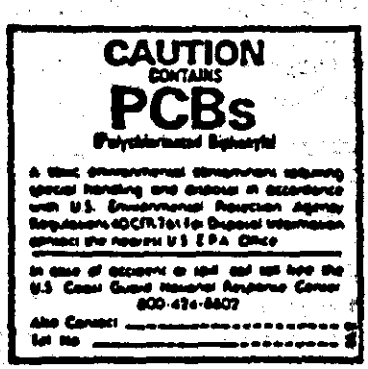
PRODUCT IDENTIFICATION

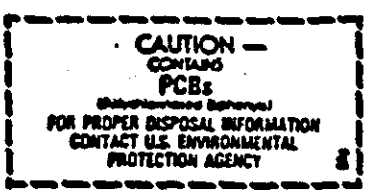
The following materials contain 99.9% or greater PCBs. For information about other ingredients in formulations containing PCBs, contact the manufacturer of those ingredients.

Synonyms:	PCBs Chlorodiphenyl (__% Cl) Chlorinated biphenyl Polychlorinated biphenyl Chlorinated biphenyls (approx. __% Cl)
Trade Names *(Commonly used Monsanto products)*	Askarel** Aroclor® Series 1016, 1221, 1232, 1242, 1248, 1254, 1260 Therminol® FR Series
CAS No.:	001336363, 053469219, 012672296, 011097691, 011096825 and others

WARNING STATEMENTS

Federal regulations under the Toxic Substances Control Act require PCBs and PCB items to be marked. (Check regulations for details.)





PRECAUTIONARY MEASURES

Care should be taken to prevent entry into the environment through spills, leakage, use, vaporization, or disposal of liquid or containers. Avoid prolonged breathing of vapors or mists. Avoid contact with eyes or prolonged contact with skin. If skin contact occurs, remove by washing with soap and water. Following eye contact, flush with water. In case of spillage onto clothing, the clothing should be removed as soon as practical, skin washed, and clothing laundered. Comply with all federal, state, and local regulations.

EMERGENCY AND FIRST AID PROCEDURES

Ingestion: Consult a physician. Do not induce vomiting or give any oily laxatives. NOTE TO PHYSICIAN—If large amounts are ingested, gastric lavage is suggested.

Skin: If liquid or solid PCBs are splashed or spilled on skin, contaminated clothing should be removed and the skin washed thoroughly with soap and water. NOTE TO PHYSICIAN—Hot PCBs may cause thermal burns.

Eyes: Eyes should be irrigated immediately with copious quantities of running water for at least 15 minutes if liquid or solid PCBs get into them. A petrolatum-based ophthalmic ointment may be applied to the eye to relieve the irritating effects of PCBs.

Inhalation: Remove to fresh air. If skin rash or respiratory irritation persists, consult a physician. NOTE TO PHYSICIAN—If electrical equipment arcs over, PCBs or other chlorinated hydrocarbon dielectric fluids may decompose to produce HCl, hydrochloric acid, a respiratory irritant.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Wear chemical splash goggles and have eye baths available where there is significant potential for eye contact.

Skin Protection: Wear appropriate protective gloves and protective clothing that provide a barrier to prevent skin contact. Consult glove manufacturer to determine appropriate type glove for given application. Wear chemical safety goggles and a face shield and a protective apron that provides a barrier when splashing is likely. Wash immediately if skin is contaminated. Remove contaminated clothing promptly and launder before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

ATTENTION: Repeated or prolonged contact may cause chloracne in some people.

Respiratory Protection: Avoid breathing vapor or mist. Use NIOSH/MSHA approved equipment when airborne exposure limits are exceeded. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical splash goggles. Consult respirator manufacturer to determine type equipment for given application. The respirator use limitations specified by NIOSH/MSHA or the manufacturer must be observed. High airborne concentrations may require use of self-contained breathing apparatus or supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR Part 1910.134.

Ventilation: Provide ventilation to control exposure levels below airborne exposure limits. Use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Airborne Exposure Limits: Chlorinated biphenyl (approximately 42% chlorine)

OSHA PEL: 1 mg/m³ 8-hour time-weighted average - Skin*
ACGIH TLV®: 1 mg/m³ 8-hour time-weighted average - Skin*
2 mg/m³ short-term exposure limit - Skin*

Chlorinated biphenyl (approximately 54% chlorine)

OSHA PEL: 0.5 mg/m³ 8-hour time-weighted average - Skin*
ACGIH TLV®: 0.5 mg/m³ 8-hour time-weighted average - Skin*
1 mg/m³ short-term exposure limit - Skin*

*Skin notation means that skin absorption of this material may add to the overall exposure. Avoid skin contact.

FIRE PROTECTION INFORMATION

Fire and Explosion: PCBs are fire-resistant compounds. They may decompose to form CO, CO_2, HCl, phenolics, aldehydes and other toxic combustion products under severe conditions such as exposure to flame or hot surfaces.

At temperatures in the range of 600-650°C in the presence of excess oxygen PCBs may form polychlorinated dibenzofurans (PCDFs). Laboratory studies under similar conditions have demonstrated that PCBs do *not* produce polychlorinated dibenzo-p-dioxins (PCDDs).

PCBs in electrical equipment have been reported to produce both chlorinated dioxins (PCDDs) and furans (PCDFs) during fire situations. These combustion products may result all, or in part, from non-PCB components of the dielectric fluids or other combusted materials. Consult the equipment manufacturer for information regarding composition of the dielectric fluids in electrical apparatus.

Standard fire fighting wearing apparel and self-contained breathing apparatus should be worn when fighting fires that involve possible exposure to chemical combustion products. Fire fighting equipment should be thoroughly cleaned and decontaminated after use.

If a PCB transformer is involved in fire-related incident, the owner of the transformer may be required to report the incident. Consult and follow appropriate federal, state, and local regulations.

REACTIVITY DATA

PCBs are very stable, fire-resistant compounds.

HEALTH EFFECTS SUMMARY

Skin Contact: PCBs can be absorbed through intact skin. Local action on skin is similar to that of common organic solvents where contact leads to removal of natural fats and oils with subsequent drying and cracking of the skin. A potential exists for the contracting of chloracne.

Eye Contact: The liquid products and their vapors are moderately irritating to eye tissues.

Ingestion: The acute oral toxicities of the undiluted compounds are: LD_{50} rats—8.65 gm/kg for 42% chlorinated, and 11.9 gm/kg for 54% chlorinated—"slightly toxic."

Inhalation: Animal experiments of varying duration and at different air concentrations show that for similar exposure conditions, the 54% chlorinated material produces more liver injury than the 42% chlorinated material.

Other: There are literature reports that PCBs can impair reproductive functions in monkeys. A study reported in the literature with female rats using Aroclor® 1260 stated that Aroclor 1260 caused liver cancers. Monsanto sponsored animal feeding studies of Aroclor 1242, 1254 and 1260. These compounds, fed to both sexes of rats, did not produce cancers. The National Cancer Institute performed a study in 1977 using Aroclor 1254 with both sexes of rats. NCI stated that the PCB, Aroclor 1254, was not carcinogenic under the conditions of their bioassay.

(Health Effects Summary Continued On Next Page)

HEALTH EFFECTS SUMMARY (Continued)

The consistent finding in animal studies with PCBs is that they produce liver injury following prolonged and repeated exposure by any route, if the exposure is of sufficient degree and duration. Liver injury is produced first, and by exposures that are less than those reported to cause cancer in rodents. Therefore, exposure by all routes should be kept sufficiently low to prevent liver injury.

Numerous epidemiological studies of humans, both occupationally exposed and non-worker environmentally exposed populations, have not demonstrated any statistically significant causal relationship between PCB exposures and chronic human illnesses such as cancer or neurological or cardiovascular effects. Nor was there any increase in overall cancer mortality as a result of PCB exposure. PCBs can cause dermatological symptoms; however, these are reversible upon removal of exposure source.

PCBs are identified as hazardous chemicals under criteria of the OSHA Hazard Communication Standard (29 CFR Part 1910.1200). The Standard requires that this document mention that PCBs have been listed in the International Agency for Research on Cancer (IARC) Monographs (1982)-Group 2B and in the National Toxicology Program (NTP) Annual Report on Carcinogens (Third).

PHYSICAL DATA

Properties of Selected Aroclors[a]

Property	1016	1221	1232	1242	1248	1254	1260
Color (APHA)	40	100	100	100	100	100	150
Physical state	mobile oil	mobile oil	mobile oil	mobile oil	mobile oil	viscous liquid	sticky resin
Stability	inert	inert	inert	inert	inert	inert	inert
Density (lb/gal 25°C)	11.40	9.85	10.55	11.50	12.04	12.82	13.50
Specific gravity x/15.5°C	1.36-1.37 x-25°	1.18-1.19 x-25°	1.27-1.28 x-25°	1.30-1.39 x-25°	1.40-1.41 x-65°	1.49-1.50 x-65°	1.55-1.56 x-90°
Distillation range (°C)	323-358	275-320	290-325	325-366	340-375	365-390	385-420
Acidity mg KOH/g, maximum	.010	.014	.014	.015	.010	.010	.014
Fire point (°C)	none to boiling point	176	238	none to boiling point	none to boiling point	none to boiling point	none to boiling point
Flash point (°C)	170	141-150	152-154	176-180	193-196	none	none
Vapor pressure (mm Hg @ 100°F)	NA	NA	0.005	0.001	0.00037	0.00006	NA
Viscosity (Saybolt Univ. Sec. @ 100°F)	71-81	38-41	44-51	82-92	185-240	1800-2500	—

NA - Not Available

SPILL, LEAK & DISPOSAL INFORMATION

Disposal of liquid PCBs and other PCB items is strictly regulated by the federal government. The regulations are found at 40 CFR Part 761. Consult these regulations as well as applicable state and local regulations prior to any disposal of PCBs, PCB items, or PCB-contaminated items.

If PCBs leak or are spilled, the following steps should be taken immediately:

All non-essential personnel should leave the leak or spill area.

The area should be adequately ventilated to prevent the accumulation of vapors.

The spill/leak should be contained. Loss to sewer systems, navigable waterways and streams should be prevented. Spills/leaks should be removed promptly by means of absorptive material, such as sawdust, vermiculite, dry sand, clay, dirt or other similar materials, or trapped and removed by pumping or other suitable means (traps, drip-pans, trays, etc.).

Personnel entering the spill or leak area should be furnished with appropriate personal protective equipment and clothing as needed. See Occupational Control Procedures section of this MSDS.

Personnel trained in the emergency procedures and protected against the attendant hazards should shut off sources of PCBs, clean up spills, control and repair leaks and fight fires in PCB areas.

All wastes and residues containing PCBs (e.g., wiping cloths, absorbent material, used disposable protective gloves, clothing, etc.) should be collected, placed in proper containers, marked and disposed of in the manner prescribed by EPA regulations (40 CFR Part 761) and applicable state and local regulations.

Various federal, state, and local regulations may require reporting of PCB spills and may also define spill clean-up levels. Consult your attorney or appropriate regulatory officials for information relating to spill reporting and spill clean-up.

ADDITIONAL COMMENTS

Polychlorinated Biphenyls

For regulatory purposes, under the Toxic Substances Control Act the term "PCBs" refers to a chemical substance limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such substance (40 CFR Part 761).

Chemically, commercial PCBs are defined as a series of technical mixtures, consisting of many isomers and compounds that vary from mobile oily liquids to white crystalline solids and hard non-crystalline resins. Technical products vary in composition, in the degree of chlorination and possibly according to batch.

The mixtures generally used contain an average of 3 atoms of chlorine per molecule (42% chlorine) to 5 atoms of chlorine per molecule (54% chlorine). They are used as components of dielectric fluids in transformers and capacitors. Prior to 1972, PCB applications included heat transfer media, hydraulic and other industrial fluids, plasticizers, carbonless paper, paints, inks and adhesives. Federal regulations specify that non-totally enclosed PCB activities are permitted only if specifically exempted or authorized. (40 CFR Part 761).

CAS No. 001336363: For general class of compounds

(Additional Comments Continued On Next Page)

10130?

MATERIAL SAFETY DATA

Polychlorinated Biphenyls (PCBs)

MR 101307

ADDITIONAL COMMENTS (Continued)

Trade Names/Common Names

**ASKAREL - Generic name for a broad class of fire-resistant synthetic chlorinated hydrocarbons and mixtures used as dielectric fluids that commonly contained about 30-70% PCBs. Some ASKAREL fluids contained 99% or greater PCBs.

PYRANOL[a] and INERTEEN[c] are trademarks for commonly used dielectric fluids that may have contained varying ratios of PCBs as well as other components including chlorinated benzenes.

[a] Registered trademark of Monsanto Company
[b] Registered trademark of General Electric Company
[c] Registered trademark of Westinghouse Electric Corporation

This list of trade names is representative of several commonly used Monsanto products (or formulated with Monsanto products). Other trademarked PCB products were marketed by Monsanto and other manufacturers. PCBs were also manufactured and sold by several European and Japanese companies. Contact the manufacturer of the trademarked product directly, if not in this listing, to determine if the formulation contained PCBs and its composition.

DATE: 10/15/85 **REVISED:** **SUPERSEDES:** All prior to 10/15/85
MSDS NO.: G 4048

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:

John H. Craddock
Product & Environmental Safety Director

Robert G. Kaley, II
Product & Environmental Safety Manager

Environmental Policy Staff
Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Missouri 63167
(314) 694-4764

MATERIAL SAFETY DATA — *Polychlorinated Biphenyls (PCBs)*

Material Safety Data Sheet*

AKZO

Chemical Division

SODIUM HYDROSULFIDE SOLUTION
(45% SOLUTION IN WATER)

This Material Safety Data Sheet (MSDS) meets the requirements of the federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Controlled Product Regulation, WHMIS classified; D-1B, D-2B, E.

New Issue 3/89
Supersedes Issue Dated 11/87
MSDS No. 984722/SOD090
PIN: UN2922

EMERGENCY TELEPHONE NUMBERS

Transportation Emergencies:

USA-CHEMTREC: 1-800-424-9300
CANADA-CANUTEC: 613-996-6666

All Other Emergencies Call:
312-906-7054

I. PRODUCT IDENTIFICATION/COMPOSITION

COMPOSITION:

Sodium Hydrosulfide (45%), CAS Registry Number: 16721-80-5, CAS Index Name: Sodium Sulfide (9CI).

Water (55%)

SYNONYMS:

Sodium bisulfide; Sodium hydrogen sulfide; Sodium sulfhydrate; NASH.

FORMULA: NaHS - Aqua

FORMULA WEIGHT: 56.07 - Aqua

II. PHYSICAL/CHEMICAL PROPERTIES

The following represent all available, applicable physical hazard data on this product.

PHYSICAL/STATE DESCRIPTION:

Pale yellow liquid at 68°F (20°C) with odor characteristic of rotten eggs.

SPECIFIC GRAVITY (WATER = 1):

1.314 at 60°F (15.6°C)

FREEZING POINT:

63°F (17.2°C)

SOLUBILITY:

Soluble in water and alcohols

pH: 9-12 (45% solution)

III. CHEMICAL REACTIVITY

Solution reacts with all acids, including weak organic acids, liberating poisonous hydrogen sulfide gas. It also reacts with oxidizing agents to precipitate elemental sulfur. Solution can be diluted with water in all proportions and is miscible with alcohols. This product is not sensitive to physical impact.

In Canada: Akzo Chemicals Ltd., 100 University Avenue, Ste. 908, Toronto, Ontario M5J 1V6

101309

Also referred to as a Product Safety Information Sheet

Akzo Chemicals Inc.
300 S. Riverside Plaza
Chicago, Illinois 60606
(312) 906-7500

IV. STABILITY

Upon warming the aqueous solution, poisonous hydrogen sulfide gas will evolve with increasing temperature. Because sodium hydrosulfide solutions are shipped hot, the vapor space of containers normally will contain hydrogen sulfide gas. Exposure of sodium hydrosulfide solution to air will cause some oxidation.

V. FIRE HAZARD

Not considered flammable or combustible. However, under fire conditions decomposes to give off poisonous hydrogen sulfide gas. Once liberated, hydrogen sulfide will burn and has an explosive range of 4.3 - 45% in air. It is not sensitive to static discharge.

VI. FIREFIGHTING TECHNIQUES

Vapors from combustion are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate nonessential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Use standard firefighting techniques to extinguish fires involving this material. Use water spray, dry chemicals or carbon dioxide.

If not leaking, use a water spray to keep fire-exposed containers cool to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination or fire hazard.

If hydrogen sulfide is evolved and is burning, it should be allowed to burn until the fire causing the decomposition of sodium hydrosulfde solution is extinguished.

Do not allow runoff to enter sewers, public waterway or any area where acids may be present. Diking procedures should be implemented for containment purposes. (See SECTION XI: SPILL HANDLING.)

Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

VII. TOXICOLOGY

INGESTION:

The acute oral LD50 is 58.4 mg/kg in male rats. A single oral dose of 50 mg/kg produced hyperactivity immediately after dosing followed by a moderate to severe decrease in physical activity and 30 percent mortality in male rats.

SKIN CONTACT:

The acute dermal LD50 is greater than 200 mg/kg in rabbits. A single dermal application of 200 mg/kg did not produce signs of toxicity or mortality in rabbits.

Corrosive to rabbit skin following a 4-hour exposure.

T-1861, T-4054, T-6307

VIII. HUMAN HEALTH

DANGER: Causes burns to skin and eyes. Can cause death if swallowed. Do not breath vapor. Do not get in eyes, on skin or on clothing.

Inhalation of sodium hydrosulfide mist may produce respiratory irritation and coughing. Sodium hydrosulfide can dissociate or be acidified to form poisonous hydrogen sulfide gas which if inhaled may cause headache, dizziness, nausea and vomiting. Exposure to high concentrations of hydrogen sulfide may cause loss of consciousness, pulmonary edema, respiratory failure and death. Although hydrogen sulfide has a characteristic odor of rotten eggs, high concentrations rapidly "deaden" the sense of smell, thus making odor a very unreliable means of protecting against overexposure.

Contact of the solution with the skin may produce burns. Repeated exposure to low concentrations of the solution or mists may result in dermatitis.

Splashes of solution or mist may produce eye irritation or burns and tears. Prolonged contact may cause corneal injury.
Ingestion of the solution may cause severe burning of the throat and digestive tract, followed by abdominal pain, nausea, vomiting and diarrhea. In severe cases, loss of consciousness and respiratory paralysis or death may occur.

IX. FIRST AID

CALL A POISON CENTER OR A PHYSICIAN IMMEDIATELY.

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. Simultaneously contact a Poison Center, a physician or the nearest hospital. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms and follow the advice given.

