

REVIEW OF PCB IMPACT AND PROGRAMS

CAPACITOR PRODUCTS DEPARTMENT

HUDSON FALLS, NEW YORK

GENP 003308



Presented by: L.P. Hart, Jr.
Syracuse, N.Y.
December 12, .

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C O N T E N T S

- I. Protective Clothing and Equipment
- II. Ventilation and Air Monitoring
- III. Non-PCB Medical Programs
- IV. Procedures for Handling PCB's
- V. Maintenance and Housekeeping Procedures
- VI. Outline for Employee Informative Meetings
- VII. Appendix
 - A Manufacturer's Statement - Ply No. 9 Gel
 - B Operating Instruction M-90.7
 - C Operating Instruction A-1.51
 - D GE News
 - E Process Instruction P2A - PC3
 - F PCB Handling Instructions - H.F.
 - G PCB Handling Instructions - H.F.
 - H PCB Handling Instructions - H.F.
 - I Control of PCB from Sinks
 - J Hearing Conservation Instruction R-30.9
 - K Employee Monitoring - Lead
 - L Employee Monitoring - Trichloroethylene
 - M PCB Air Concentration

PROTECTIVE CLOTHING AND EQUIPMENT

Protective clothing as a precaution against PCB contamination has been under evaluation by GE management. Disposable fabrics were tested and determined to be unacceptable. Cloth smocks and coveralls are presently on order and will be issued to the appropriate employees. Dry cleaning equipment has been purchased and delivered (received 12/11/75) and will be installed shortly. This equipment will be used to clean protective clothing, gloves, and contaminated rags.

Protective gloves have been issued to all employees handling PCB's except Crimp Operators at the Fort Edward location. Due to the necessity of handling elastomers (a small rubber object that can't be handled when gloves are worn), these employees are required to use a barrier cream called Ply 9 Gel. See appendix No. A for manufacturer's statement.

Safety glasses are issued to all employees in manufacturing areas

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VENTILATION - FORT EDWARD and HUDSON FALLS

Plans are in the formative stages with the Consulting Firm of Crawford and Russell of Stanford, Connecticut. Current readings on the present system are being evaluated by the consultants. Detailed drawings will be provided for upgrading the system. Studies of the system were developed by Ollie White and Dave Wilson of Technical Service Laboratory, Electronics Laboratory, Syracuse General Electric. There is some information available at this time, although incomplete.

Work station readings in both plants are attached. Present OSHA level for Chlorodiphenyl 42% is 1 mg/m³. Recent readings Appendix "M".

To date we have had two visits from OSHA Industrial Hygenist with the express purpose of testing work stations for vapor levels of PCB. We do not have the results of the tests. We expect the results of the first test from Fort Edward within the next week. The Hudson Falls tests will follow by January.

A previous visit by OSHA due to an employee complaint about welding fumes resulted in our adding an air assist to the existing system. OSHA was satisfied with the action taken.

All work stations that are recognized problems are vented. Ventilating and air makeup systems have been redesigned in Bldgs. 3, 4 and 4-B in Hudson Falls within the last 2 years. More work is planned in Bldg. 3 next week.

Fort Edward treat has a new exhaust system complete with comfort air conditioning for operators work stations.

Testing of systems has been conducted upon request of supervision. Modifications, cleaning and balancing of systems has resulted from these requests. A maintenance check and moniroting of exhausts will be established to assure the capabilities designed in equipment is maintained.

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MEDICAL PROGRAMS FOR EMPLOYEE HEALTH MONITORING PRESENTLY IN PLACE

Pre-employment physical:	Nurse centered	- complete history Urinalysis for glucose and albumin height weight blood pressure, pulse eyes - sight screener audiometric test
	Physician	- clinical examination
Pre-employment after lack of work:	Nurse Centered	- Updated history urinalysis height weight blood pressure, pulse audiometric examination eyes - sight screener (if needed) clinical examination
	Physician	-
Re-employment after illness or injury (absence of two weeks or over)	Nurse	- review of history of absence
	Physician	- review of attending physician reports examination for work fitness
Driver's Physicals:	Nurse	- complete history or updating eyes - sight screener audiometric test urinalysis - glucose and albumin height weight blood pressure, pulse
	Physician	clinical examination
Preventative Maintenance Men: (Degreaser Cleaners-Trichloroethylene exposure) <u>AND</u> Respirator Users	Nurse	- history or updating height weight blood pressure, pulse blood work - (calcium, inorganic phos., glucose, urea nitrogen, uric acid, cholesterol, total protein albumin, total bilirubin, alkaline phosphatase, LDH, SGAT. - CBC - VDRL.) Urinalysis Chest X-ray Clinical examination
	Physician	

