

January 16, 1985

MEMO TO: SIA OSHE COMMITTEE  
SIA OCCUPATIONAL HEALTH COMMITTEE  
SIA ENVIRONMENTAL COMMITTEE

FROM: SHEILA SANDOW, SIA MANAGER OF COMMUNICATIONS *SS*

RE: RESULTS OF STATE OF CALIFORNIA'S  
HEALTH EFFECTS STUDIES

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The State of California's Department of Health Services (DHS) today released the results of two studies of possible health effects resulting from drinking water contamination caused by a 1981 underground storage tank leak at Fairchild Camera and Instrument Company in San Jose, California.

DHS has drawn three major conclusions from the two studies:

- (1) that there was an excess of miscarriages, congenital heart abnormalities, and total birth defects in the community around Fairchild in 1980 and 1981;
- (2) that the increased health problems in the area are not due to behavior, habits, or other known characteristics of the mothers; and
- (3) that the cause or causes of these adverse pregnancy outcomes are unknown, but that contaminated drinking water cannot be ruled out as a contributing cause at this time.

Further investigation has been recommended, and Governor Deukmejian has already approved the allocation of additional funding, including \$625,000 for the "necessary next steps," \$200,000 for a pilot spontaneous abortion registry for Santa Clara County, and \$4 million to develop drinking water standards for organic chemicals.

We have not yet been able to obtain a copy of the complete report and therefore have not reviewed the actual study data. Because we know how important it is that you be aware of the results of these studies, enclosed are copies of the documents we have at this time -- the Executive Summary of the studies, and the press release which was distributed to the media who attended today's announcement.

In addition, enclosed is an SIA Statement which is being made available to press and other interested persons upon request.

Wednesday, January 16, 1985

**SIA STATEMENT REGARDING RESULTS OF HEALTH EFFECTS STUDIES**

The Semiconductor Industry Association is extremely concerned about the incidence of industrial chemicals accidentally leaking into soil and ground water in Santa Clara County.

In the case of the Fairchild Semiconductor leak, detected in 1981, ground water contamination resulted in low level contamination of two of the wells owned by the Great Oaks Water Company, which supplies drinking water to people living in the Los Paseos area of San Jose, near the Fairchild plant. Use of the contaminated wells as a source of public drinking water was immediately discontinued upon discovery of the problem. To our knowledge, no measurable contamination was ever detected in the Los Paseos community's tap water -- the point of water delivery to the public.

It has been proposed, however, that residents of the Los Paseos area may have been exposed to contaminated drinking water prior to the discovery of the well contamination. SIA joins public health officials in being concerned about the effects such possible exposure may have had on the health and well-being of residents, and supports the efforts of the State of California to determine if there have been negative health consequences as a result of such exposure.

The State of California's initial epidemiological studies are now concluded, and the results of those investigations were announced this morning. Because we have not yet had an opportunity to study those results in detail, we are unable to comment upon them specifically at this time.

It is our understanding, however, that the results announced this morning are generally inconclusive as to the etiology -- the cause or causes -- of the health effects that may have been detected, and that the State of California is recommending further investigation. We fully support such additional investigation.

Through the Industry Clean Water Task Force, we have committed ourselves to working with our member companies, other industry representatives, and government officials at the local, state, and federal level to assure that all industrial chemical leaks in Santa Clara County are located and cleaned up, so that they no longer pose a threat to the community.

Interoffice Memorandum

To: JACK BURNS @MSO

Memo: 5237265262AKT43

Date: Tue 22 May 1984 3:10 PM EDT

From: AL SIDEL\*

cc: see "CC" DISTRIBUTION

Dept: RISK MANAGEMENT

Tel: 288-6373

Adr: AK01-3/E13

Subject: Permit Guideline Handbook - Storage of Flammables

PERMIT TYPE: Limited Quantity Storage of Flammable Fluids, Solids or Gases.

PURPOSE: Control the keeping or storage of flammable fluids, solids or gases in amounts that do not exceed the limits shown as follows and are approved, or further limited, by the local head of the fire department.

Class A fluids ----- 165 gallons  
[Highly flammable fluids having a flash point < 100 degrees F.]

Class B fluids ----- 500 gallons  
[Less flammable fluids having a flash point range from 100 to 187 degrees F.]