INGESTION:

If swallowed, immediately give several glasses of water, and induce vomiting by gagging the victim with a finger placed on the back of the victim's tongue. Give fluids until vomitus is clear. If victim is unconscious or convulsing, do not induce vomiting or give anything by mouth.

SKIN CONTACT:

Under a safety shower, immediately flush all affected areas with large amounts of running water for at least 15 minutes. Remove contaminated clothing and shoes. Do not attempt to neutralize with chemical agents. Get medical attention immediately. Wash clothing before reuse.

EYE CONTACT:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention immediately. Oils or ointments should not be used. Continue the flushing for an additional 15 minutes if a physician is not immediately available.

INHALATION:

Remove to fresh air. If not breathing, clear victim's airway and start mouth-to-mouth, artificial respiration which may be supplemented by the use of a bag-mask respirator or a manually triggered oxygen supply capable of delivering one liter per second or more. Once breathing is restored, provide alternately 100% oxygen and amyl nitrate. Give the victim 100% oxygen from a demand-type or a continuous-flow inhaler, preferably with a physician's advice. Break an amyl nitrate pearl (ampule) in a cloth and hold it close to a victim's mouth and nose for 15-30 seconds. Remove cloth and let victim breathe oxygen for 30 seconds. Repeat this procedure five times at 30 second intervals for each amyl nitrate pearl. Repeat as necessary using a fresh amyl nitrate pearl every 5 minutes until 3 or 4 additional pearls have been given. If victim stops breathing at any time, restart artificial respiration. Get medical attention immediately.

X. INDUSTRIAL HYGIENE

The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them nonhazardous before maintenance and repair activities are performed. Waste resulting from these procedures should be handled in accordance with SECTION XIV: DISPOSAL OF MATERIAL/ CONTAINER.

ENGINEERING CONTROLS:

In those cases where engineering controls are indicated by the use conditions, the following traditional exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design or process isolation and remote control in combination with appropriate use of personal protective equipment.

INGESTION:

All food should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, hands and face should be thoroughly washed.

SKIN CONTACT:

Skin contact with liquid or its aerosol must be prevented through the use of impervious clothing, gloves and footwear selected with regard for use condition exposure potential.

Safety showers, with quick opening valves which stay open, should be readily available in all areas where the material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

EYE CONTACT:

Eye contact with liquid or aerosol must be prevented through the use of chemical safety glasses, goggles or a face shield selected with regard for use condition exposure potential.

Eye wash fountains, or other means of washing the eyes with a gentle flow of tap water, should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

INHALATION:

If use conditions generate airborne mist, handle this material only in an open (e.g., outdoor) or well-ventilated area. Where adequate ventilation is not available, use NIOSH-approved dust, mist and fume respirators to reduce exposure. Where exposure potential under the use conditions necessitates a higher level of protection, use a positive-pressure, air-supplied respirator.

Either half-face respirators in combination with chemical goggles or full-face respirators may be required in certain use conditions to prevent eye contact or irritation.

EXPOSURE LIMITS:

No exposure limits have been established for this material. However, the following exposure limits apply for hydrogen sulfide, a decomposition product:

Federal OSHA Permissible Exposure Limit (PEL): Ceiling of 20 ppm and a 50 ppm 10-minute excursion above ceiling. (1).

Recommended Threshold Limit Value (TLV): 10 ppm (14 mg/m^3 as an 8-hour, time-weighted average and a Short-Term Exposure Limit (STEL) of 15 ppm (21 mg/m^3) (2.)

XI. SPILL HANDLING

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices (refer to SECTION X: INDUSTRIAL HYGIENE).

Any person entering either a significant spill area or an area of unknown concentration of a gas or vapor should use a positive-pressure, self-contained breathing apparatus or a positive-pressure, supplied-air respirator with escape pack.

Soak up pooled liquid with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal (refer to SECTION XIV: DISPOSAL OF MATERIAL/ CONTAINER). Do not use chemical waste container which contains acidic waste. Generously cover contaminated area with hydrated lime to further absorb liquid and minimize odor. When all liquid possible has been absorbed, wash the area thoroughly with water.

Spills should not be allowed to enter a sewer in which acidic waste might be present. This could result in the liberation of poisonous hydrogen sulfide and could be fatal to personnel near catch basins and manholes along the route of the sewer.

Large spills should be handled according to a predetermined plan.

XII. CORROSIVITY TO MATERIALS OF CONSTRUCTION

Solution is slightly corrosive to iron and steel. It is highly corrosive to aluminum, zinc and copper. Corrosion of steel is accelerated if moisture is present.

XIII. STORAGE REQUIREMENTS

Containers should be stored in a cool, dry, well-ventilated area (preferably out of doors) away from flammable materials and sources of heat or flame. Store away from foodstuffs or animal feed. Exercise due caution to prevent damage to or leakage from the container.

Storage tanks built of carbon steel ¼" thick should last at least 20 years. Several resin-fiberglass reinforced tanks are now in service with sodium hydrosulfide solution. Partially full tanks will cause corrosion problems because of the action with moist air; therefore, the use of a number of small tanks is recommended to minimize this problem. Heat is needed to keep the solution from freezing. Its freezing point is 63°F (17°C).

Because sodium hydrosulfide can dissociate to poisonous and flammable hydrogen sulfide, storage tanks should be closed vessels having a vent pipe equipped with a flame arrestor to prevent any flashback or explosion in case vented hydrogen sulfide is burning. Continuous detectors and alarms in all storage and use areas are recommended to detect the presence of poisonous hydrogen sulfide gas.

XIV. DISPOSAL OF MATERIAL/CONTAINER

Material that cannot be used or chemically reprocessed and empty containers should be disposed of at an approved facility in accordance with any applicable regulations. NOTE: State and local regulations may be more stringent than federal.

XV. PREPARATION INFORMATION

Prepared by: Product Stewardship, Akzo Chemicals Inc., Chicago, Illinois, (312) 906-7500.

REFERENCES CITED:

(1) 29 CFR 1910.1000

(2) American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices for 1988-89, ACGIH: Cincinnati, OH, 1988.

Material Safety Data Sheet*

AKZO

Chemical Division

CARBON DISULFIDE
POISON

This Material Safety Data Sheet (MSDS) meets the requirements of the federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Controlled Product Regulation, WHMIS classified as: B-2, D-2A, D-2B.

New Issue 3/89
Supersedes Issue Dated 9/85
MSDS No 983101/CAR016
PIN: UN1131

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EMERGENCY TELEPHONE NUMBERS

Transportation Emergencies:

USA-CHEMTREC: 1-800-424-9300
CANADA-CANUTEC: 613-996-6666

All Other Emergencies Call:

312-906-7054

==========

I. PRODUCT IDENTIFICATION/COMPOSITION

Carbon Disulfide (100%), CAS Registry Number: 75-15-0.

FORMULA: CS_2

MOLECULAR WEIGHT: 76.14

SYNONYM: Carbon bisulfide

CAS INDEX NAME (8CI9CI):

Carbon disulfide

II. PHYSICAL/CHEMICAL PROPERTIES

The following represent all available, applicable physical hazard data on this product.

PHYSICAL STATE/DESCRIPTION:

Clear, colorless to slightly yellow, mobile liquid at 68°F (20°C).

AUTOIGNITION TEMPERATURE:

194°F (90°C)

BOILING POINT:

115°F (46.3°C) at 760 mm Hg

DENSITY:

10.5 lb/gallon at 77°F (25°C)

FLAMMABLE RANGE:

(% by volume in air at 68°F (20°C)

Lower limit 1.3
Upper limit 50

FLASH POINT:

-22°F (-30°C), Closed Cup

==========

In Canada: Akzo Chemicals Ltd., 100 University Avenue, Ste. 908, Toronto, Ontario M5J 1V6

Also referred to as a Product Safety Information Sheet

101315

Akzo Chemicals Inc.
300 S. Riverside Plaza
Chicago, Illinois 60606
(312) 906-7500

MELTING POINT:

-169.1°F (-111.7°C)

ODOR:

Generally disagreeable, slight sulfide odor when pure.

SOLUBILITY:

0.22 g/100 ml water at 72°F (22°C).

Soluble in most organic liquids such as benzene, alcohol, carbon tetrachloride and ether.

SPECIFIC GRAVITY:

1.26 (water = 1)

VAPOR DENSITY:

2.63 (air = 1)

VAPOR PRESSURE:

100 mm Hg at 23°F (-5°C)
200 mm Hg at 51.1°F (10.6°C)
400 mm Hg at 82°F (28°C)

VISCOSITY:

0.36 cps at 73°F (22.8°C)

III. CHEMICAL REACTIVITY

Not considered highly reactive. However, reacts incandescently with chemically active metals such as zinc, sodium and potassium. Contact with azides and inorganic amines can be explosive. Not compatible with strong oxidizing agents. It is not sensitive to physical impact.

IV. STABILITY

Stable at ambient temperatures and atmospheric pressure when kept in a closed container.

V. FIRE HAZARD

Carbon disulfide is a flammable liquid. It gives off flammable vapors, even at low temperatures (e.g., -22°F/-30°C, which can form explosive mixtures in confined areas over a wide range of vapor/air mixtures. The material decomposes under fire conditions to give off toxic materials such as sulfur dioxide and carbon monoxide. Do not use welding or cutting torch on or near any container of this material, even empty, because an explosion could occur. Do not use, pour, spill or store near heat or open flame.

Tests have shown that carbon disulfide, because of its low ignition temperature and because of the extremely small joint clearance required to arrest its flame, cannot be included in any of the atmospheric groups in Section 500-2 of the National Electric Code. Carbon disulfide should never be transferred by means of air. Use pump, water or inert gas to transfer. Do not use spark-producing tools or devices where product is stored, handled or used. Use wooden measuring stick for measuring contents of containers and tanks. No electrical installations or heating facilities should be permitted in or near storage area. Protect against lightning and static electricity (1).

VI. FIREFIGHTING TECHNIQUES

Products of combustion are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate nonessential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Large carbon disulfide fires are best extinguished by completely blanketing the fire area with water fog or a water spray. This will help prevent possible reignition of the carbon disulfide. Continue the water fog or water spray until the fire area is completely cooled off. Carbon dioxide (or other inert gases) or dry chemical extinguishing agents may be used on small carbon disulfide fires.

Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

VII. TOXICOLOGY

INGESTION:

The acute oral LD50 is 3188 mg/kg in rats (2).

INHALATION:

The acute inhalation LC50 is 2500 mg/m^3 in rats following a 2-hour exposure (2).

Citations to original sources of toxicity data are available in RTECS; accession number: FF6650000 (2).

VIII. HUMAN HEALTH

Carbon disulfide can affect the body if it is inhaled, comes in contact with the eyes or skin or is swallowed. It may enter the body through the skin.

Inhalation of carbon disulfide vapor may cause headache, nausea, drop in blood pressure, dizziness, unconsciousness and death. Liquid carbon disulfide and high concentrations of the vapor may cause irritation of the skin, eyes and nose. The liquid may cause burns. Swallowing carbon disulfide may cause loss of consciousness and convulsions. If small amounts are swallowed, vomiting, diarrhea and headache may occur.

Prolonged or repeated exposure to carbon disulfide may damage the nervous system and cause muscle weakness, numbness, unsteady walking and difficulty in swallowing. In addition, memory loss, headache, difficulty in sleeping, nervousness, fatigue, depression, suicidal tendencies and psychosis may occur. Increased arteriosclerosis may occur which may cause or increase damage to the heart and other organs. Repeated or prolonged exposure of the skin to carbon disulfide may cause a rash (3).

There are sufficient human and animal data to indicate that prolonged or repeated exposure to high levels of carbon disulfide may be toxic to the reproductive systems of both the male and female, as well as the fetus. The available evidence indicates that keeping exposures below the current ACGIH TLV (10 ppm, 8-hour TWA) and OSHA PEL (4 ppm, 8-hour TWA and 12 ppm, 15-minute STEL) provides adequate protection against these risks.

There is no convincing evidence that CS_2 is a human mutagen or teratogen at the present TLV/PEL for regular work exposure (4).

There are no data available which address medical conditions that are generally recognized as being aggravated by exposure to this product.

IX. FIRST AID

CALL A POISON CENTER OR A PHYSICIAN IMMEDIATELY.

If a known exposure occurs or if poisoning is suspected, do not wait for symptoms to develop.

Immediately start the recommended procedures below and simultaneously contact a Poison Center, a physician or the nearest hospital. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms and follow the advice given.

INGESTION:

If swallowed, immediately give several glasses of water and induce vomiting by gagging the victim with a finger placed on the back of the victim's tongue. Give fluids until vomitus is clear. If victim is unconscious or convulsing, do not induce vomiting or give anything by mouth.

SKIN CONTACT:

Under a safety shower, immediately flush all affected areas with large amounts of running water for at least 15 minutes. Remove contaminated clothing and shoes. Do not attempt to neutralize with chemical agents. Get medical attention immediately. Wash clothing before reuse.

EYE CONTACT:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used at this time. Continue the flushing for an additional 15 minutes if a physician is not immediately available.

INHALATION:

If inhaled, remove to fresh air. If not breathing, clear victim's airway and start mouth-to-mouth, artificial respiration, which may be supplemented by the use of a bag-mask respirator or manually triggered oxygen supply capable of delivering one liter per second or more. If victim is breathing, oxygen may be given from a demand-type or continuous-flow inhaler, preferably with a physician's advice. Get medical attention immediately.

X. INDUSTRIAL HYGIENE

The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them nonhazardous before maintenance and repair activities are performed.

ENGINEERING CONTROLS:

In those cases where engineering controls are indicated by the use conditions, the following traditional exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design or process isolation and remote control, in combination with appropriate use of personal protective equipment.

INGESTION:

All food must be kept in a separate area away from the storage/use location. Eating, drinking, smoking and carrying of tobacco products must be prevented in areas where there is a potential for exposure to this material.

Before eating, drinking or smoking, hands and face must be thoroughly washed.

SKIN CONTACT:

Skin contact with liquid or its aerosol must be prevented through the use of impervious clothing, gloves and footwear selected with regard for use condition exposure potential. Footwear should not have exposed nails or metal inserts.

Safety showers, with quick opening valves which stay open, should be readily available in all areas where the material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

EYE CONTACT:

Eye contact with liquid or aerosol must be prevented through the use of chemical safety glasses, goggles or a face shield selected with regard for use condition exposure potential.

Eye wash fountains, or other means of washing the eyes with a gentle flow of tap water, should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

Either half-face respirators in combination with chemical goggles or full-face respirators may be required in certain use conditions to prevent eye contact or irritation.

INHALATION:

If use conditions generate airborne vapor, the material should be handled in an open (e.g., outdoor) or well-ventilated area. Where adequate ventilation is not available, use NIOSH-approved, organic vapor respirators to reduce exposure.

Where exposure potential under the use conditions necessitates a higher level of protection, use a positive-pressure, air-supplied respirator.

EXPOSURE LIMITS:

The federal OSHA Permissible Exposure Limit (PEL) is 4 ppm as an 8-hour, time-weighted average and 12 ppm as a 15-minute short-term exposure limit (STEL) with a skin notation (5).

The American Conference of Governmental Industrial Hygienists (ACGIH) has recommended a Threshold Limit Value (TLV) of 10 ppm (30 mg/m^3) as an 8-hour, time-weighted average with a skin notation (6).

PELs and TLVs refer to airborne concentrations measured in the breathing zone by appropriate sampling techniques.

XI. SPILL HANDLING

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices (refer to SECTION X: INDUSTRIAL HYGIENE).

Any person entering either a significant spill area or an area of unknown concentration of a gas or vapor, should use a positive-pressure, self-contained breathing apparatus or a positive-pressure, supplied-air respirator with escape pack.

Small spills can be handled routinely. Use adequate ventilation and/or wear a NIOSH-approved, organic vapor respirator to prevent inhalation exposure. Wear protective clothing to prevent skin and eye contact. Use the following procedures:

Evacuate all nonessential personnel from the spill area to a location upwind of the spill and far enough removed to avoid potential exposure. Use water to flush the spilled carbon disulfide into an impervious trench or other low-lying area from which it can be removed via pumping or similar method. Carbon disulfide is more dense than water; it will settle to the bottom of the trench and will be covered by a layer of water. This water layer serves as a protective covering over the carbon disulfide and thereby reduces fire and exposure hazards. The collection trench should be sufficiently baffled or blocked to retain the carbon disulfide so that it does not escape from the maintained area. Dispose of collected material on-site, if possible. If on-site disposal is not possible, proper shipping regulations should be considered before transporting the spilled material to a disposal location.

Large spills should be zoned off and handled according to a predetermined plan which includes proper design and grading of storage and handling areas for spill control. Part of this plan should include fire fighting techniques.

XII. CORROSIVITY TO MATERIALS OF CONSTRUCTION

Noncorrosive to metallic materials commonly used in the construction of process equipment and storage and shipping containers. Because of this product's solvency action, caution should be used when shipping, storing or processing it in contact with plastic material.

XIII. STORAGE REQUIREMENTS

Containers should be stored in a cool, dry, well-ventilated area away from flammable materials, sources of heat or flame and direct sunlight. Store away from foodstuffs or animal feed. Exercise due caution to prevent damage to or leakage from the container. No smoking signs should be posted. Firefighting equipment should be immediately available. No electrical installations or heating facilities should be permitted in or near storage areas. Protect against lightning and static electricity.

Storage area should be in an isolated location away from other buildings, preferably in a building of noncombustible construction and equipped with floor level ventilation. During hot weather, spray drums to keep vapor pressure down.

Tanks should be submerged in water or located over concrete basins containing water. Basins should be of sufficient capacity to hold all of the tank contents in addition to the water. Water or inert gas should be provided over the carbon disulfide in all tanks.

Bulk material can be stored in underground tanks, tanks submerged in water or above ground tanks which are diked and have water in the dike. The void above the carbon disulfide must be filled with water, nitrogen or other suitable inert material.

XIV. DISPOSAL OF MATERIAL/ CONTAINER

Material that cannot be used or chemically reprocessed and empty containers should be disposed of at an approved facility in accordance with any applicable regulations. NOTE: State and local regulations may be more stringent than federal.

XV. PREPARATION INFORMATION

Prepared by: Product Stewardship, Akzo Chemicals Inc., Chicago, Illinois, (312)906-7500.

REFERENCES CITED:

(1) National Fire Protection Association (NFPA), Hazardous Chemicals Data, Standard 49, NFPA: Quincy, MA, 1975.

(2) National Institute for Occupational Safety and Health (NIOSH), Registry of Toxic Effects of Chemical Substances (RTECS), NIOSH: Cincinnati, OH, 1983.