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Workers exposed to lead: Yearly Physical examination
CBC
Urinalysis
Blood level - simultaneous monitoring of
exposure level

All Employees - Noise: APPENDIX "J" Hearing Conservation Program

RECOMMENDATIONS

1. App. "K" & "L" recommendations for lead and trichloroethylene
2. Prepare a Compliance Action Plan for anticipated standards for Toxic Substances including:

Updating of Medical Facilities
Purchase Pulmonary function equipment, EKG equipment, etc.
Arrangements for 14 x 17 chest x-rays
Increased nursing staff

PROCEDURES FOR HANDLING PCB's

The proper procedures for handling PCB's are contained in several different documents, some having been issued to all employees and others developed for management's use in supervising employees. These documents are listed below with a brief explanation. Copies are provided in the appendix:

1. Operating Instruction No. M-90.7

Issued as a general instruction for management's use on September 1, 1972, this instruction specifies the use of protective equipment and clothing, safety precautions and first aid measures to be taken. See Appendix No. B.

2. Operating Instruction No. A-1.51

Issued on September 17, 1973, this instruction provides general guidelines on environmental protection policy, including but not limited to the handling of PCB's. Significantly, it includes an action plan for the accidental release of any material harmful to the environment. Appendix C

3. Special Edition of GE News

This special edition was issued to all employees on September 8, 1975 outlining the PCB issue as it stood at the moment and provided specific guidelines on the proper handling of Pyranol. See Appendix "D"

4. Process Instruction No. P2A - PC3

This instruction was issued as a guide to management on January 11, 1965 and expired on January 11, 1968. Used as a basis of instruction to production employees, this document included specific preventive measures to be taken when handling Pyranol. See Appendix "E"

5. PCB Handling Instructions - Hudson Falls

Consisting of three separate instructions, these guidelines were issued by G.P. Challender, Unit Manager, to foremen in the Hudson Falls treat department on September 22, 1975. See Appendix F, G, H.

GENP 003314

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6. Spill Prevention Control and Countermeasure Plan

Implemented on November 1, 1974 as required by the Federal Water Pollution Control Act, this procedure sets forth the actions to be taken in the event of a spill of any oil, including Pyranol, into a navigable waterway. Copy not included but available.

7. Control of Pyranol Discharges from Sinks

Issued on September 10, 1975, this procedure outlined a method of preventing PCB losses as a result of employees washing hands in sinks connected to the drainage system. Special waterless cleaner was provided for hands wet with pyranol. See Appendix "I"

MAINTENANCE AND HOUSEKEEPING PROCEDURES

Since the recognition of Pyranol as a material with a possible adverse environmental impact, numerous housekeeping and maintenance changes have been implemented to eliminate possible PCB losses. Following is a partial listing of those procedures implemented to achieve this objective:

- Railcar unloading areas have been paved to prevent ground contamination in the event of a spill. The area will also be covered to prevent runoff from rain.
- Tank farm areas have been curbed to contain Pyranol and other oils in the event of an eruption.
- Units are in the process of being removed from river bank storage.
- Floor trenches have been plugged to prevent access to drainage system.
- Unit wash water is now being recycled.
- Special hand wash procedure implemented for Pyranol.
- Rearranged treat process to contain spillage by installing drip pans, pallet pans and curbing.
- Removed eating facility (18 seat capacity) from treat area. To be relocated in new cafeteria now under construction.
- Rearranged recovery and repair areas to contain all open units. Added route man to empty all drip pans.
- All PCB liquid and solid waste deposited in drums and shipped to contract incinerator for disposal.
- Eliminated water leaks in unit washers.
- High level alarm systems installed in storage tanks.
- Spill clean up stations deployed around plant containing special metal drums and "Speedy Dry".
- Redesigned drain pipe system for effective measurement of liquid discharge.

- Informative meetings held with employees in treat areas to discuss the handling of pyranol, spills, preventive practices, hygiene, etc.
- Additional wash-up time provided employees in treat area.

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OUTLINE FOR EMPLOYEE INFORMATIVE MEETINGS ON PCB's

- I. Historical Overview of PCB problem
 - ...Capacitor Products Department applications of PCB fluids
 - ...Advantages of PCB liquids in capacitors
 - ...Environmental impact upon aquatic life
 - ...No conclusive data available on human effect of PCB's
- II. EPA Discharge Permit Program
 - ...GE permit issuance and compliance
 - ...New York State participation in data generated
- III. New York Department Environmental Conservation (DEC) charge against GE
 - ...Alleged violations of State Environmental laws
 - ...Negotiation between General Electric and DEC and results
 - ...Remedies sought against GE by DEC
 - ...DEC Compliance order technically unattainable
- IV. Formal Hearings between DEC and General Electric
 - ...Presentation of DEC position concluded
 - ...Present status of GE position
 - ...Hearing still in progress
- V. PCB Containment Programs by GE
 - ...Tank farm projects
 - ...Automatic sampling program
 - ...Pipe replacement
 - ...Liquid and solid PCB disposal
 - ...Waterless clean-up program
 - ...Storage of leaking units
 - ...High level alarm systems on storage tanks
 - ...Spill Prevention Procedure implemented
 - ...Floor trenches sealed
 - ...Other specific programs
- VI. Replacement Liquids
 - ...Econol, and Castor Oil applications and limitations
 - ...Field testing of other liquids
 - ...Limitations of known replacement liquids
- VII. Employee Health Considerations
 - ...Protective equipment provided (gloves, safety glasses, etc.)
 - ...Guidelines for PCB handling issued to employees
 - ...Physical Examinations for appropriate employees under consideration today (12/12/75) in Syracuse by top GE management
 - ...Monitored PCB vapor levels for OSHA compliance
 - ...Protective clothing has been ordered and will be provided and cleaned by GE.

VIII. Other Considerations

- ...Japanese Ban of PCB's. Achieved since not widely used in Japan and their decision to accept the disadvantage of flammability.
- ...Effect of New York State Ban of PCB's. Would place GE in unfair competitive position with its competitors with possible loss of jobs.
- ...Nationwide Ban of PCB's. Would force all capacitor manufacturers to seek a replacement liquid thereby giving GE an advantage due to the efforts already made in this area.

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SUBJECT	DATE EFFECTIVE	NO.
ENVIRONMENTAL PROTECTION POLICY R02ETHKE	September 17, 1973	A-1.51
PREPARED BY Manager - APPROVALS Tech. Planning Emp. & Comm. Rel.	SUPERSEDED NO. A-1.51 DATE April 1, 1972	PAGE 1 OF

PURPOSE

Environmental protection is an important public responsibility, as well as a key element for achieving good customer relationships and for building future business. This instruction states the Department's policy and the procedures for implementing it.

RESPONSIBILITY

Section Managers of Engineering, Manufacturing, Marketing and Product Section Managers are assigned responsibility and authority for implementing this Policy. Decisions having a significant impact on the environment must be reviewed with the General Manager.

An Environmental Protection representative, appointed by the General Manager, has the responsibility for advising, counseling and disseminating information on environmental protection and integrating the work performed in the separate functions. Positions responsible for Environmental Protection-Facilities/Activities and Environmental Protection-Products will also be appointed by the General Manager.

BODY

1. STATEMENT ON POLICY

It is the policy of the Industrial & Power Capacitor Products Department to contribute to environmental protection by eliminating or limiting to lowest practicable levels, and in any event limiting to statutorily defined levels, all adverse environmental effects from its products, facilities, operations and activities, in accord with the Company Environmental Protection Policy No. 21.13.

2. IMPLEMENTATION OF POLICY

The essence of environmental protection is the ability to recognize and eliminate, or appropriately limit, any adverse environmental effect which might be caused by distribution, use, and ultimate disposition of products; manufacturing processes and operations. All employees whose work affects environmental protection are expected to be diligent in preventing or minimizing adverse environmental effects.

Each Department business component is responsible for taking all reasonable measures to promote environmental protection in the design, manufacture and use of the products within its scope, giving full regard to applicable regulatory requirements and initiating technological advances to eliminate or reduce adverse environmental effects.