(3) National Institute for Occupational Safety and Health (NIOSH), Occupational Health Guideline for Carbon Disulfide-Reproductive System, NIOSH: Cincinnati, OH, 1978.

(4) American Medical Association, Council on Scientific Affairs, Advisory Panel on Reproductive Hazards in the Workplace, Effects of Toxic Chemicals on the Reproductive System, Chicago, IL, 1985.

(5) 29 CFR 1910.1000.

(6) American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices for 1988-89, ACGIH: Cincinnati, OH, 1988.

Allied Chemical

CHEMICALS COMPANY

PRODUCT SAFETY DATA SHEET

A. GENERAL INFORMATION

TRADE NAME (COMMON NAME OR SYNONYM)	☒ C.A.S. NO. ☐ ALLIED PRODUCT CODE
Sulfuric Acid	7664-93-9

CHEMICAL NAME
Sulfuric Acid

FORMULA	MOLECULAR WEIGHT
58% to 99% H_2SO_4 in water	98.08

COMPANY/PLANT ADDRESS (No., STREET, CITY, STATE AND ZIP CODE)
Chemicals Company
P.O. Box 1139R
Morristown, N.J. 07960

CONTACT	PHONE NUMBER	ISSUED DATE	REVISED DATE
Director - Technical Service	(315) 487-4990	June 12, 1980	

B. FIRST AID MEASURES

EMERGENCY PHONE NUMBER
(201) 455-2000

Skin or Eyes: *Promptly flush with plenty of water for at least 15* minutes. Remove contaminated clothing.
Ingestion: Drink large amounts of water (or milk if available) to dilute the acid. Do not induce vomiting.
Get prompt medical attention for ingestion, inhalation, eye contact, irritation or burns.
Additional procedures are outlined in references listed in Section J.

C. HAZARDS INFORMATION

FIRE AND EXPLOSION

FLASH POINT °C	AUTO IGNITION TEMPERATURE °C	FLAMMABLE LIMITS IN AIR (% BY VOL.)
Not Flammable ☐ OPEN CUP ☐ CLOSED CUP	NA - Not Applicable	LOWER NA UPPER NA

UNUSUAL FIRE AND EXPLOSION HAZARDS
Flammable and potentially explosive hydrogen gas can be generated inside metal drums and storage tanks.
Concentrated acid can ignite combustible materials.

HEALTH

INHALATION
Inhalation of fumes or acid mist can cause irritation or corrosive burns to the upper respiratory system, including nose, mouth and throat. Lung irritation and pulmonary edema can also occur.

INGESTION
Can cause irritation and corrosive burns to mouth, throat, and stomach.
Can be fatal if swallowed.

SKIN
Can cause corrosive burns or irritation.

EYES
Can cause irritation, corneal burns, and conjunctivitis.

PERMISSIBLE CONCENTRATION: AIR (SEE SECTION J) Threshold Limit Value (TLV): 1 mg/m^3 as 100% H_2SO_4 BIOLOGICAL

UNUSUAL CHRONIC TOXICITY

101322

D. PRECAUTIONS/PROCEDURES

VENTILATION

Sufficient to reduct acid mist below current permissible TLV levels.
Packaging and unloading areas and open processing equipment may require mechanical exhaust systems.

NORMAL HANDLING
Use protective equipment outlined in Section E. Procedures are detailed in references listed in Section J. Safety showers and eyewash facilities should be available nearby all H_2SO_4 handling equipment. Do not add water to acid. When diluting, always add acid to water cautiously and with agitation.

STORAGE
Store in cool, well-ventilated area away from combustibles and reactive chemicals. Vent metal containers weekly or more frequently in hot weather to prevent H_2 gas build-up. Diking of storage tanks is recommended.

PRECAUTIONARY LABEL ☐ ATTACHED ☒ NOT ATTACHED
Label warning statement(s): "Danger! Liquid is corrosive. Causes severe burns. Vapor may contain explosive hydrogen. Keep sources of ignition away."

SPILL OR LEAK

Dilute small spills or leaks cautiously with plenty of water. Neutralize residue with alkali such as soda ash or lime. Adequate ventilation is required for soda ash due to release of CO_2 gas.
(See Section I for disposal methods.)

FIRE EXTINGUISHING AGENTS RECOMMENDED

NA

SPECIAL FIRE FIGHTING PRECAUTIONS

...gh temperatures, H_2SO_4 mists or SO_3 gas can be released from vented or ruptured containers. If water is added to concentrated sulfuric acid, violent spattering can occur, and considerable heat may be evolved. Full protective equipment is recommended.

FIRE EXTINGUISHING AGENTS TO AVOID

NA

SPECIAL PRECAUTIONS/PROCEDURES

To prevent ignition of hydrogen gas generated in metal containers from contact with sulfuric acid, smoking, open flames, and sparks must not be permitted in storage areas.

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION
Where required, use a respirator approved by NIOSH for sulfuric acid gas or mists, as applicable. Some exposures may require NIOSH-approved, self-contained breathing apparatus or air-supplied respirator.

EYES AND FACE

As a minimum, wear hard hat, chemical safety goggles, and full-face plastic shield. Do not wear contact lenses.

HANDS, ARMS, AND BODY

As a minimum, wear acid-resistant apron, protective clothing, boots and gauntlet gloves for routine product use. For ...sed protection, include acid-resistant trousers and jacket.

OTHER CLOTHING AND EQUIPMENT

161323

F. PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS):	APPEARANCE AND ODOR	
☒ LIQUID ☐ SOLID ☐ GAS ☐ _____	Oily, colorless to slightly yellow, clear to turbid liquid. Odorless.	
BOILING POINT (°) a. 136 °C b. 279 °C MELTING POINT c. 310 °C	SPECIFIC GRAVITY (°) (H_2O = 1) a. 1.480 b. 1.835 c. 1.842	VAPOR DENSITY (AIR = 1) NA
SOLUBILITY IN WATER (% by weight) complete	pH 1% solution; pH = 0.9	VAPOR PRESSURE (mm Hg at 20° C) negligible
EVAPORATION RATE (Butyl Acetate = 1) Less than 1	% VOLATILES BY VOLUME (At 20° C) NA	(°) a. 47° Be' = 58% H_2SO_4 b. 66° Be' = 93% H_2SO_4 c. 99% H_2SO_4

G. REACTIVITY DATA

STABILITY	CONDITIONS TO AVOID
☐ UNSTABLE ☒ STABLE	

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with combustible materials, carbides, chlorates, nitrates, fulminates, picrates, metallic powders, sulfides, or strong reducing agents. Considerable heat is evolved, and violent reaction can occur if water is added to acid in a container.

HAZARDOUS DECOMPOSITION PRODUCTS

SO_3 gas

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
☐ MAY OCCUR ☒ WILL NOT OCCUR	

H. HAZARDOUS INGREDIENTS (Mixtures Only)

MATERIAL OR COMPONENT	%	HAZARD DATA (SEE SECT. J)
NA		
		101324

I. ENVIRONMENTAL

DEGRADABILITY

OCTANOL/WATER PARTITION COEFFICIENT

WASTE DISPOSAL METHODS*

Dilute with water, neutralize with alkali and flush to sewer with plenty of water if permitted by applicable disposal regulations. Neutralized waste may have to be disposed of by an approved contractor.

*DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISC. .RGE LAWS.

J. REFERENCES

PERMISSIBLE CONCENTRATION REFERENCES

OSHA standard, 29 CFR, Part 1910.1000 (July 1, 1977).

"Criteria for a Recommended Standard . . . Occupational Exposure to Sulfuric Acid, "NIOSH (U.S. Dept. of HEW), 1974.

REGULATORY STANDARDS

DOT Classification - Corrosive; Placard - Corrosive; Label - Corrosive (49 CFR). Designated a hazardous substance spills by EPA (40 CFR, Parts 116 - 117).

GENERAL

"Criteria for a Recommended Standard . . . Occupational Exposure to Sulfuric Acid," NIOSH (U.S. Dept. of HEW) 1974. Also available are Allied Chemical's sulfuric acid wall chart, a Technical Service Report which discusses storage and handling, and a product information bulletin.

K. ADDITIONAL INFORMATION

Information (hazards, precautions, first aid, etc.) is abbreviated. More detailed information is contained in references found in Section J.

This product is not for food or drug use.

101325

Paul Ehlers

MATERIAL SAFETY DATA SHEET

CAS # 7733-02-0

Zinc Corporation of America
300 Frankfort Road
Monaca, Pa. 15061

412-774-1020

Common Name and Synonyms: ~~Zinc Sulfate Solution~~
Zinc Sulfate Solution
$ZnSO_4$

MSDS #: 926

Date Issued: 11/6/87

Source: Bag Filter Dust Circuit

Date Revised:

HAZARDOUS INGREDIENTS — Section I

Ingredient	%	NTP or IARC Carcinogen	8-hr Exposure Limit (mg/M^3) TLV	PEL

Does not contain US EPA defined hazardous substances.

PHYSICAL DATA — Section II

Appearance: Clear, colorless, odorless liquid. Specific gravity = 1.4, pH=5. Produces white crystals when evaporated to dryness.

Solubility in Water: Complete.

FIRE AND EXPLOSION HAZARD DATA — Section III

Combustibility: Noncombustible as solution or as dried crystals.

Extinguishing Media and Fire Fighting Procedures: Any suitable for the supporting fire.

REACTIVITY DATA — Section IV

Stability: Stable. Dry crystals decompose above 1364° F to evolve SO_2.

Incompatability (Materials/Conditions to Avoid): None indicated.

101326

Paul Ehlers

MATERIAL SAFETY DATA SHEET Cont'd.

HEALTH HAZARD DATA — Section V

Effects of Overexposure: Liquid or mist irritating to eye, nose and throat. Prolonged exposure to skin can cause dryness and irritation.

Emergency and First Aid Procedures: Flush area of contact with water. It is unlikely that overexposure to this material would result in an acute illness. However, if symptoms are present, the individual should be removed from exposure and the plant nurse or physician consulted.

SPILL OR LEAK PROCEDURES — Section VI

Steps to take in case of spill or accidental release: Place spilled or contaminated material in drums or other suitable container.

Waste Disposal Method (Location): Ship to approved chemical disposal site.

SPECIAL PROTECTION INFORMATION — Section VII

Respiratory Protection (Specify Type): NIOSH-approved dust/mist respirator, such as Comfo II, when exposed to mist or dust from dried material.

Ventilation: May be needed to control mist.

Other Protective Equipment: Goggles and water proof gloves.

SPECIAL PRECAUTIONS — Section VIII

Precautions to be taken in handling and storage: No unusual precautions. Minimize direct contact.

101327

CASTROL INDUSTRIAL EAST INC.
775 Louis Drive
Warminster, PA 18974
(215) 443-7080

SECTION I

PRODUCT NAME OR NUMBER: COMX-CLEAN 909

MANUFACTURER'S NAME: ~~CASTROL INDUSTRIAL~~
GREAT LAKES INCORPORATED
ADDRESS: 1445 McPherson Park Dr., P.O. Box 860, Howell, MI 48844-0860

PROPER SHIPPING NAME(49 CFR 172.101): Not regulated
HAZARD CLASS(49 CFR 172.101): Not regulated
HAZARD ID NUMBER: Not applicable

CHEMICAL FAMILY: Alkaline water base solution

SECTION II

Blend of surfactants, couplers, builders, dyes, conditioners and water	95-99%	
Sodium hydroxide	1-5%	TLV*: 2mg/m3 (OSHA) 2mg/m3 (ceiling) (ACGIH)

*V means Threshold Limit Value. * This refers to airborne concentrations of substances and represent conditions believed that nearly all workers may be repeatedly exposed day after day without adverse effect.*

SECTION III TYPICAL PHYSICAL DATA NOT TO BE CONSIDERED SPECIFICATIONS

BOILING POINT (initial):	approx. water
SPECIFIC GRAVITY:	1.2
VAPOR PRESSURE (mm Hg):	approx. water
VAPOR DENSITY (air=1):	approx. water
EVAPORATION RATE (ether=1):	approx. 1
PERCENT VOLATILE BY WEIGHT:	65-75
SOLUBILITY IN WATER:	Complete
pH:	Concentrate - 12.5-13.0 5% dilution - 11.9-12.3
APPEARANCE AND ODOR:	Clear pale yellow-green liquid; mild odor

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used): None

FLAMMABLE LIMITS IN AIR, % BY VOLUME: Lower(lel) Upper(uel)
Not applicable

EXTINGUISHING MEDIA: Fire and heat may drive off water leaving chemical ingredients which may burn.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus when fire fighting in a confined space

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

CONTAINER HANDLING: Do not cut or weld empty drums unless they are thoroughly cleaned.

101328

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not established for the product [illegible]
LISTED CARCINOGEN (NTP, IARC OR OSHA): This product does not contain any listed carcinogens.

ROUTES OF EXPOSURE AND ACUTE EFFECTS:
[illegible]: Corrosive

Skin Contact: The concentrate will irritate or burn skin after short contact due to high alkalinity. Dilutions of 1% in water alone have alkalinity similar to hand soap, although the product is not intended for use as hand soap.
Eye Contact: Concentrate will irritate or burn eye tissue. Dilutions will be irritating.
Inhalation: The concentrate is not volatile, so no inhalation should be possible.
Ingestion: Concentrate will be harmful if swallowed, because of its alkalinity. It will irritate or burn mucous membrane tissue.

CHRONIC EFFECTS: A review of literature suggests [illegible] exposure is very limited.

EMERGENCY AND FIRST AID PROCEDURES:
Skin Contact: Concentrate - wash off with plain water. Dilution - wash with soap and water. Launder contacted clothing before reuse.
Eye Contact: Flush with water for at least 15 minutes. Contact physician.
Inhalation: If throat is irritated by vapors, move to fresh air.
Ingestion: If concentrate is swallowed, DO NOT induce vomiting. Give large quantities of water. Contact physician immediately. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Contact with strong acids; contact of concentrate with active metal fines such as aluminum.

INCOMPATIBILITY: Store away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrocarbon decomposition products at elevated temperatures.

[illegible]RDOUS POLYMERIZATION: Will not occur
[illegible]ONDITIONS TO AVOID: None known

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Small Spills: Soak up with absorbent material.
Large Spills: Dike area to prevent runoff, recover liquid, soak up remaining liquid with absorbent material

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations

RCRA HAZARDOUS WASTE DESIGNATION: This product does fall under current EPA RCRA definitions of hazardous waste with designation D002 because of its alkalinity if the product is disposed of in its original form.

CERCLA (Superfund) REPORTABLE QUANTITY: This product does contain a CERCLA regulated material, sodium hydroxide, RQ=1000 LBS.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Good industrial hygiene practices recommend that engineering controls (such as local and/or mechanical ventilation) be used to reduce environmental concentrations to the permissible exposure level. Respirators may be used when engineering and work practice controls are not technically feasible, when such controls are in the process of being installed, or when they fail and need to be supplemented. If the use of a respirator is necessary, use only a MSHA/NIOSH approved air supplied respirator or an air purifying respirator.

PROTECTIVE GLOVES: Impervious gloves (such as rubber, neoprene, NBR nitrile, polyethylene) when handling the concentrate.
EYE PROTECTION: Safety glasses with side shields or chemical goggles
OTHER PROTECTIVE EQUIPMENT: Appropriate clothing to avoid skin contact

1,1,1-TRICHLOROETHANE
1,1,1-TRICHLOROETHANE
1,1,1-TRICHLOROETHANE

MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC
CHEMICAL DIVISION
1 REAGENT LANE
FAIR LAWN NJ 07410
(201) 796-7100

EMERGENCY CONTACTS:
GASTON L. PILLORI
(201) 796-7100

SUBSTANCE IDENTIFICATION

CAS-NUMBER 71-55-6

SUBSTANCE: **1,1,1-TRICHLOROETHANE**

TRADE NAMES/SYNONYMS: METHYL CHLOROFORM; ETHYLIDYNE CHLORIDE; UN 2831

CHEMICAL FAMILY:
HYDROCARBON, ALIPHATIC

MOLECULAR FORMULA: C2-H3-CL3 MOL WT: 133.41

CERCLA RATINGS (SCALE 0-3): HEALTH=2 FIRE=0 REACTIVITY=2 PERSISTENCE=3
NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=1 REACTIVITY=1

COMPONENTS AND CONTAMINANTS

PERCENT: >95 COMPONENT: 1,1,1-TRICHLOROETHANE

PERCENT: <5 COMPONENT: INHIBITOR TO PREVENT CORROSION OF METALS

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:
350 PPM OSHA TWA; 350 PPM ACGIH TWA; 450 ACGIH STEL;
350 PPM NIOSH RECOMMENDED 15 MINUTE CEILING

PHYSICAL DATA

DESCRIPTION: COLORLESS LIQUID WITH A MILD CHLOROFORM-LIKE ODOR.

BOILING POINT: 165 F (74 C) MELTING POINT: -36 F (-32 C)

SPECIFIC GRAVITY: 1.3 VAPOR PRESSURE: 100 MMHG @ 20 C

EVAPORATION RATE: (CCL4=1) 1 TTE SOLUBILITY IN WATER: 0.44%

SOLVENT SOLUBILITY: ACETONE, BENZENE, CCL4, METHANOL, AND ETHER.

ODOR THRESHOLD: 20-100 PPM VAPOR DENSITY: 4.6

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:
NEGLIGIBLE FIRE HAZARD AND EXPLOSION HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FLASH POINT: NONFLAMMABLE UPPER EXPLOSION LIMIT: 10.5%

LOWER EXPLOSION LIMIT: 8.0% AUTOIGNITION TEMP.: 998 F (537 C)

FLAMMABILITY CLASS(OSHA): IIIA

FIREFIGHTING MEDIA:
DRY CHEMICAL OR CARBON DIOXIDE
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL FOAM
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FIREFIGHTING:
STAY AWAY FROM STORAGE TANK ENDS. COOL CONTAINERS EXPOSED TO FLAMES WITH WATER FROM SIDE UNTIL WELL AFTER FIRE IS OUT (1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

TOXICITY

27 GM/M3/10 MIN INHALATION-MAN LCLO; 1000 PPM INHALATION-RAT LCLO; 10300 MG/M3 ORAL-RAT LD50, 11240 ORAL-MOUSE LD50; MUTAGENIC DATA (RTECS); REPRODUCTIVE EFFECTS DATA (RTECS); INDEFINITE ANIMAL CARCINOGEN (IARC). DATA AVAILABLE DO NOT PERMIT EVALUATION OF CARCINOGENICITY OF 1,1,1-TRICHLORDETHANE TO BE MADE 1,1,1-TRICHLOROETHANE IS A SKIN IRRITANT AND CENTRAL NERVOUS SYSTEM DEPRESSANT. EXPOSURE MAY IRRITATE THE EYES AND MUCOUS MEMBRANES. POISONING MAY AFFECT THE CARDIOVASCULAR SYSTEM AND LIVER. ALCOHOLIC BEVERAGES MAY ENHANCE THE SYSTEMIC EFFECTS.

HEALTH EFFECTS AND FIRST AID

INHALATION:
NARCOTIC. 1000 PPM IS IMMEDIATELY DANGEROUS TO LIFE AND HEALTH.
ACUTE EXPOSURE- INDIVIDUALS EXPOSED TO 900-1000 PPM FOR 20 MINUTES EXPERIENCED LIGHT-HEADEDNESS, INCOORDINATION, AND IMPAIRED EQUILIBRIUM. EXPOSURE TO HIGHER CONCENTRATIONS FOR EXTENDED PERIODS OF TIME MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH DIZZINESS, INCOORDINATION, DROWSINESS, INCREASED REACTION TIME, UNCONSCIOUSNESS, AND DEATH. "SUDDEN DEATHS" MAY OCCUR DUE TO SENSITIZATION OF THE MYOCARDIUM TO EPINEPHRINE. (CAUSING CARDIAC ARRYTHMIA). DEATH MAY ALSO BE CAUSED BY ASPHYXIA DUE TO THE REDUCTION IN OXYGEN AVAILABLE FOR BREATHING. AT EXTREMELY HIGH CONCENTRATIONS, LIVER AND KIDNEY INJURY MAY OCCUR. REPEATED EXPOSURE TO THE POINT OF ANESTHESIA MAY CAUSE REVERSIBLE HEPATITIS (ANIMAL).

CHRONIC EXPOSURE- IN EXPERIMENTAL ANIMALS, LIVER AND KIDNEY DAMAGE HAVE BEEN MINIMAL. SEE ANIMAL MUTAGENIC AND REPRODUCTIVE EFFECTS REFERENCES IN TOXICITY SECTION. AT 1000 TO 10,000 PPM: 3-MONTH EXPOSURES OF ANIMALS CAUSED SOME PATHOLOGIC CHANGES IN THE LIVERS AND LUNGS OF SOME SPECIES. WHEN REPEATED, REDUCED TO 500 PPM: PATHOLOGIC CHANGES WERE ELIMATED, BUT THERE WAS SOME GROWTH LOSS.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. IF BREATHING WITH DIFFICULTY, GIVE OXYGEN. REMOVE ANY CONTAMINATED CLOTHING. DO NOT GIVE EPINEPHRINE (ADRENALIN). KEEP AFFECTED PERSON WARM AND AT REST. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:
IRRITANT.

ACUTE EXPOSURE- CONTACT WITH THE LIQUID MAY CAUSE IMMEDIATE IRRITATION AND REDNESS. THE SUBSTANCE CAN BE ABSORBED TO A MODERATE DEGREE PRODUCING SYSTEMIC EFFECTS OF DIZZINESS, HEADACHE, INCOORDINATION, AND DROWSINESS.

CHRONIC EXPOSURE- REPEATED SKIN CONTACT MAY PRODUCE A DRY, SCALY, FISSURED DERMATITIS DUE TO THE DEFATTING PROPERTIES OF THE LIQUID. SEE ANIMAL MUTAGENIC AND REPRODUCTIVE REFERENCES IN TOXICITY SECTION.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:
IRRITANT.

ACUTE EXPOSURE- HIGH VAPOR CONCENTRATIONS (800-1000 PPM) MAY CAUSE IRRITATION AND REDDNESS DIRECT CONTACT OF THE LIQUID MAY CAUSE TEMPORARY INJURY WITH COMPLETE RECOVERY EXPECTED IN 48 HOURS. DIRECT APPLICATION TO THE EYES OF RABBITS HAS CAUSED CONJUNCTIVAL IRRITATION, BUT NO CORNEAL DAMAGE.

CHRONIC EXPOSURE- NO EFFECTS KNOWN IN HUMANS.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING THE UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 10-20 MINUTES). GET MEDICAL ATTENTION.

INGESTION:
NARCOTIC.

ACUTE EXPOSURE- SYMPTOMS PROGRESS THROUGH HEADACHE, DIZZINESS, NAUSEA, FAINTING, RESPIRATORY DEPRESSION, HYPOTENSION, ARRHYTHMIAS, AND UNCONSCIOUSNESS. LIVER AND KIDNEY DAMAGE MAY OCCUR. THE ADULT FATAL DOSE IS ESTIMATED TO BE 5 ML.

FIRST AID- GET MEDICAL ATTENTION IMMEDIATELY. IF MEDICAL ATTENTION IS NOT IMMEDIATELY AVAILABLE, AND IF VICTIM IS CONSCIOUS, ATTEMPT TO INDUCE VOMITING BY TOUCHING FINGER TO BACK OF THROAT.

REACTIVITY

EACTIVITY:
TABLE UNDER NORMAL CONDITIONS. REACTS VIOLENTLY WITH ALKALI, EARTH-ALKALINE, AND WITH VARIOUS METAL POWDERS. THE SUBSTANCE CAN BE HYDROLYZED BY WATER TO FORM HYDROCHLORIC ACID AND ACETIC ACID. THE SUBSTANCE WILL REACT WITH STRONG CAUSTICS, SUCH AS CAUSTIC SODA OR CAUSTIC POTASH TO FORM FLAMMABLE OR EXPLOSIVE MATERIAL. AN INHIBITOR IS REQUIRED TO PREVENT THE CORROSION OF METALS.

INCOMPATIBILITIES:

ACETONE + BASE: EXPLOSION.
LIQUID OXYGEN + IGNITION SOURCE: EXPLOSION.
SODIUM-POTASSIUM ALLOY + LIQUID OXYGEN WITH AN ENERGY SOURCE: EXPLOSION.
STRONG OXIDIZERS: VIOLENT REACTION.
STRONG CAUSTICS: VIOLENT REACTION.
CHEMICALLY ACTIVE METALS (ALUMINUM POWDER, SODIUM, POTASSIUM, MAGNESIUM POWDER): VIOLENT REACTION.
NATURAL RUBBER: DECOMPOSES.
SODIUM: SPONTANEOUSLY FLAMMABLE COMPOUND FORMED.
SODIUM HYDROXIDE: SPONTANEOUSLY FLAMMABLE COMPOUND FORMED.
NITROGEN TETRAOXIDE: EXPLODES.

DECOMPOSITION:
THE SUBSTANCE WILL DECOMPOSE AT HIGH TEMPERATURES UPON CONTACT WITH HOT METAL OR UNDER ULTRAVIOLET RADIATION TO PRODUCE TOXIC AND CORROSIVE GASES SUCH AS HYDROGEN CHLORIDE, DICHLOROACETYLENE, AND VERY SMALL AMOUNTS OF CHLORINE AND PHOSGENE.

POLYMERIZATION:
NOT KNOWN TO OCCUR.

****

CONDITIONS TO AVOID

MAY BURN BUT DOES NOT IGNITE READILY. CONTAINER MAY EXPLODE IN HEAT OF FIRE. AVOID ULTRAVIOLET RADIATION. AVOID OPEN FLAMES, WELDING ARCS OR OTHER HIGH TEMPERATURE SOURCES, WHICH INDUCE THERMAL DECOMPOSITION OR EXPLOSION. AVOID AUTOIGNITION TEMPERATURE, 537 C.

****

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL:
SHUT OFF IGNITION SOURCES. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. FOR SMALL LIQUID SPILLS, TAKE UP WITH SAND, EARTH OR OTHER ABSORBENT MATERIAL. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. NO SMOKING, FLAME OR FLARES IN HAZARD AREA! KEEP UNNECESSARY PEOPLE AWAY.

PROTECTIVE EQUIPMENT

ENTILATION:
ROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PERMISSIBLE EXPOSURE LIMITS.

ALLIANCE
Technologies Corporation

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

APPENDIX D
GRID PATTERN DATA

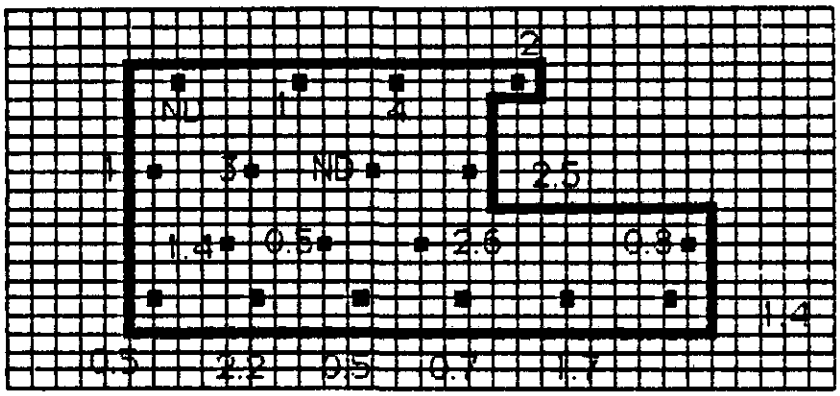
ADMINISTRATIVE ORDER
Docket No. III-90-01-DC

Prepared for U.S. Environmental Protection Agency
Hazardous Waste Management Division

Region III

November 7, 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P.O. Box 1169
Front Royal, Virginia 22630



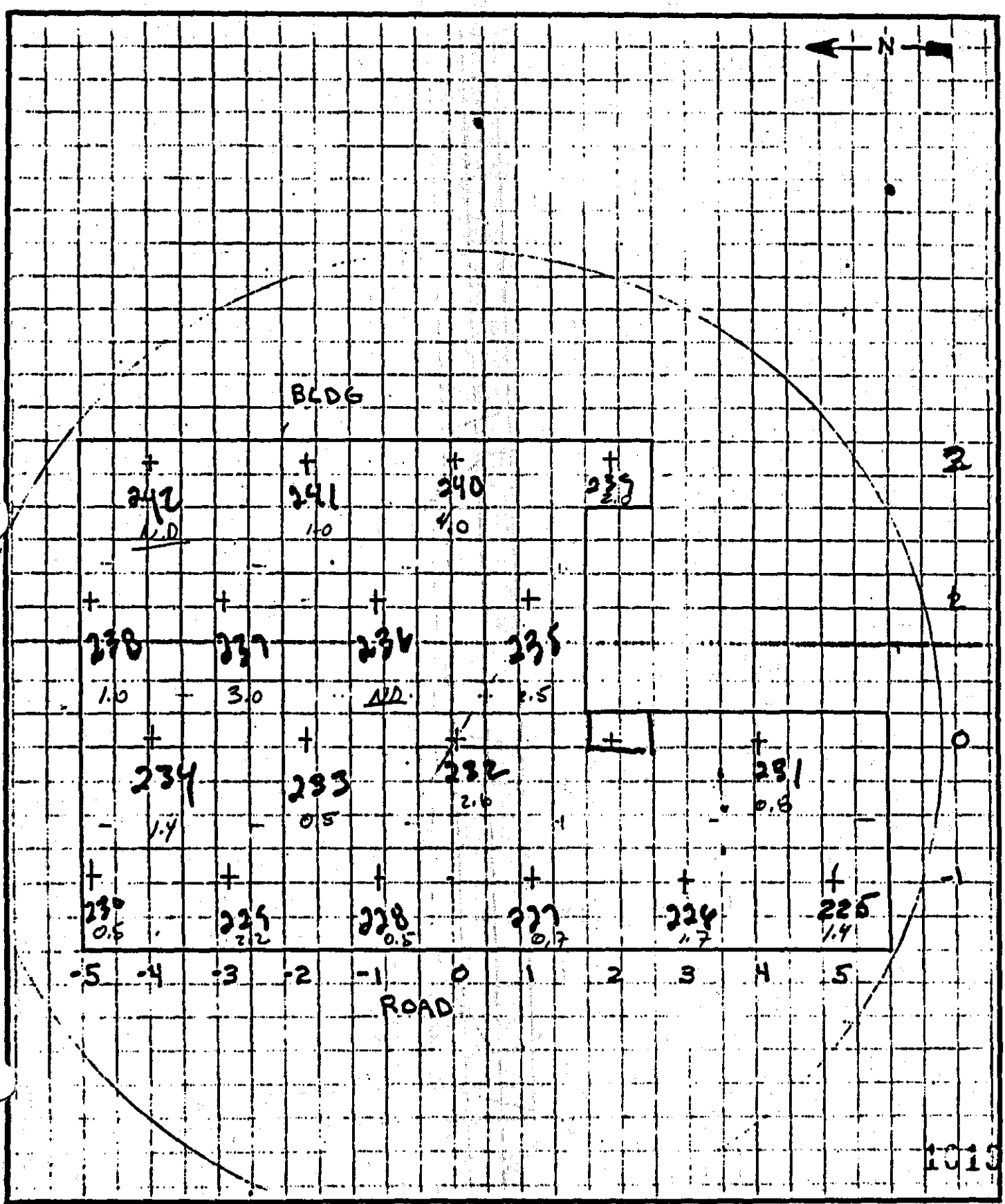
DUMPSTER SITE AT COMPRESSOR ROOM

FINAL READINGS AFTER 12 INCHES OF EARTH REMOVED.
HIGH 4 ppm LOW Non Detected
Will refill with clean fill

S.D.MYERS, INC.
FIELD SERVICE DIVISION

Page: _____
Job. No.: _____
Date: 10/17/89
By: J.F.

Subject: Compressor Room Roof Over Flow
Location: Aytex Fibers



SCALE — ONE SQUARE = 1 FT.

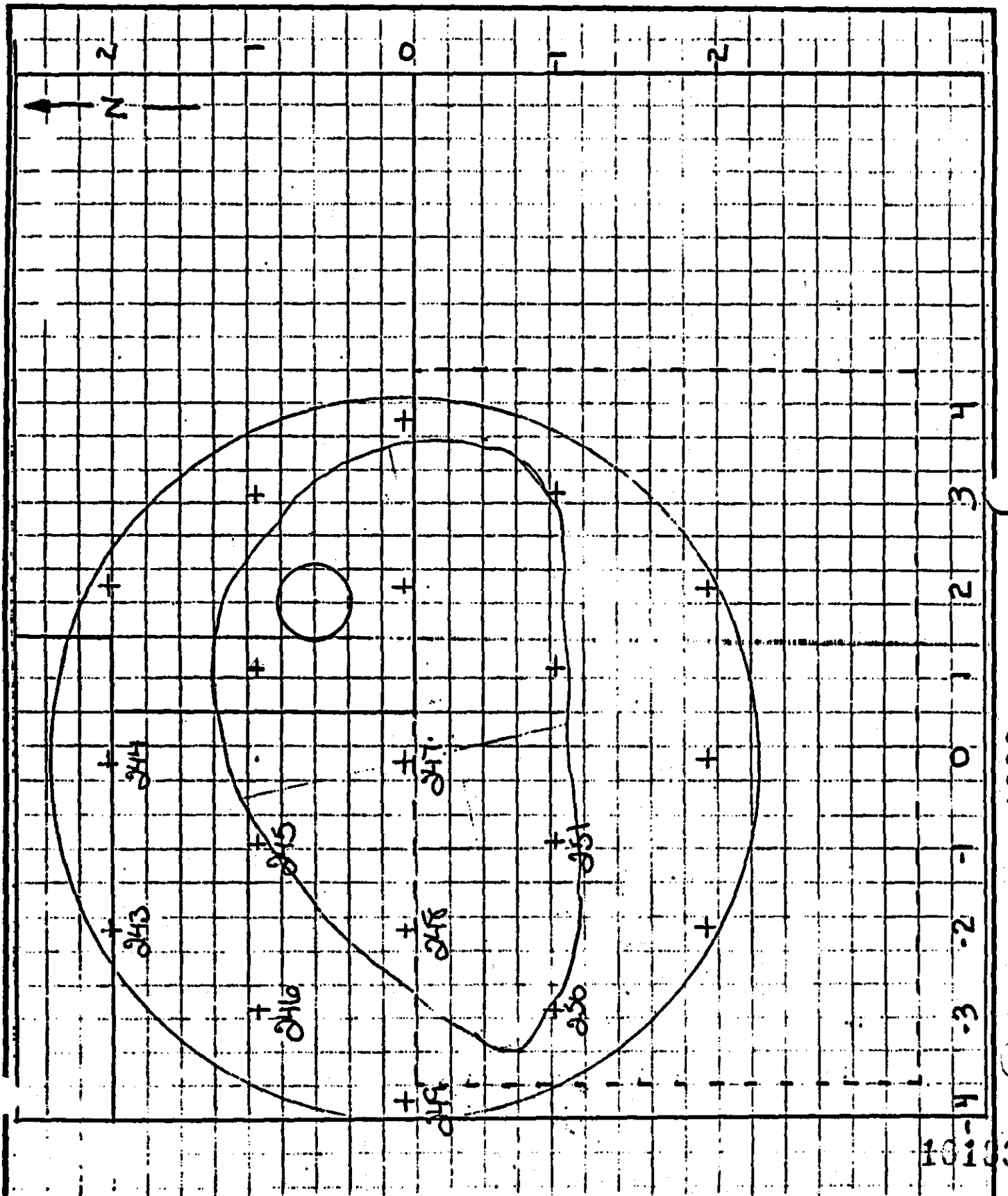
AR101337

101337

S.D.MYERS, INC.
FIELD SERVICE DIVISION

Page: 1
Job. No.:
Date: 10/17/89
By: L.F.

Subject: SUB 1-A Post Clean up GRID
Location: AYTEX FIBERS



SCALE -- ONE SQUARE = 1 FT.