Specifically, the following procedures and activities are required to maintain a continued high level of environmental protection:

GENP 003324

PLAINTIFF'S
EXHIBIT

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SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager- Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972	PAGE 2 OF 5

A. Facilities/Activities

Manufacturing

Identify any adverse environmental effect which might reasonably be regarded as offensive to man's senses, health or general welfare, or as disruptive to ecologic stability.

Take appropriate action to control or limit to lowest practicable level, and in any event limit to statutorily defined level, any adverse environmental effect, as well as to apply safeguards, tests, measurements, operating and maintenance instructions and other precautions for effective environmental control.

Develop and adopt standards for manufacturing processes and other component activities, together with related measurement, test, and inspection procedures that will achieve consistently high conformance with environmental control objectives.

Initiate technological advances which can be applied to facilities or activities to eliminate or reduce adverse effects, calling on Corporate Research and Development, Environmental Protection Operation, other internal centers of competence, or external specialists as appropriate.

Comply with applicable environmental protection laws, regulations, ordinances, codes, and standards.

Provide necessary written operating instructions for factory personnel, specifying and requiring adequate environmental protection practices. Report promptly, through established Department management channels, any situation concerning environmental effects that might affect the Company's reputation locally or nationally.

Continuously measure and evaluate performance in environmental protection to determine whether adverse effects are being eliminated or reduced as intended, and to provide a basis for further improving environmental protection.

SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager- Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972	PAGE 3 OF 5

A. Facilities/Activities (continued).

Engineering

Provide consultation and equipment to assist manufacturing to develop and adopt standards for manufacturing processes and other component activities, together with related measurement, test, and inspection procedures that will achieve consistently high conformance with environmental control objectives. In conjunction with the appropriate Corporate component, cooperate with private organizations, professional societies, industry associations, and government agencies in developing appropriate and effective codes, standards, ordinances and regulations.

B. Product

Engineering

Identify any product adverse environmental effect which public segments might reasonably regard as offensive to man's senses, health or general welfare, or as disruptive to ecologic stability.

Take prompt action to eliminate or limit to lowest practicable level, and in any event limit to statutorily defined level, any adverse environmental effect, as well as to apply safeguards, measurements, instructions and other precautions for effective environmental control.

Develop and adopt standards for product design, user instructions, and ultimate disposition of products, together with related procedures that will achieve consistently high conformance with environmental control objectives.

Initiate technological advances which can be applied to products, to eliminate or reduce adverse environmental effects, calling on Corporate Research and Development, other internal centers of competence, or external specialists as appropriate.

Comply with applicable environmental protection laws, regulations, ordinances, codes, and standards. In conjunction with the appropriate Corporate component, cooperate with private organizations, professional societies, industry associations, and government agencies in developing appropriate and effective codes, standards, ordinances and regulations.

SUBJECT ENVIRONMENTAL PROTECTION POLICY	DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager- Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972 PAGE 4 OF 8

B. Product (continued)

Engineering (continued)

Provide information to Marketing for user instructions and/or to respond to customer inquiries outside the scope of existing instructions regarding use and ultimate disposition of products.

Report promptly, through established Department management channels, any situation concerning environmental effects that might affect the Company's reputation locally or nationally.

Continuously measure and evaluate performance in environmental protection to determine whether adverse effects are being eliminated or reduced as intended, and to provide a basis for further improving environmental protection.

Manufacturing

Provide manpower and equipment to continuously measure and evaluate performance in product environmental protection to determine whether adverse effects are being eliminated or reduced or controlled as intended, and to provide a basis for further improving environmental protection, especially as regards disposition of scrap material and products.

Marketing

Communicate to and respond to inquiries from customers and users previously approved instructions for product use and ultimate disposition to eliminate or reduce adverse environmental effects.

Communicate to Engineering and Manufacturing field data pertaining to adverse environmental effects.

3. REPORTS AND REVIEWS

The responsible Section Managers shall provide to the General Manager an environmental protection report by February 1st of each year. Interim reports shall be provided as circumstances require. The purpose of these reports is to evaluate performance and to recommend changes for improving environment protection.

SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
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3. REPORTS AND REVIEWS (continued)

The Environmental Protection representative prepares the report to Division managerial level in accordance with Company Policy 20.13.

The annual environmental protection reports and the report made annually to higher managerial levels in accordance with Company Policy 20.13 will be reviewed at a Department Staff meeting in March. Environmental protection will be on the agenda at other staff meetings of each year as circumstances require.