AR101338

101338

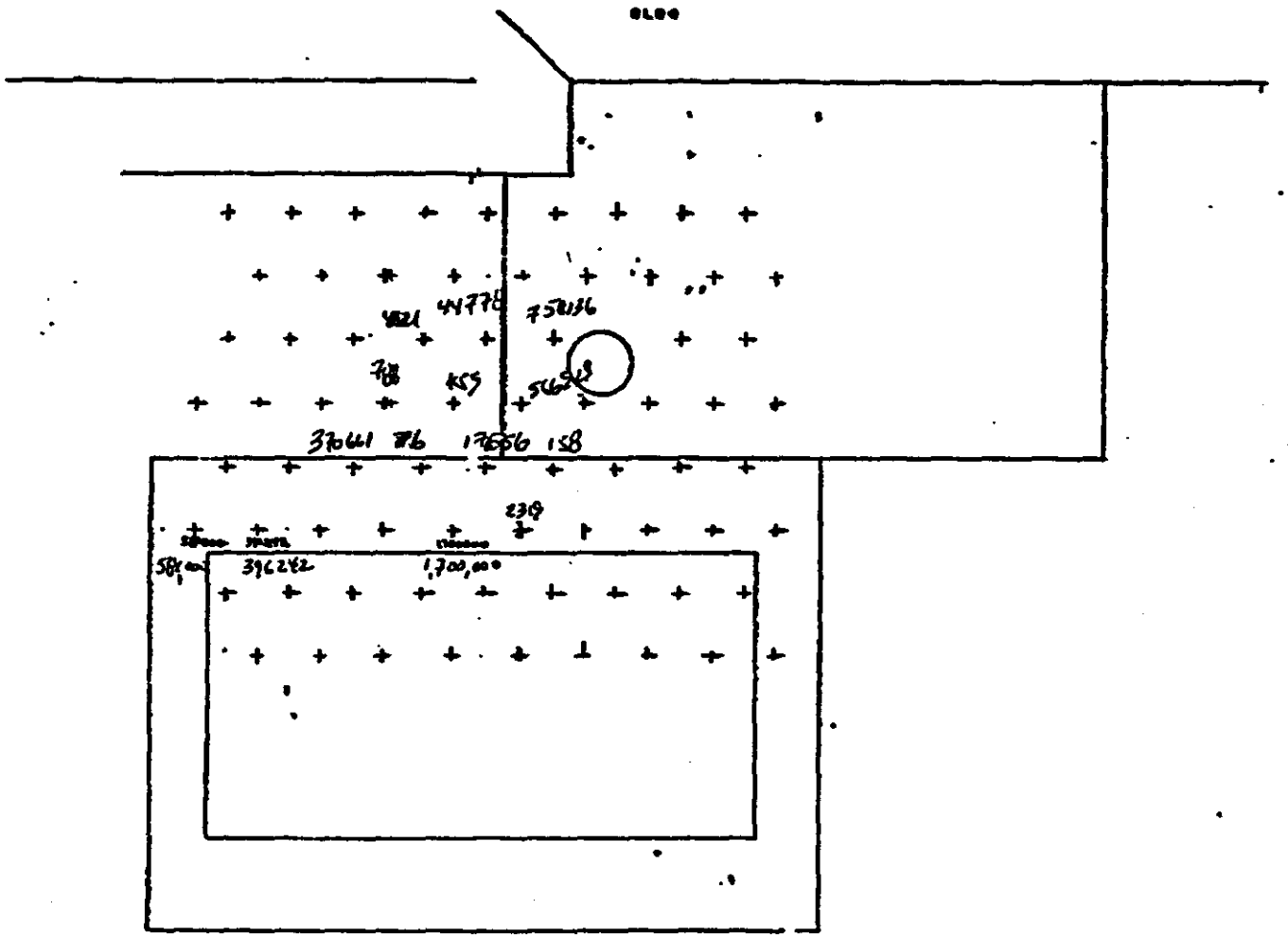
MANHOLE WIPE SAMPLE SUMMARY

MANHOLE WIPE SAMPLE SUMMARY

MH #	*mg/100cm^2	DATE	# SAMPLES	ENCAPSULATED
A-55	N.D.	12 OCT	1	
A-54	N.D	12 OCT	1	
A-51	2.2	12 OCT	1	
A-51	N.D	14 OCT	7	
A-50	4.2	12 OCT	1	
A-50	15.3	14 OCT	7	
A-50	55	16 OCT	7	
A-10	N.D	12 OCT	1	
A-11	218	12 OCT	1	
A-11	N.D	14 OCT	7	
A-16	4.5	11 OCT	1	
A-16	238	14 OCT	7	
A-16	37	15 OCT	7	
A-21	127	12 OCT	1	
A-21	31	13 OCT	7	
A-21	25	16 OCT	7	
A-22	5.1	11 OCT	1	
A-22	1.5	12 OCT	1	
A-22	14.8	13 OCT	7	
A-24	7326	11 OCT	1	
A-24	6065	13 OCT	7	
A-24	4978	15 OCT	7	18 OCT
A-26	138	11 OCT	1	
A-26	3072	13 OCT	7	
A-26	5036	15 OCT	7	
A-27	4.7	11 OCT	1	
A-27	138	15 OCT	7	18 OCT
A-28	15	11 OCT	1	
A-28	108	13 OCT	7	
A-31	5.4	11 OCT	1	
A-31	2.9	13 OCT	7	
A-31	7.5	16 OCT	7	
A-33	N.D	11 OCT	1	
A-39				
A-40	16	16 OCT	1	
Sump	31	16 OCT	1	
A-41	83	16 OCT	1	
A-42	1269	16 OCT	1	
NA-13	4.4	16 OCT	1	
NA-11	N.D.	10 OCT	7	
NA-10	N.D	10 OCT	7	
A-43	N.D	10 OCT	7	

MH #	*mg/100cm^2	DATE	# SAMPLES	ENCAPSULATED
A-44	N.D	10 OCT	7	
A-45	N.D.	10 OCT	7	
A-46	7.7	10 OCT	7	
A-46	252	14 OCT	7	
A-23	N.D	11 OCT	7	
A-29	N.D	13 OCT	1	
A-61	N.D	15 OCT	1	
A-30	5.3	16 OCT	1	
A-32	5.3	16 OCT	1	
A-7	N.D	15 OCT	1	
A-8	4	15 OCT	1	
A-9	6	15 OCT	1	

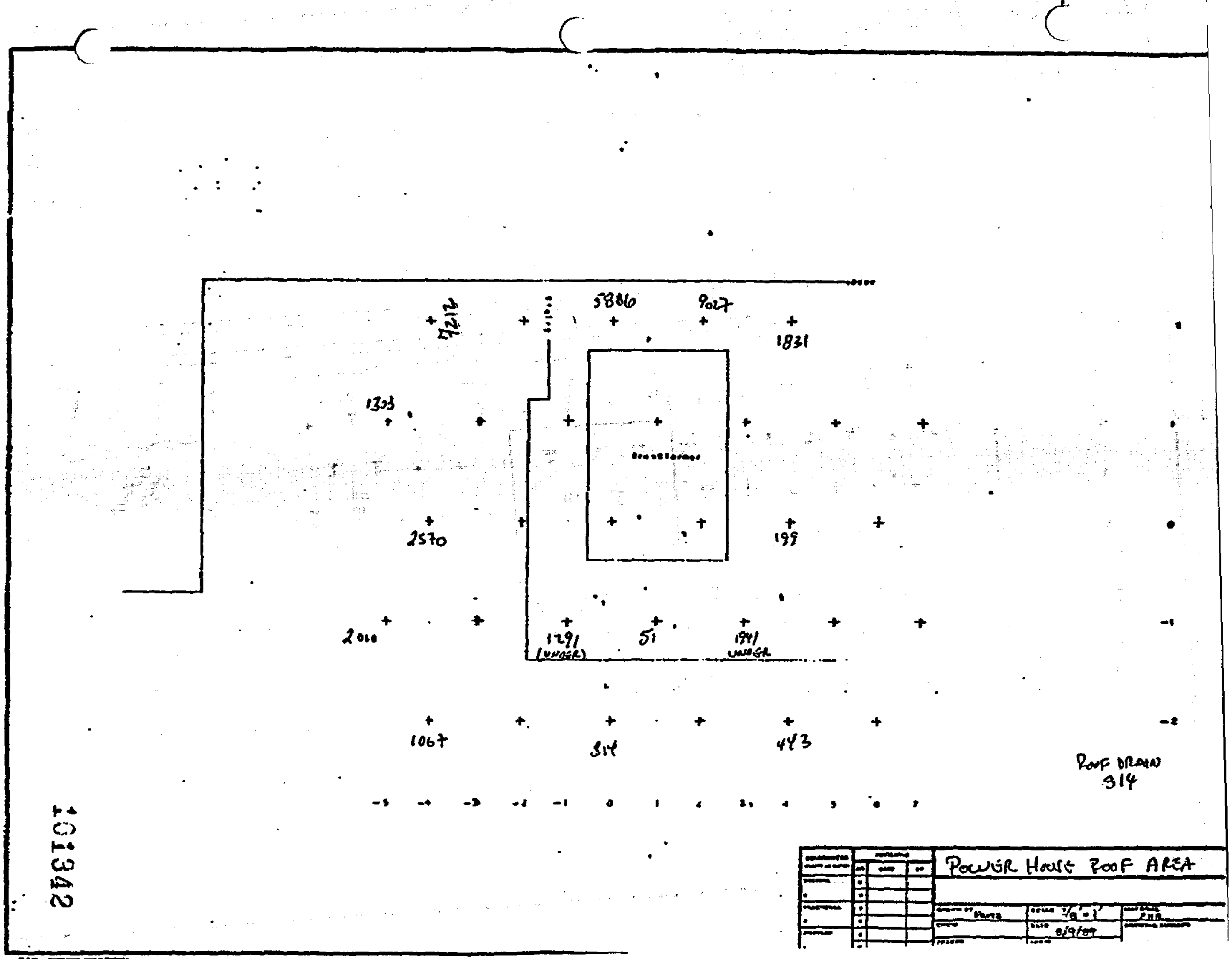
* mg/100 cm^2 = micro grams per 100 centimeters squared
A method of relative measure for PCB detection in "wipe" samples. This has no corollation to ppm, parts per million. A method to detect PCB concentration in oil and/or particulate matter.



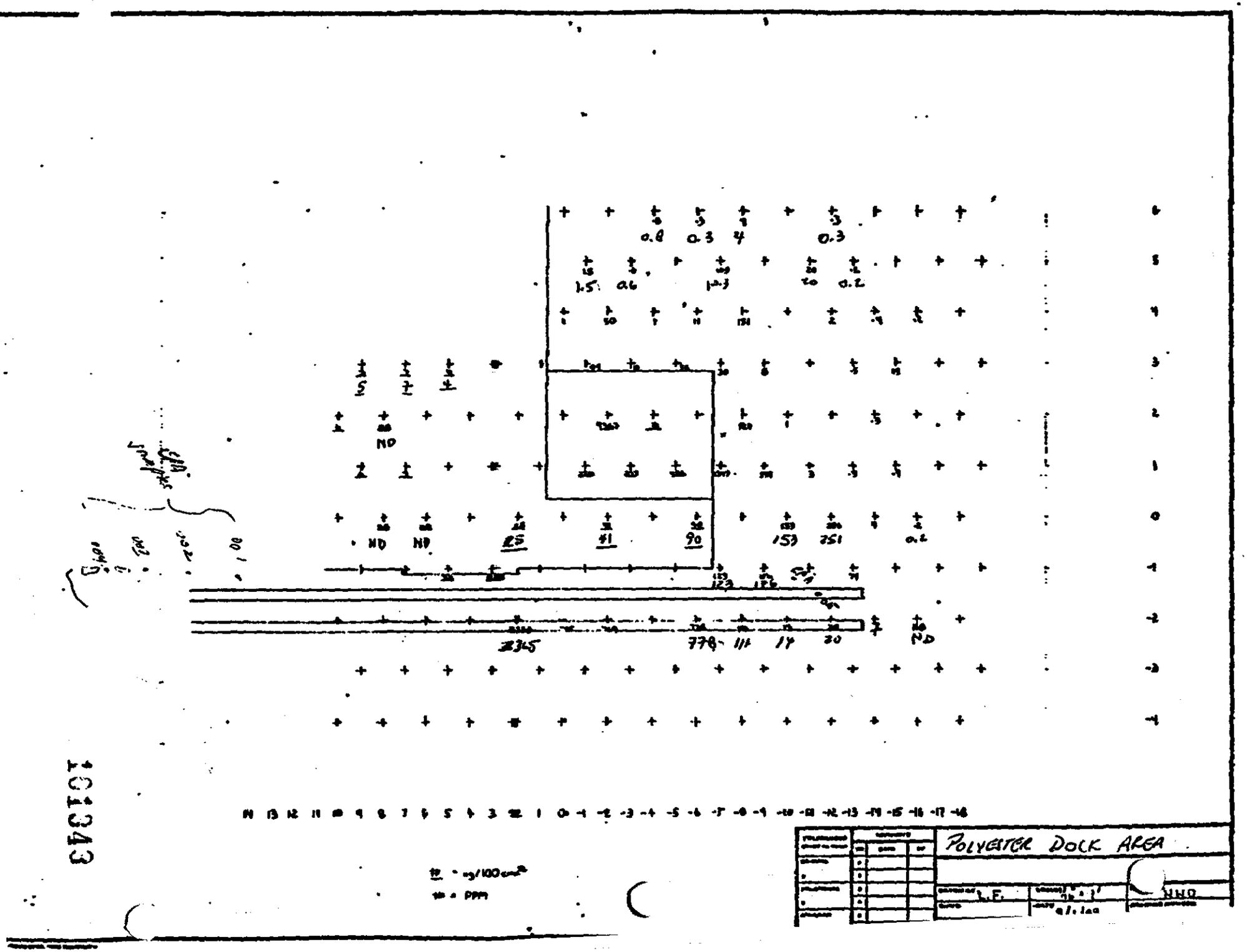
SUB 1A AREA

1-A

1C13411



58860
9027
7212
1831
1303
2570
199
2010
1291 (UNDGR)
51
1941 UNDGR
1067
314
443
ROOF DRAIN 314
POWER HOUSE ROOF AREA
8/9/89
101342


POLYESTER DOCK AREA

Acts 4:12

DIVISION OF D Myers TRANSFORMER CONSULTANTS

Date 7/26/89 No. Samples 10

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1248	1016	1260	Total ppm
TC# 2023		x		1/7 N.W. dock	1474			1474
TC# 2026		x		-1/9 N.W. dock	176			176
TC# 2027		x		-1/7 N.W. dock	123			123
TC# 2029		x		-1/3 N.W. dock	905			905
TC# 2030		x		-1/-7 N.W. dock	71			71
TC# 2031		x		3/3 N.W. dock	36			36
TC# 2038		x		1/-1 1A	1549			1549
TC# 2041		x		0/2 1A	17,656			17,656
TC# 2044		x		3/3 1A	2153			2153
TC# 2045		x		0/0 1A		76		76

101344

PCBA1188

Acts 4:12

DIVISION OF T.D. Nyers TRANSFORMER CONSULTANTS

Date 7/26/89 No. Samples 6

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1248	1016	1260	Total ug/100 cm²
TC# 2017	x			1/3 N.W. dock	227			227
TC# 2018	x			1/0 N.W. dock	256			256
TC# 2021	x			1/5 N.W. dock	486			486
TC# 2024	x			0/6 N.W. dock	90			90
TC# 2034	x			0/-4 1A	158			158
TC# 2035	x			1/1 1A	1320			1320

191345

PCBA1180

Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date 7/26/89 No. Samples 10

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total ppm
TC# 2012		x		-1/-1 power house			1291	1291
TC# 2013		x		-2/0 power house			814	814
TC# 2014		x		-1/3 power house			1941	1941
TC# 2015		x		-2/4 power house			443	443
TC# 2016		x		roof drain power house			314	314
TC# 2022		x		2/7 N.W. dock	1643			1643
TC# 2039		x		2/0 1A	44,778			44,778
TC# 2040		x		2/-2 1A	421			421
TC# 2042		x		1/-3 1A	78			78
TC# 2043		x		0/4 1A				ND

101346

PCB411H

Acs 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date 7/26/89 No. Samples 19

Customer Number 03720000

Company Name Aytex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

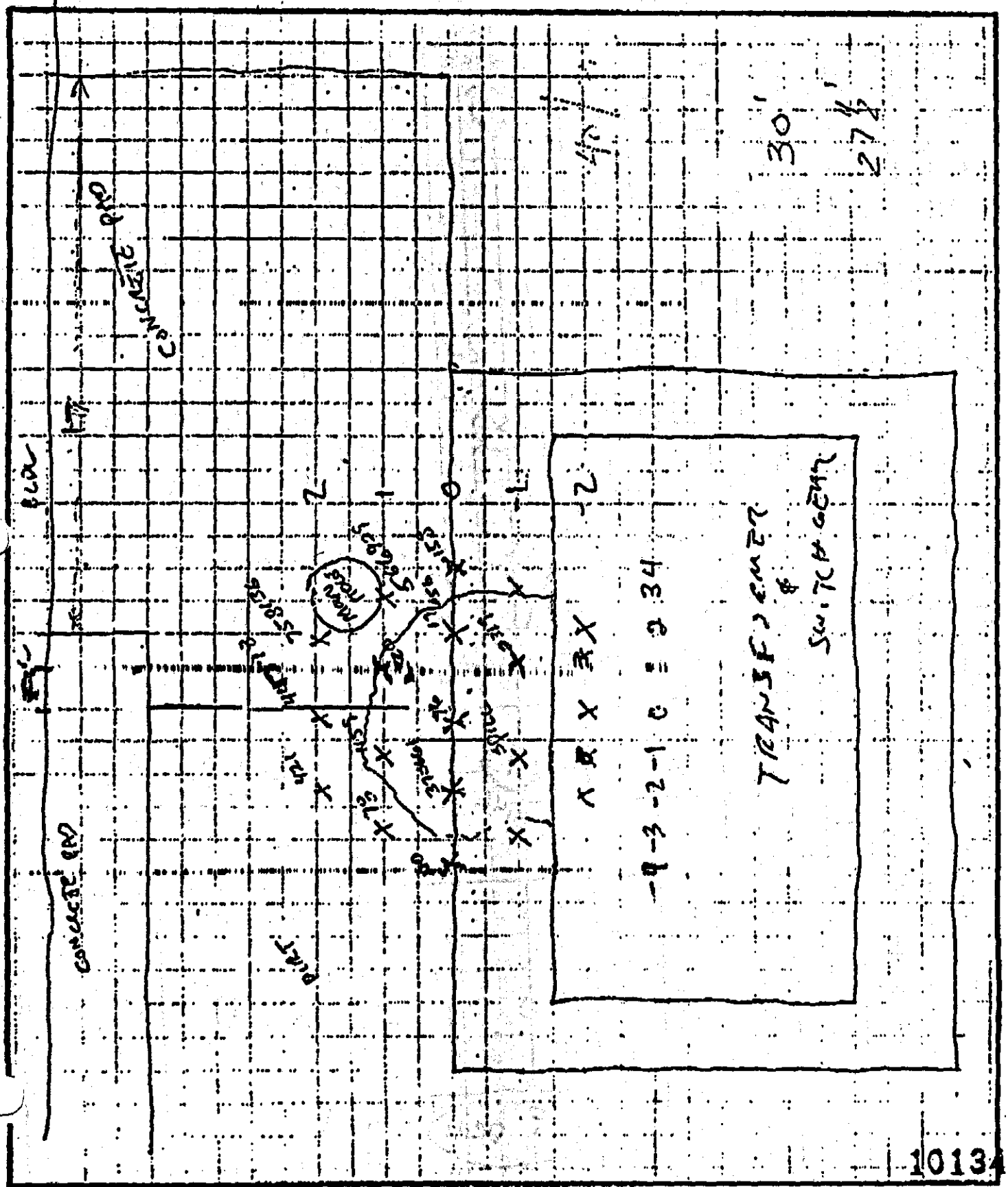
	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total ug/100 cm^2
TC# 2001	x			0/4 power house	3		196	199
TC# 2002	x			2/-4 power house	1414		5798	7212
TC# 2003	x			2/2 power house			9027	9027
TC# 2004	x			2/0 power house			5886	5886
TC# 2005	x			0/0 power house			1841	184
TC# 2006	x			-1/1 power house			51	51
TC# 2007	x			2/4 power house			1831	1831
TC# 2008	x			1/-5 power house			1303	1303
TC# 2009	x			0/-4 power house			2520	2520
TC# 2010	x			-1/-5 power house			2010	2010
TC# 2011	x			-2/-4 power house			1067	1067
TC# 2019	x			2/2 N.W. dock	4367			4367
TC# 2020	x			2/4 N.W. dock	8			8
TC# 2025	x			0/-2 N.W. dock	25			25
TC# 2028	x			0/2 N.W. dock	41			41
TC# 2032	x			2/2 1A	758.136			758.136
TC# 2033	x			1/3 1A	566.929			566.929
TC# 2036	x			0/-2 1A	370.661			370.661
TC# 2037	x			-1/1 1A	2319			2319

101347 FCBA1188

S.D.MYERS, INC.
FIELD SERVICE DIVISION

Page:
Job. No.:
Date:
By:

Subject:
Location: A SUBSTATION



101348

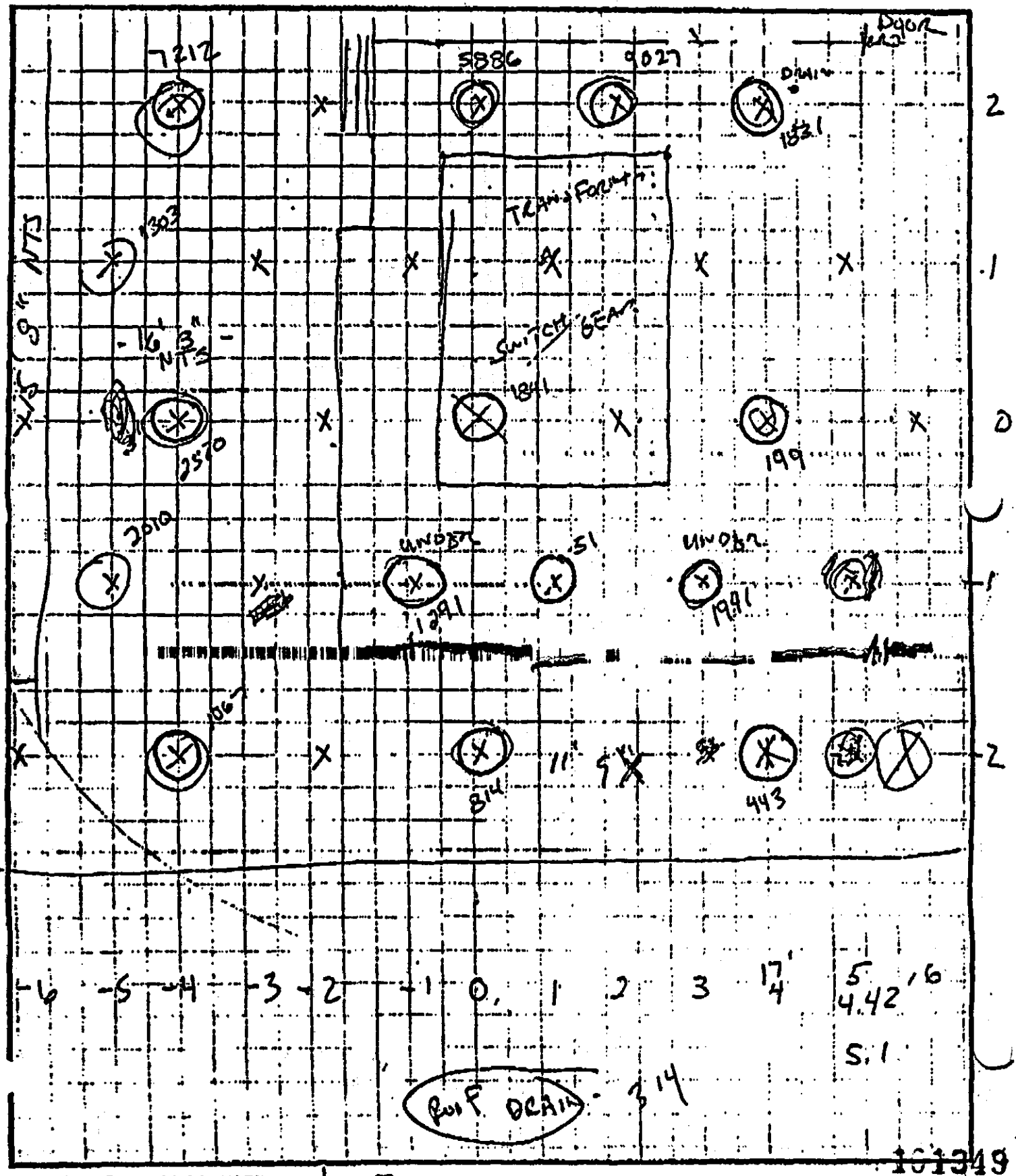
SCALE — ONE SQUARE = ____ FT.

AG18 4:12

S.D.MYERS, INC.
FIELD SERVICE DIVISION

Page: 1 of 2
Job. No.:
Date: 7/6/85
By:

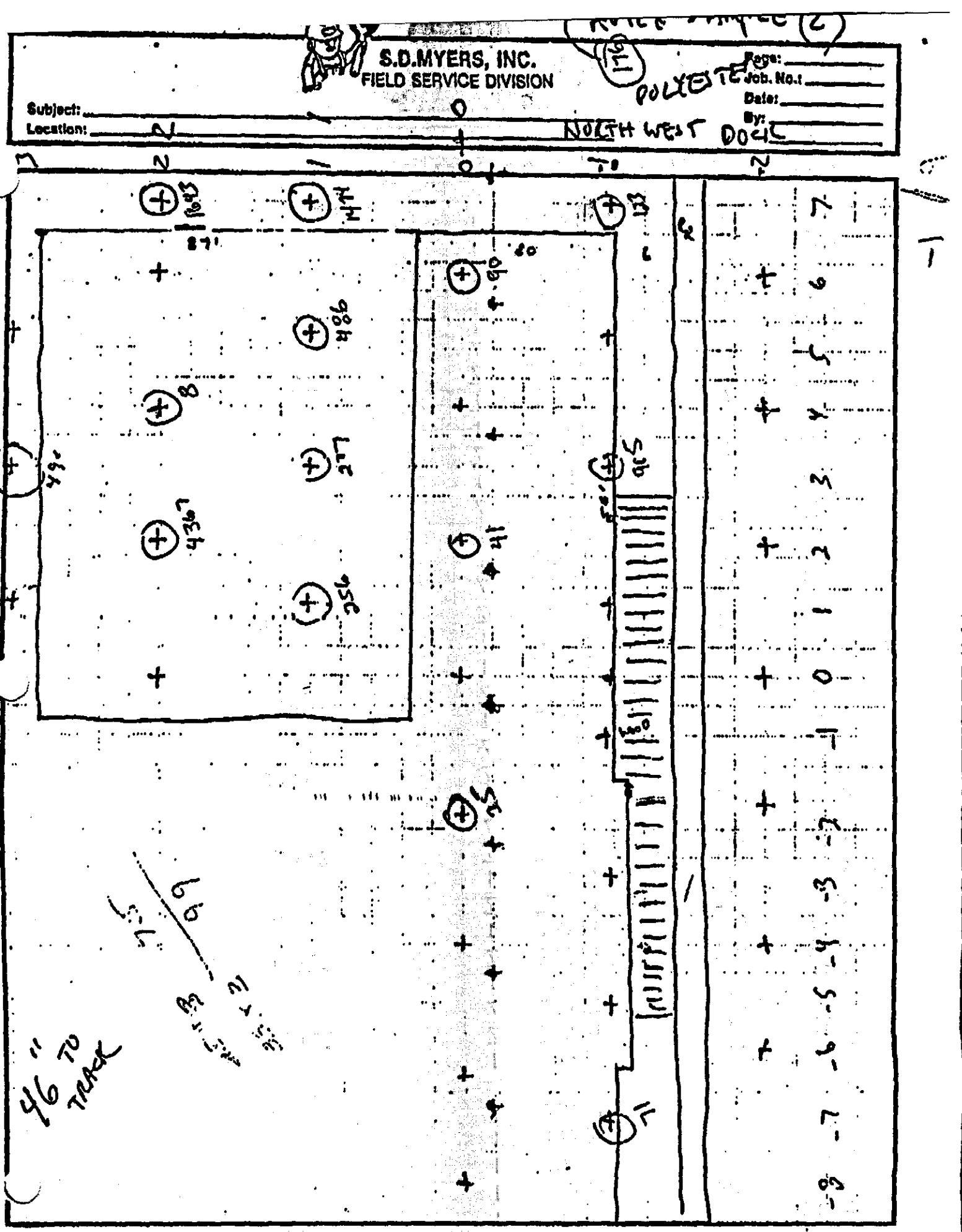
Subject: AVTEX FIBERS
Location: POWERHOUSE LOOP



SCALE — ONE SQUARE = ____ FT.

NTS = NOT TO SCALE

ACTS 4:12


S.D.MYERS, INC.
FIELD SERVICE DIVISION
Subject:
Location:
NORTH WEST DOCK
Page:
Job. No.:
Date:
By:
SCALE — ONE SQUARE = _____ FT.
ACTS 4:12
101050

MANHOLE WIPE SAMPLE SUMMARY

MH #	*mg/100cm^2	DATE	# SAMPLES	ENCAPSULATED
A-55	N.D.	12 OCT	1	
A-54	N.D	12 OCT	1	
A-51	2.2	12 OCT	1	
A-51	N.D	14 OCT	7	
A-50	4.2	12 OCT	1	
A-50	15.3	14 OCT	7	
A-50	55	16 OCT	7	24 OCT
A-10	N.D	12 OCT	1	
A-11	218	12 OCT	1	
A-11	N.D	14 OCT	7	
A-16	4.5	11 OCT	1	
A-16	238	14 OCT	7	
A-16	37	15 OCT	7	24 OCT
A-21	127	12 OCT	1	
A-21	31	13 OCT	7	
A-21	25	16 OCT	7	24 OCT
A-22	5.1	11 OCT	1	
A-22	1.5	12 OCT	1	
A-22	14.8	13 OCT	7	24 OCT
A-24	7326	11 OCT	1	
A-24	6065	13 OCT	7	
A-24	4978	15 OCT	7	18 OCT
A-26	138	11 OCT	1	
A-26	3072	13 OCT	7	
A-26	5036	15 OCT	7	23 OCT
A-27	4.7	11 OCT	1	
A-27	138	15 OCT	7	18 OCT
A-28	15	11 OCT	1	
A-28	108	13 OCT	7	23 OCT
A-31	5.4	11 OCT	1	
A-31	2.9	13 OCT	7	
A-31	7.5	16 OCT	7	23 OCT
A-33	N.D	11 OCT	1	
A-39				
A-40	16	16 OCT	1	
Sump	31	16 OCT	1	
A-41	83	16 OCT	1	
A-42	1269	16 OCT	1	
NA-13	4.4	16 OCT	1	24 OCT
NA-11	N.D.	10 OCT	7	23 OCT
NA-10	N.D	10 OCT	7	23 OCT
A-43	N.D	10 OCT	7	23 OCT

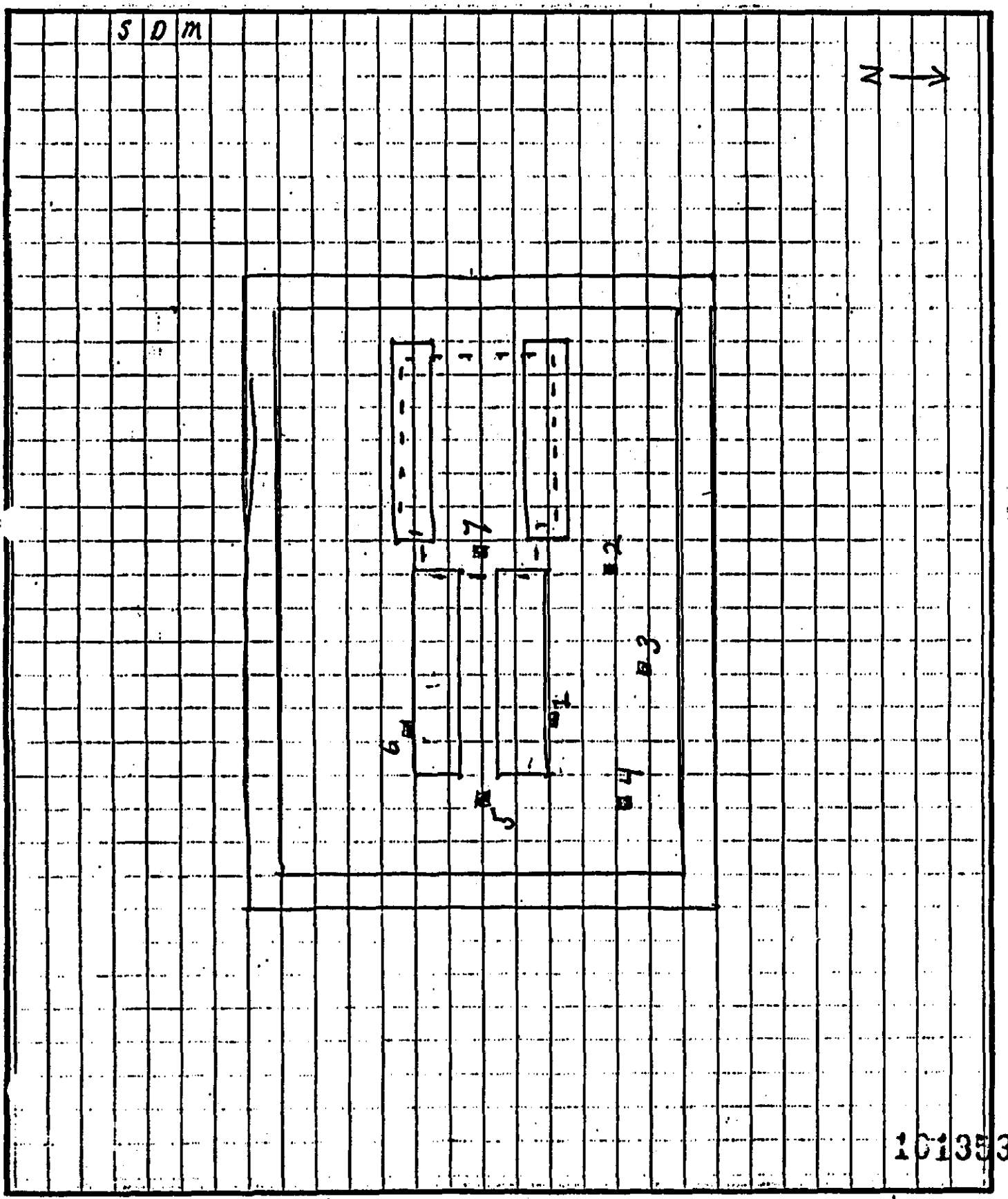
MH #	*mg/100cm^2	DATE	# SAMPLES	ENCAPSULATED
A-44	N.D	10 OCT	7	23 OCT
A-45	N.D.	10 OCT	7	24 OCT
A-46	7.7	10 OCT	7	
A-46	252	14 OCT	7	24 OCT
A-23	N.D	11 OCT	7	
A-29	N.D	13 OCT	1	
A-61	N.D	15 OCT	1	
A-30	5.3	16 OCT	1	24 OCT
A-32	5.3	16 OCT	1	24 OCT
A-7	N.D	15 OCT	1	
A-8	4	15 OCT	1	
A-9	6	15 OCT	1	

* **mg/100 cm^2** = micro grams per 100 centimeters squared
A method of relative measure for PCB detection in "wipe" samples. This **has no corollation to ppm**, parts per million. A method to detect PCB concentration in oil and/or particulate matter.

S.D.MYERS, INC.
FIELD SERVICE DIVISION

Page: 1
Job. No.:
Date:
By: DB

Subject: Sub S-A Grid
Location:



101353

SCALE — ONE SQUARE = 1 FT.

ACTS 4:12

MH #	*mg/100cm^2	DATE	# SAMPLES	ENCAPSULATED
A-43	N.D	10 OCT	7	23 OCT
A-44	N.D	10 OCT	7	23 OCT (N. D under brick)
A-45	N.D.	10 OCT	7	24 OCT
A-46	7.7	10 OCT	7	
A-46	252	14 OCT	7	24 OCT
A-23	N.D	11 OCT	7	2 NOV
A-29	N.D	13 OCT	1	-------
A-61	N.D	15 OCT	1	-------
A-30	5.3	16 OCT	1	24 OCT
A-32	5.3	16 OCT	1	24 OCT
A-7	N.D	15 OCT	1	-------
A-8	4	15 OCT	1	26 OCT
A-9	6	15 OCT	1	30 OCT
MHI	64	18 OCT	1	
MHJ	49	18 OCT	1	
MHK	10	3 NOV	1	
MHL	10	3 NOV	1	
MHM	10	3 NOV	1	

* **mg/100 cm^2** = micro grams per 100 centimeters squared
A method of relative measure for PCB detection in "wipe" samples. This has **no corollation to ppm**, parts per million. A method to detect PCB concentration in oil and/or particulate matter.