Environmental Protection Council

The Environmental Protection representative, the appointee for Environmental Protection-Products for Environmental Protection-Facilities/Activities, and one from Marketing constitute an Environmental Protection Council which will meet as circumstances require in integrating the efforts of the three functional operation.

This Council, through the Environmental Protection representative, will maintain appropriate consultation with Legal Counsel.

4. LETTERS AND MEMORANDA RELATING TO ENVIRONMENTAL PROTECTION

Records of environmental protection reviews and recommendations are essential to the attainment of the environmental protection objectives of this instruction. Great care should be taken, however, in framing and articulating findings and recommendations in order to reflect the situation as accurately as possible. Records shall be retained no longer than is necessary for the purpose. An exception to this would be records documenting compliance with statutorily defined levels of any adverse environmental effects.

5. PROCEDURES FOR INTERFACING WITH OUTSIDE GROUP ON PCB'S AND ENVIRONMENTAL MATTERS

The Manager-Technology Planning will be responsible for interfacing with professional societies, industry associations, government agencies, and other organizations concerned with developing codes, standards, ordinances, and regulations for handling PCB's or other materials of environmental concern. All inquiries should be referred immediately to his attention.

SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager - Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972	PAGE 6 OF 8

5. PROCEDURES FOR INTERFACING WITH OUTSIDE GROUP ON PCB'S AND ENVIRONMENTAL MATTERS (continued)

All requests for information or specific responses to civic organizations, citizens concerned about environment, or the press should be referred to the Manager of Employee & Community Relations, for handling and approval.

Some environmental dealings with vendors and outside specialists may involve sensitive subjects. If there is a question regarding what information should be divulged, transmission of any such information should be done only after approval of the Manager-Technology Planning.

6. ACTION PLAN FOR SPECIAL CONTINGENCIES

Purpose

This is to provide instructions in the event of spills or other incidents which could result in the release of materials potentially harmful to the environment.

Types of Incidents

The following is intended to illustrate the type of incident that might occur during the handling and shipment of materials and products:

1. Accidental spill within the local manufacturing operations.
2. Escape of material in plant effluent streams beyond established limits.
3. Incidents arising during the shipment or disposal of materials. This includes materials either coming to or leaving the plant by common or other carriers.
4. Accidents during the shipment or use of capacitors which result in hazard of environmental pollution.

OPERATING INSTRUCTIONS

SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager- Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972	PAGE 7 OF 8

6. ACTION PLAN FOR SPECIAL CONTINGENCIES (continued)

Responsibilities

Immediate notification should be made to one of the following who will be responsible for notifying the others:

Manager-Technology Planning

Manager-Manufacturing

Manager-Employee & Community Relations

NOTE: (SEE ATTACHED LIST FOR NAMES AND TELEPHONE NUMBERS) - APPENDIX I

This group will analyze the situation and formulate a course of action based on the following:

1. Determine the actions to be taken to limit the incident, for its correction, cleanup, etc.
2. Notify the General Manager if warranted.
3. Notify Division Counsel of the situation and planned actions.

If he cannot be reached, then:

Attorney-Environmental Protection Corp. Services

4. Determine what other Company personnel should be notified. These would normally include:

Manager-Environmental Protection Operation

Consultant-Product Environmental Compatibility

5. Determine if the incident requires notification of the EPA and State as follows:

EPA - District II Hotline

STATE - District V - Water
District V - Air

CA. 045 (REV 4/78)

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SUBJECT ENVIRONMENTAL PROTECTION POLICY		DATE EFFECTIVE September 17, 1973	NO. A-1.51
PREPARED BY Manager- Tech. Planning Emp. & Comm. Rel.	APPROVALS General Manager	SUPERSEDES NO. A-1.51 DATE April 1, 1972	PAGE 8 OF 8

6. ACTION PLAN FOR SPECIAL CONTINGENCIES (Continued)

Responsibilities (continued)

6. Maintain complete records of actions taken.
7. Responsibilities for assuring immediate reporting of incidents or spills by those on the scene are as follows:

Manager-Materials - Shippers

Manager-Manufacturing - Fort Edward Operation

Manager-Manufacturing - Hudson Falls Operation

Instruction rewritten

DISTRIBUTION: A & B

Attachment