AVTEX FIBERS FRONT ROYAL INC.
AVTEX FIBERS SITE

WORK PLAN

COPIES OF ANALYTICAL RESULTS

ADMINISTRATIVE ORDER

Docket III-90-010-DC

Prepared for

U. S. Environmental Protection Agency

Region III

November 1989

AVTEX FIBERS FRONT ROYAL INC.
Kendrick Lane
P. O. Box 1169
Front Royal, Virginia 22630

QUALIFICATION RECAP

CUST# 03720000 AVTEX FIBERS FRONT ROYAL VA 2/25/89

TC#	SERIAL NUMBER	SUBSTATION NAME	SIZE KVA	GALLONS	LIQUID TYPE	PCB CLASS	PCB DATE	LST	SC	XF	ICP	PF	SERVICE PRODUCT
1	1646271	SUB 2	200	121	OIL	NON-PCB	4/14/88	AC	AC	OU		AC	
2	1646273	SUB 2	200	121	OIL	NON-PCB	2/13/89	AC	AC	AC		AC	
3	1646272	SUB 2	200	121	OIL	NON-PCB	2/13/89	AC	AC	AC			
4	1638034	SUB 2	1500	857	OIL	NON-PCB	2/13/89	AC	AC	OU			
5	1638033	SUB 2	1500	857	OIL	NON-PCB	4/14/88	AC	AC	OU		AC	
6	5060444	SUB 17	1500	649	OIL	NON-PCB	4/14/88	AC	AC	AC			
7	1706299	SUB 5	833	360	OIL	NON-PCB	4/14/88	AC	AC	OU		AC	
8	1706300	SUB 5	833	360	OIL	NON-PCB	4/14/88	AC	OU	AC		AC	
9	1706298	SUB 5	833	360	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
10	5357119	SUB 5A	1500	205	ASKAREL	PCB		AC		AC			
11	7022651	SUB 7A	2000	409	OIL	CONTAMINATED	4/14/88	UN	AC	AC			
12	3411932	SUB 7	2500	1024	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
13	3411933	SUB 6	2000	715	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
14	2600721	SUB 1	200	214	OIL	NON-PCB	4/14/88	AC	AC	OU		AC	
15	2600720	SUB 1	200	214	OIL	NON-PCB	4/14/88	AC	AC	OU		AC	
16	2600722	SUB 1	200	214	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
17	C856043	SUB 1	1500	600	OIL	NON-PCB	2/13/89	AC	AC	AC			
18	C856044	SUB 1	1500	600	OIL	NON-PCB	4/14/88	AC	AC	AC			
19	3857783	SUB 1A	1500	205	ASKAREL	PCB		AC		AC			
20	55V0234	WASTE TREATMENT PLT	300	270	OIL	NON-PCB	12/14/88	AC					
24	E9E1050	POWER HOUSE	1500	585	ASKAREL	PCB				AC			
25	E9E1052	POWER HOUSE	1500	585	ASKAREL	PCB		AC		AC			
26	E9E1051	POWER HOUSE	1500	585	ASKAREL	PCB		AC		AC			
27	E9E1049	POWER HOUSE	1500	585	ASKAREL	PCB		AC		AC			
28	3412195	SUB 11	500	285	OIL	NON-PCB	4/14/88	AC	OU	AC		AC	
29	3412159	SUB 8	1000	406	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
30	3412150	SUB 9	2000	715	OIL	NON PCB	4/14/88	UN	OU	AC			
31	3412194	SUB 10	500	285	OIL	NON-PCB	4/14/88	AC	AC	AC		AC	
32	5503523	SUB 18	2000	420	ASKAREL	PCB		AC		AC			
33	3412625	SUB 14	1500	659	OIL	NON-PCB	4/14/88	AC	OU	AC		AC	
34	3416291	SUB 15	750	400	OIL	NON-PCB	4/14/88	AC	AC	OU			
35	18110	SUB C	2000	322	ASKAREL	PCB		UN		AC			
36	18111	SUB B	2000	322	ASKAREL	PCB		AC		AC			
37	18112	SUB F	2000	322	ASKAREL	PCB		AC		AC			
38	18114	SUB A	2000	322	ASKAREL	PCB		AC		AC			
39	53115	SUB F	1500	262	ASKAREL	PCB		AC		AC			
40	18342	SUB I	1500	400	ASKAREL	PCB		AC		AC			
41	18112	SUB G	2000	322	ASKAREL	PCB		AC		AC			
42	18341	SUB H	2000	322	ASKAREL	PCB		AC		AC			
43	80228	SUB E	1500	262	ASKAREL	PCB		AC		AC			
	18343	SUB J	1500	436	ASKAREL	PCB		UN		AC			
	6500248		1500	580	ASKAREL	PCB		AC		AC			

101355

IDENTIFICATION RECAP

CUST# 03280000 AVTEX FIBERS FRONT ROYAL VA 8/09/89

TD#	SERIAL NUMBER	SUBSTATION NAME	SIZE KVA	GALLONS	LIQUID TYPE	PCB CLASS	PCB DATE	LST	SC	XF	ICP	PF	SERVICE PRODUCT
46	886313	WASTE TREATMENT PLT	1500	289	ASKAREL PCB				AC	AC			
47	PEV575601	POWERHOUSE	1500	328	ASKAREL PCB				AC	AC			
48	1507855	1A SUB	1500	726	OIL	NON-PCB	4/14/89	UN	AC	OU		AC	
49	1838035	SUB 6	1500	857	OIL	NON-PCB	4/14/89	AC	AC	AC		AC	
50	4812197	OUTSIDE SUB 2	833	420	OIL	CONTAMINATED	4/14/89	OU	AC	OU			
51	4812195	OUTSIDE SUB 2	833	420	OIL	NON-PCB	8/13/89	AC	AC	OU			
52	4812196	OUTSIDE SUB 2	833	420	OIL	NON-PCB	8/13/89	AC	AC	OU			
53	PAT782201	RIVER PUMPHOUSE	1000	149	SIL;CON	NON-PCB	4/14/89	AC	OU	AC			
54	2243194	1A LIGHTING	15	18	OIL	NON-PCB	4/14/89	AC				AC	
55	2613407	SPARE OUTSIDE SUB 6	50	64	OIL	NON-PCB	12/30/82						
56	2242496	SUB 6 LIGHTING	15	18	OIL	NON-PCB	12/30/82	UN					
57	40561	SPARE BY SUB 6	1000	468	OIL	NON-PCB	12/30/82		AC				
58	HB87734	19 ZINC RECOVERY	1500	211	ASKAREL PCB				AC	AC			
59	B8C19800	POWERHOUSE	1500	308	RTEMP	NON-PCB	4/14/89	AC	OU	OU			
60	1625690	ROOF	50	39	OIL	NON-PCB	7/06/89						
61	1625654	ROOF	50	39	OIL	NON-PCB	7/06/89						
62	1625696	ROOF	50	39	OIL	NON-PCB	7/06/89						
63	1625624	ROOF	50	39	OIL	NON-PCB	7/06/89						
64	1625663	ROOF	50	39	OIL	NON-PCB	7/06/89						
65	1625696	ROOF	50	39	OIL	NON-PCB	7/06/89						
66	1625652	ROOF	50	39	OIL	NON-PCB	7/06/89						
67	1625698	ROOF	50	39	OIL	NON-PCB	7/06/89						
68	1625612	ROOF	50	39	OIL	NON-PCB	7/06/89						
69	1625623	ROOF	50	39	OIL	NON-PCB	7/06/89						
70	1625673	ROOF	50	39	OIL	NON-PCB	7/06/89						
71	1625657	ROOF	50	39	OIL	NON-PCB	7/06/89						
72	1625633	ROOF	50	39	OIL	NON-PCB	7/06/89						
73	1625639	ROOF	50	39	OIL	NON-PCB	7/06/89						
74	1625659	ROOF	50	39	OIL	NON-PCB	7/06/89						
75	1625632	ROOF	50	39	OIL	NON-PCB	7/06/89						
76		ROOF: 300 FT.	50	39	OIL	NON-PCB	7/06/89						
77	1625627	ROOF	50	39	OIL	NON-PCB	7/06/89						
78	1625637	ROOF	50	39	OIL	NON-PCB	7/06/89						
79	1625638	ROOF	50	39	OIL	NON-PCB	7/06/89						
80	1625665	ROOF	50	39	OIL	NON-PCB	7/06/89						
81	1625648	ROOF	50	39	OIL	NON-PCB	7/06/89						
82	1625653	ROOF	50	39	OIL	NON-PCB	7/06/89						
83	1625636	ROOF	50	39	OIL	NON-PCB	7/06/89						
84	1625644	ROOF	50	39	OIL	NON-PCB	7/06/89						
85	1625644	ROOF	50	39	OIL	NON-PCB	7/06/89						
86	1625675	ROOF	50	39	OIL	NON-PCB	7/06/89						
	1625636	ROOF	50	39	OIL	NON-PCB	7/06/89						

101356

MST520

QUALIFICATION RECAP

CUST# 03720000 AVTEX FIBERS FRONT ROYAL VA 8/23/89

TC#	SERIAL NUMBER	SUBSTATION NAME	SIZE KVA	GALLONS	LIQUID TYPE	PCB CLASS	PCB DATE	LST GC KF ICP PF	SERVICE PRODUCT
88	1625505		50	39	OIL	NON-PCB	7/06/89		
89	1625561	ROOF	50	39	OIL	NON PCB	7/06/89		
90	1625597	ROOF	50	39	OIL	NON PCB	7/06/89		
91	1265625	ROOF	50	39	OIL	NON-PCB	7/06/89		
92	1265650	ROOF	50	39	OIL	NON-PCB	7/06/89		
93	1625587	ROOF	50	39	OIL	NON-PCB	7/06/89		
94	1625593	ROOF	50	39	OIL	NON-PCB	7/06/89		
95	1625609	ROOF	50	39	OIL	NON-PCB	7/06/89		
96	1625604	ROOF	50	39	OIL	NON-PCB	7/06/89		
97	1625568	ROOF	50	39	OIL	NON-PCB	7/06/89		
98	1265545	ROOF	50	39	OIL	NON-PCB	7/06/89		
99	1265616	ROOF	50	39	OIL	NON-PCB	7/06/89		
100	1265645	ROOF	50	39	OIL	NON-PCB	7/06/89		
101	1265678	ROOF	50	39	OIL	NON-PCB	7/06/89		
102	1265628	ROOF	50	39	OIL	NON-PCB	7/06/89		
103	1265622	ROOF	50	39	OIL	NON-PCB	7/06/89		
104	1265664	ROOF	50	39	OIL	NON-PCB	7/06/89		
105	1265694	ROOF	50	39	OIL	NON-PCB	7/06/89		
106	1265554	ROOF	50	39	OIL	NON-PCB	7/06/89		
107	1265571	ROOF	50	39	OIL	NON-PCB	7/06/89		
108	1265606	ROOF	50	39	OIL	NON PCB	7/06/89		
109	1265639	ROOF	50	39	OIL	NON-PCB	7/06/89		
110	1265567	ROOF	50	39	OIL	NON-PCB	7/06/89		
111	1265691	ROOF	50	39	OIL	NON-PCB	7/06/89		
112	1265640	ROOF	50	39	OIL	NON-PCB	7/06/89		
113	1265573	ROOF	50	39	OIL	NON-PCB	7/06/89		
114	1265590	ROOF	50	39	OIL	NON-PCB	7/06/89		
115	1265566	ROOF	50	39	OIL	NON-PCB	7/06/89		
116	1265572	ROOF	50	39	OIL	NON-PCB	7/06/89		
117	1265502	ROOF	50	39	OIL	NON-PCB	7/06/89		
118	1265661	ROOF	50	39	OIL	NON-PCB	7/06/89		
119	1265660	ROOF	50	39	OIL	NON-PCB	7/06/89		
120	126[illegible]	ROOF	50	39	OIL	NON-PCB	7/06/89		
121	1265673	ROOF	50	39	OIL	NON-PCB	7/06/89		
122	1265653	ROOF	50	39	OIL	NON-PCB	7/06/89		
123	1265672	ROOF	50	39	OIL	NON-PCB	7/06/89		
124	1265637	ROOF	50	39	OIL	NON-PCB	7/06/89		
125	1265671	ROOF	50	39	OIL	NON-PCB	7/06/89		
126		ROOF	50	39	OIL	NON-PCB	7/06/89		
127	12655[illegible]	ROOF	50	39	OIL	NON-PCB	12/20/82		
128	1265691	ROOF	50	39	OIL	NON-PCB	7/06/89		
129	1265610	ROOF	50	39	OIL	NON-PCB	7/06/89		

101357

KET520

QUALIFICATION RECAP

CUST# 03720000 AVTEX FIBERS FRONT ROYAL VA 9/28/89

TCB SERIAL NUMBER	SUBSTATION NAME	SIZE KVA	GALLONS	LIQUID TYPE	PCB CLASS	PCB DATE	LST GC KP ICP PF	SERVICE PRODUCT
130 1265659	ROOF	50	39	OIL	NON-PCB	7/06/89		
131 1265693	ROOF	50	39	OIL	NON-PCB	7/06/89		
132 1265680	ROOF	50	39	OIL	NON-PCB	7/06/89		
133 1265657	ROOF	50	39	OIL	NON-PCB	7/06/89		
134 [illegible]		50	09	VIL	NON FCB	[illegible]		

101353

QUALIFICATION RECAP

CUST# 02780000 AVTEX FIBERS FRONT ROYAL VA 9/23/99

* SUMMARY OF RESULTS *

NOTE: EPA 9 CFR49-761 states that any transformer not tested for pcb content ----> must be considered contaminated (50-500ppm)

TOTAL BALANCE OF UNITS	23522
TOTAL UNITS NON-PCB	109
TOTAL UNITS CONTAMINATED	2
TOTAL UNITS PCB	21
TOTAL REQUIRING PCB TEST	0
TOTAL REQUIRING SERVICE	
TOTAL K/A	72273
ESTIMATED VALUE OF UNITS	1,596,716.00

The national average cost of annual transformer maintenance is 6 pct of transformer investment. (EPRI JOURNAL, March, 1986). Based on the above estimated value of units average annual maintenance for these units would be $95,802.96

PERCENT OF VALUE RANGE 8.62% TO 8.45%

BUDGETARY RANGE $46,029.60 TO $135,630.16

While in your plant, I observed the need for the following services:

___ Oil Reclamation
___ PCB Reduction
___ Field Repair
___ Other
___ Max-Life
___ Dehydration
___ Paint or I.R.
___ E.T./Breaker Testing

Notes_____

___ Yes, please forward me a formal written quotation on the above services.
Signed_____

___ Please send me a budgetary figure on the above services.
Signed

101359

ROY F. WESTON CONSULTANTS

Customer Number 03120000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
#1		x						ND
#2		x			320			320
#3		x						ND
#4		x						ND
#5		x			1		1	2
#6		x						ND
#8		x						ND
#9		x						ND

PCB

101360

SOMyers CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total ppm
TC# 2050		x		R153-67B	5.2		.9	6.1
TC# 2051		x		R153-67E				ND
TC# 2052		x		R153-67A				ND
TC# 2054		x		R153-67D			121	121
TC# 2055		x		R153-67C	1.8		13.9	15.7

PCBA1188

101361

ENVIRONMENTAL CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			Total ug/100 cm^2
	Wipe	Dirt	Other		1242	1254	1260	
TC# 2001	x			0/4 power house	3		196	199
TC# 2002	x			?/-4 power house	1414		5798	7212
TC# 2003	x			2/2 power house			9027	9027
TC# 2004	x			2/0 power house			5886	5886
TC# 2005	x			0/0 power house			1841	1841
TC# 2006	x			-1/1 power house			51	51
TC# 2007	x			2/4 power house			1831	1831
TC# 2008	x			1/-5 power house			1303	1303
TC# 2009	x			0/-4 power house			2520	2520
TC# 2010	x			-1/-5 power house			2010	2010
TC# 2011	x			-2/-4 power house			1067	1067
TC# 2019	x			2/2 N.W. dock	4367			4367
TC# 2020	x			2/4 N.W. dock	8			8
TC# 2025	x			0/-2 N.W. dock	25			25
TC# 2029	x			0/2 N.W. dock	41			41
TC# 2032	x			2/2 1A	758.136			758.136
TC# 2033	x			1/3 1A	566.929			566.929
TC# 2036	x			0/-2 1A	370.661			370.661
TC# 2037	x			-1/1 1A	2319			2319

PCBAll

101362

Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date 7/26/89 No. Samples 10

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total ppm
TC# 2012		x		-1/-1 power house			1291	1291
TC# 2013		x		-2/0 power house			814	814
TC# 2014		x		-1/3 power house			1941	1941
TC# 2015		x		-2/4 power house			443	443
TC# 2016		x		roof drain power house			314	314
TC# 2022		x		2/7 N.W. dock	1643			1643
TC# 2039		x		2/0 1A	44,778			44,778
TC# 2040		x		2/-2 1A	421			421
TC# 2042		x		1/-3 1A	78			78
TC# 2043		x		0/4 1A				ND

101363 PCBA1100

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1240	1016	1260	Total ug/100
TC# 2017	x			1/3 N.W. dock	227			227
TC# 2018	x			1/0 N.W. dock	256			256
TC# 2021	x			1/5 N.W. dock	486			486
TC# 2024	x			0/6 N.W. dock	90			90
TC# 2034	x			0/-4 1A	158			158
TC# 2035	x			1/1 1A	1320			1320

101364

DIVISION OF Sovers TRANSFORMER CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1248	1016	1260	Total ppm
TC# 2025		x		1/7 N.W. dock	1474			1474
TC# 2026		x		-1/9 N.W. dock	176			176
TC# 2027		x		-1/7 N.W. dock	123			123
TC# 2029		x		-1/3 N.W. dock	905			905
TC# 2030		x		-1/-7 N.W. dock	71			71
TC# 2031		x		3/3 N.W. dock	36			36
TC# 2038		x		1/-1 1A	1549			1549
TC# 2041		x		0/2 1A	17,656			17,656
TC#,2044		x		3/3 1A	2153			2153
TC# 2045		x		0/0 1A		76		76

PCBA11

101365

PITTSBURGH TRANSFORMER SERVICES CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Aroclor			
	Wipe	Dirt	Other		1242	1254	1260	Total
2056			x	Sump Hole Drain from Roof				ND
2057			x	Dumpster Runoff from Sump				ND

101366

S.D. Myers TRANSFORMER CONSULTANTS

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
R153741		X					.4	.4
R153746		X					.1	.1
R1537411		X					1	1
R153747		X					45	45
R153749?		X					.1	.1
R153748		X					4	4
R153744		X					.2	.2
R153745		X					.6	.6
R153743		X					.6	.6
R153749		X					65	65
R1537412		X					.7	.7
R1537413		X					.3	.3
R1547410		X					.7	.7
				PUMP COMPOSITE (PCB OIL)				ND

PCBA1188

101367

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
1/9		X		SUB 1-A .9 - 1248				.9
2/4		X		SUB 1-A 32 - 1248				32
1/5		X		SUB 1-A 33 - 1248				33
1/7		X		SUB 1-A 14 - 1248				14
2/2		X		SUB 1-A 22 - 1248				22
1/3		X		SUB 1-A 405 - 1248				405
1/1		X		SUB 1-A 282 - 1248				282
2/0		X		SUB 1-A 1010 - 1248				1010

101363

DIVISION OF DENZER TRANSFORMER CONSULTANTS

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total
0/8	X			NORTH WEST DOCK				ND
1/1	X			NORTH WEST DOCK	3.8	2.3		6.1
3/7	X			NORTH WEST DOCK	2.9	4.		6.9
3/5	X			NORTH WEST DOCK	3.	1.		4.
2/10	X			NORTH WEST DOCK	3.8	2.		5.8
1/9	X			NORTH WEST DOCK	4.5	1.2		5.7
3/9	X			NORTH WEST DOCK	2.			2.
0/6	X			NORTH WEST DOCK				ND
[illegible]	X			NORTH WEST DOCK				ND
-1/3	X			NORTH WEST DOCK				ND
2/8	X			NORTH WEST DOCK				ND
-1/9		X		NORTH WEST DOCK 13-1248			3	16
3/-5		X		NORTH WEST DOCK 52-1248				52
-1/1		X		NORTH WEST DOCK 22-1248				22
-1/-1		X		NORTH WEST DOCK 352-1248				352
2/-8		X		NORTH WEST DOCK 147-1248				147
3/-7		X		NORTH WEST DOCK 30-1248				30
3/-1		X		NORTH WEST DOCK 84-1248				84
0/-10		X		NORTH WEST DOCK 153-1248				153
1/-9		X		NORTH WEST DOCK 547-1248				547
3/-3		X		NORTH WEST DOCK 11-1248				11
3/1		X		NORTH WEST DOCK 1.6-1248				1.6

PCBA1188

101369

Division of S.D. Myers TRANSFORMER CONSULTANTS

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
TC# 2056			x	cc row/double deck. drum				ND
TC# 2057			x	dd row/double deck. drum				ND
TC# 2058			x	oil drum #3&#4-box shop west				ND
TC# 2059			x	oil drum #5&#6-box shop east		11		11

PCBA11M

101370

S.D. Myers CONSULTANTS

Customer Number 0372000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other	SUB 1-A	1242	1254	1260	Total
-2/2	X				408			408
-3/3	X				48			48
-1/3	X				328			328
-1/-9	X				444			444
0/4	X				1331			1331
-1/-1	X				2026			2026
-2/44	X				65			65
0/2	X				2708			2708
2/-4	X				816			816
-2/-2	X				1354			1354
-2/-6	X				2934			2934
-1/-3	X				1707			1707
-1/5	X				45			45
0/8	X				155			155
-3/5	X				47			47

PCBA1188

101371

S.D. Myers CONSULTANTS

Customer Number

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
-1/-13		X		NORTH WEST DOCK 38-1248		36		74
4/-6		X		NORTH WEST DOCK 4-1248		7		11
3/-5		X		NORTH WEST DOCK 2-1248		3		5
1/-11		X		NORTH WEST DOCK 1.5-1248			1.4	2.9
0/-12		X		NORTH WEST DOCK 251-1248				251
4/-2		X		NORTH WEST DOCK		50		50
4/-4		X		NORTH WEST DOCK		7.4		7.4
2/-10		X		NORTH WEST DOCK		.9		.9
3		X		NORTH WEST DOCK	1,341			1,341
-2/-14		X		NORTH WEST DOCK 11-1248				11
4/-8		X		NORTH WEST DOCK 151-1248				151
4/0		X		NORTH WEST DOCK 1.6-1248				1.6

101372

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
0/0	X			SUB 1-A	4,763			4,763
-1/7	X			SUB 1-A	33			33
-1/1	X			SUB 1-A	1,771			1,771
-1/9	X			SUB 1-A	58			58
0/6	X			SUB 1-A	1,777			1,777
-3/-1	X			SUB 1-A	131			131
-3/1	X			SUB 1-A	557			557
-2/0	X			SUB 1-A	275			275
2		X		SUB 1-A 148-1248				148
2/6		X		SUB 1-A 21-1248				21
2/8		X		SUB 1-A	15			15
1/3		X		SUB 1-A 13-1248				13
2/0		X		SUB 1-A 55-1248				55
1/1		X		SUB 1-A 89-1248				89
2/4		X		SUB 1-A 74-1248				74
1/-3	X			SUB 1-A	3,807			3,807
1/-7	X			SUB 1-A	372			372
1/-1	X			SUB 1-A	2,526			2,526
0/-10	X			SUB 1-A	295			295
-1/-5	X			SUB 1-A	8,560			8,560
2/-2	X			SUB 1-A	3,539			3,539
0/-4	X			SUB 1-A	3,377			3,377
1/-5	X			SUB 1-A	1,119			1,119
0/-2	X			SUB 1-A	4,358			4,358
-8	X			SUB 1-A 393-1248				393

PCBA1188

101373

ENVIROSYSTEMS CONSULTANTS

Customer Number [redacted]

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
0/-6	X			SUB 1-A 1,012-1248				1,012
-2/-8	X			SUB 1-A	219			219
-3/-3	X			SUB 1-A	246			246
-3/-5	X			SUB 1-A	260			260
-1/-7	X			SUB 1-A 1,182-1248				1,182

PCBA111

101374

Company Name AVTEX FIBERS

9-5-89

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
A002L		X		15 - 1232				15
A029R		X						ND
A030R		X						ND
A004L		X						ND
A004R		X						ND
A006R		X						ND
A012R		X						ND
A014R		X						ND
A01[illegible]		X					12	12
A01[illegible]R		X					3	3
A028P		X					33	33
A010R		X						ND
A011R		X					3	3
A013R		X					6	6
A015R		X					16	16
A016R		X					21	21
A017R		X					6.4	6.4
A027R		X		TIME 16:13			.3	.3

PCBA11M

101375

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Customer Number 03/20000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total
-2/-6		X		NORTH WEST DK. 778 - 1248				778
-2/2		X		NORTH WEST DK 3238 - 1248				3238
-2/-12		X		NORTH WEST DK 20 - 1248				20
-2/-3		X		NORTH WEST DOCK	769			769
-2/0		X		NORTH WEST DK 745 - 1248				745
-2/-10		X		NORTH WEST DOCK 14 - 1248				14
3/-15		X		NORTH WEST DOCK 13 - 1248				13
3/-13		X		NORTH WEST DOCK .5 - 1248				.5
4/-12		X		NORTH WEST DOCK 2 - 1248				2
0/-16		X				.2		.2
0/-14		X			4.2			4.2
5/-3		X					.6	.6
5/-11		X		20 - 1248				20
5/-1		X				1.5		1.5
5/-7		X		103 - 1248				103
1/-15		X			.4			.4
2/-14		X				.3		.3
1/-13		X				.3		.3

101376

SDMyers CONSULTANTS

Customer Number 03720000

Company Name AVTEX FIBERS

9-15-89

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
1/-3	X			NORTH WEST DK. 4 - 1248				4
2/-4	X			NORTH WEST DK161 - 1248				161
1/-5	X			NORTHWEST DK1230 - 1248				1230
2/-2	X			NORTH WEST DK 3 - 1248				3
1/-1	X			NORTH WEST DK 3 - 1248				3
2/0	X			NORTH WEST DOCK1 - 1248				1

PCBA1188

101377

ENVIRONMENTAL CONSULTANTS

Customer Number [illegible]

Company Name AVTEX FIBERS

9-18-89

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Aroclor			
	Wipe	Dirt	Other		1242	1254	1260	Total
1531057		X					19	19
1531056		X					5	5
1531054		X					64	64
1531052		X					187	187
1531055		X		1.4-1240			.5	1.9
15310510		X					2.7	2.7
1531051		X					43	43
1531053		X					.8	.8
1531059		X					1.6	1.6
1531058		X					.7	.7

PCBAIR

101378

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Customer Number 03120000

Company Name AVTEX FIBERS

9-19-89

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
-2/-14		X		NORTH WEST DK 7 - 1248				7
-2/-16		X		NORTH WEST DOCK				ND
4/-16		X		NORTH WEST DOCK		.24		.24
4/-14		X		NORTH WEST DOCK		.4		.4
5/-13		X		NORTH WEST DOCK		.25		.25
6/-4		X		NORTH WEST DOCK		.8		.8
6/-8		X		NORTH WEST DK 4.2 - 1248				4.2
-6		X		NORTH WEST DOCK		.3		.3
-12		X		NORTH WEST DOCK		.3		.3
A007R		X		NORTH WEST DOCK				ND
A020R		X		NORTH WEST DOCK				ND

PCBA11M

101379

Acts 4:12

DIVISION OF SDN Byers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
1		x						ND
2		x						ND
3		x						ND
4		x						ND
5		x						ND
6		x						ND
7		x						
8		x						ND
9		x						ND
10		x						ND
11		x						ND
12		x						ND
13		x						ND
14		x						ND
15		x						ND
16		x						ND
17		x						ND
18		x						ND
19		x						ND
20		x						ND
21		x						ND
22	x						7.7	7.7
23		x						ND
24	x						3.3	
25		x						ND

PCBA1E

101380

Acts 4:12

DIVISION OF SDNyers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
26		x						ND
27	x						2.4	2.4
28		x						ND
29		x						ND
30		x						ND
31		x						ND
32		x						ND
33		x						ND
34		x						ND
35		x						ND
36		x						ND
37		x						ND
38		x						ND
39		x						ND
40		x						ND
41		x						ND
42		x						ND
43			x					ND
44			x					ND
45		x						ND
46		x						ND
47		x						ND
48		x						ND
49		x						ND
50		x						ND

PCB-1381

101381

Acts 4:12

DIVISION OF Sonyers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			Total
	Wipe	Dirt	Other		1242	1254	1260	
51		x						ND
52		x						ND
53	x				4.6		3.6	8.2
54		x						ND
55	x						5	5
56		x					173	173
57		x						ND
58		x						ND
59	x						35	35
60		x						ND
61	x						4	4
62	x						3.7	3.7
63	x						41	41
64		x						ND
65	x						4.5	4.5
66		x						ND
67		x						ND
68		x						ND
69	x						7.5	7.5
70	x						11	11
71	x						1.7	1.7
72		x						ND
73		x						ND
74		x						ND
75		x						ND

PCBA118

101382

Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
76	x						2.8	2.8
77		x						ND
78	x						2.4	2.4
79	x				7.9		138.3	146.2
80	x				5.4		1.7	7.1
81	x						15	15
82	x				3.3		4.7	8.0
83		x					93	93
84		x					3	3
85		x					55	55
86		x					51	51
87		x					3.2	3.2
88		x					59	59
89		x					20	20
90		x						ND
91	x				3.8		5.1	8.9
92		x					54.7	54.7
93	x						2.4	2.4
94		x						
95			x				4	4
96			x				4	4
97			x				4	4
98		x						ND
99	x				3.6		4.5	8.1
100	x						1.5	1.5

PCB3188

101383

Acts 4:12

DIVISION OF Sd Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
101	x						7326	7326
102	x						218	218
103	x						2.2	2.2
104	x						12.7	12.7
105	x						4.2	4.2
106		x					8	8
107		x						ND
108		x						ND
109		x						ND
110		x						ND
111	x						2.9	2.9
112	x						2.6	2.6
113	x						7.5	7.5
114	x						1.8	1.8
115	x						1.6	1.6
116	x						1.6	1.6
117	x						1.4	1.4
118	x						10.2	10.2
119	x						6.9	6.9
120	x						21.4	21.4
121	x						5.5	5.5
122	x						84	84.0
123	x						108.0	108.0
124	x						79.3	79.3
125	x						19.6	.(

PCBA11

101384

Acts 4:12

DIVISION OF S.D. MYERS TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
126				NO SAMPLE- HIGH WATER				
127	x						17.9	17.9
128	x						138.2	138.2
129	x						11.4	11.4
130	x						22.0	22.0
131	x						22.3	22.3
132	x						1219.0	1219.0
133	x						277.0	277.0
134	x						2618.0	2618.0
135	x						383.0	383.0
136	x						482.0	482.0
137	x						3072.0	3072.0
138				NO SAMPLE-BAG IN OUTFLOW PIPE				
139	x						101	101
140	x						338	338
141	x						261	261
142	x						417	417
143	x						6065	6065
144	x						96.8	96.8
145	x						221	221
146	x						24	24
147	x						17	17
148	x						14	14
149	x						25	25
150	x						17	17 PCBA

101385

Acts 4:12

DIVISION OF SDMyers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
151	x						10	10
152	x						31	31
153	x						43	43
154	x						11.2	11.2
155	x						4.9	4.9
156	x						11	11
157	x						252	252
158	x						67.8	67.8
159	x						17	17
160	x						5.4	5.4
161	x						1.1	1.1
162	x						1.1	1.1
163	x						2.2	2.2
164	x						55	55
165	x						9.2	9.2
166	x						15.3	15.3
167		x						ND
168		x						ND
169		x						ND
170				NO SAMPLE - WATER				
171				"				
172				"				
173				"				
174	x						31.5	31.5
1	x						238.7	238.7

PCBA138

101386

Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
176	x						53.8	53.8
177	x						19.2	19.2
178	x						42.4	42.4
179	x						53.4	53.4
180				NO SAMPLE - WATER				
181		x						ND
182	x						7.5	7.5
		x						ND
184		x						ND
185		x						ND
186		x						ND
187		x						ND
188	x						3.8	3.8
189	x						12.1	12.1
190	x						4.3	4.3
191	x						7.8	7.8
192	x						13.1	13.1
193	x						14.8	14.8
194		x						ND
195		x						ND
196	x						4978	4978
197	x						217	217
198	x						540	540
199	x						1746	1746
2	x						95	95

PCBA1188

101387

4:12

DIVISION OF [illegible] TRANSFORMER CONSULTANTS

Date ______ No. Samples ______

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
201	x						3886	3886
202	x						198	198
203	x						39	39
204	x						5036	5036
205	x						95	95
206		x					54	54
[illegible]		x					35	35
208		x					201	201
209		x					15	15
210		x					17	17
211		x					37	37
212		x					2	2
213		x					19	19
214		x					8	8
215		x					4	4
216		x					6	6
217		x						ND
218	x						1267	1267
219	x						4.4	4.4
220	x						83	83
221	x						31	31
222	x						5.3	5.3
223	x						5.3	5.3
[illegible]	x						16	16
225		x					1.8	1.[illegible]

PCBA1180

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Acts 4:12

DIVISION OF SD Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total
226		x					1.7	1.7
227		x					.65	.65
228		x					.45	.45
229		x					2.2	2.2
230		x					.5	.5
231		x					.8	.8
232		x					2.6	2.6
233		x					.5	.5
234		x			1.2		1.4	2.6
235		x				2.8		2.8
236		x						ND
237		x					3	3
238		x					1	1
239		x					2	2
240		x					4	4
241		x					1	1
242		x						ND
243		x		2.3 / 1248			.8	3.1
244		x		278 / 1248				278
245		x			273			273
246		x		10 ppm / 1248			19	29
247		x					2.4	2.4
248		x					.8	.8
249		x					244	244
250		x		4 / 1248				4

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101389

Acts 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name Avtex Fibers

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total
251		x			4			4
252	x						6.7	6.7
253	x						35	35
254	x						8.8	8.8
255	x						17	17
256	x				64			64
257	x				49			49
258	x				39			39
259	x							ND
260	x						65	65
261	x						13	13
262	x						23	23
263	x						1	1
264	x						40	40
265	x						141	141
266	x						6	6
267	x			28 / 1248				28
268	x			37 / 1248				37
269	x			508 / 1248				508
270	x			105 / 1248				105
271	x			121 / 1248				121
272	x			10 / 1248				10
273		x			25			25
274		x			7			7
27		x			5			5

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Acct 4:12

DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
276		x		2 / 1248				2
277		x						ND
278	x							ND
279		x					2	2

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Accepted

Acct 4:13

DIVISION OF SDNyers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

NORTHWEST DOCK AREA

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
-3/-1		X		7-1248				7
-3/5		X		9.4-1248				9.4
-3/3		X		15-1248				15
4/-10		X		20-1248				20
-3/-7		X		.6-1248				.6
-3/-11		X		191-1248				19'
-3/1		X		12-1248				
/8		X		.9-1248				.9
-3/7		X		2.4-1248				2.4
5/-17		X		1.3-1248				1.3
-3/-5		X		58-1248				58
-2/4		X		.3-1248				.3
-3/-3		X		.8-1248				.8
-2/6		X		.3-1248				.3
-3/-9		X		158-1248				158
-3/-15		X		2-1248				2
-1/-15		X		5.4-1248				5.4
-4/-6		X						ND
3/-17		X						ND
-4/-12		X						ND
2/-16		X						ND
-4/+6		X						ND
-4/4		X						ND
-4/-2		X						ND
-		X						ND

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DIVISION OF S.D. Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

NORTHWEST DOCK AREA

Sample No.	Type			Location	Arochlor			
	Wipe	Dirt	Other		1242	1254	1260	Total
-2/-18		X		42-1248				42
-4/-14		X		[illegible]				ND
6/-10		X		1.4-1248				1.4
-1/+9		X		50-1248				50
-1/-17		X		[illegible]				ND
-4/-10		X		[illegible]				ND
-4/-8		X		[illegible]				ND
-4		X		[illegible]				ND
-3/-15		X		227-1248				227
-4/0		X		1.7-1248				1.7
-4/-16		X		[illegible]				ND
-3/-17		X		[illegible]				ND
-2/-4		X		3.5-1248			2	5.5
6/0		X		[illegible]			0.4	0.4
6/-2		X		64-1248				64
DRAIN		X		52-1248				52
-2/-2	X			45-1248				45
-1/-1	X			3805-1248				3805
-3/-1	X			3-1248				3
-2/0	X			754-1248				754
0/-2	X			12-1248				12
1/-1	X			1744-1248				1744
-1/-5	X			2166-1248				2166
2/-	X			2.3-1248				2.3
2/	X			8.2-1248			2.8	11

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DIVISION OF S D Myers TRANSFORMER CONSULTANTS

Date _____ No. Samples _____

Customer Number 03720000

Company Name AVTEX FIBERS

POLYCHLORINATED BIPHENYL (PCB) ANALYSIS
STATEMENT OF CERTIFICATION

NORTHWEST DOCK AREA

	Type				Arochlor			
Sample No.	Wipe	Dirt	Other	Location	1242	1254	1260	Total
0/-4	X			57-1248				57
-2/-4	X			16-1248				16
2/0	X			32-1248		30		62
1/1	X			38-1248				38
-3/-3	X			3-1248				3
-3/-5	X			2.5-1248				2.5
1'	X			755-1248				755
1/-5	X			62-1248				62
0/2	X			1907-1248				1907
2/-2	X			13-1248				13
-2/-6	X			6.4-1248				6.4
2/4	X			34-1248		30		64
-3/1	X			4-1248				4
1/3	X			61-1248				61
0/0	X			1463-1248				1463
2/2	X			6-1248				6
3/-5	X					18		18
-1/-3	X			1600-1248				1600
0/-6	X			2.4-1248				2.4

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ALLIANCE
Technologies Corporation

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