Class C fluids ----- 1,000 gallons  
[Relatively safe flammable fluids with flash point > 187 degrees F.]

Flammable solids ----- 100 pounds

Flammable gases, within the building ----- 3,000 cubic feet

Flammable gases, outside the building ----- 10,000 cubic feet

APPLICABILITY: Facilities having a need for storing flammable fluids, solids or gases.

STATUTE NUMBER: 527 CMR 14:00

Sections 10A and 23 of chapter 148 of the General Laws.

AGENCY: Commonwealth of Massachusetts  
Department of Public Safety  
Division of Fire Safety  
1 Ashburton Place, Boston  
(617) 566-4500

FILING RESPONSIBILITY: Facilities Management

PREREQUISITES: Flammable storage / red label room.

Outside the building housing (shaded pad) for gas storage.

PROCEDURE: Complete an Application for License, which can be obtained from the head of the local fire department.

The application requires that the amounts of the various flammable fluids, solids or gases, that are to be kept and stored, be clearly stated. The returned permit will, likewise, specify the quantities of flammables that have been approved.

All flammable fluids, solids or gases, for which a permit has been

approved, will be kept or stored in a manner as the official granting the permit may prescribe.

ASSOCIATED PERMITS: Occupancy permit.

"CC" DISTRIBUTION:

ED HIMML @MSO  
HARRY MURPHY

RON LAMB  
JIM ROGERS @EMS

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d	i	g	i	t	a	l
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I N T E R O F F I C E M E M O R A N D U M

TO: Plant Managers

DATE: 2 JUL 1985

CC: Distribution

FROM: Laura Goldin

DEPT: LAW

EXT : 223-5831

MAIL STOP: MSO/C5

SUBJ: CRIMINAL LIABILITY: FEDERAL ENVIRONMENTAL LAWS

Since I have received a number of questions from plant managers, environmental coordinators and others regarding criminal liability for violations of Federal Environmental Laws, I thought it would be useful to outline what those liabilities are. Given Digital's vigorous environmental compliance programs, geared toward not only compliance with the laws but also toward being a "good environmental citizen", it is unlikely that criminal violations will occur. However, the significant legal exposures inherent in the environmental area make your role in conscientiously supporting Digital's environmental programs essential.

The long list of companies and individuals indicted over the past few years for criminal violations of environmental laws includes American Cyanamid and a number of lesser-known companies (e.g. Johnson & Towers, Inc., Wycoff Co., A.C. Lawrence, Electro Sales, Quality Research Labs, etc.). The Environmental Protection Agency's (EPA) criminal enforcement program, revitalized in 1982 with the creation of the Office of Criminal Investigation, has been used with increasing vigor by the Agency. Between 1982 and 1984, EPA attorneys and the Department of Justice obtained 60 convictions; 9 individuals were sentenced to prison terms and over one million dollars in fines were imposed. By 1984, the number of criminal cases filed had tripled and two-thirds of the defendants charged were successfully prosecuted. Last year, EPA gained law enforcement powers for its investigators, who can now execute search warrants and carry firearms.

Criminal enforcement is of concern not only to corporations and their officers, who are by specific statutory language liable for violations of environmental laws, but also to responsible corporate managers and employees. Plant managers, waste treatment plant supervisors, plant engineers, and other managers responsible for ensuring their company's

compliance with environmental laws are being prosecuted in increasing numbers. Further, the courts have ruled that criminal liability may be imposed when the person charged knew or merely should have known of the violation. Thus, actual knowledge of the violation is not essential; it may be inferred from the manager or employee's responsibilities within the corporation. For example, a plant manager who should have been aware that the company lacked necessary programs for environmental compliance could be criminally liable if serious violations occur.

The majority of criminal prosecutions have arisen out of violations of hazardous materials statutes: the Resource Conservation Recovery Act (RCRA), the Clean Water Act, the Toxic Substances Control Act (TOSCA) and the Comprehensive Environmental Response Compensation Liability Act ("Superfund"). Each Act provides extensive criminal sanctions, as shown in the attached outline.

In addition to the criminal penalties under the hazardous materials laws, environmental violations are prosecuted under general Federal criminal statutes which apply to violations of any Federal law (conspiracy, mail fraud, wire fraud and false statements). Numerous environmental convictions in 1983 and 1984 included counts for conspiracy and false statements, potentially doubling the fine or jail term. In a recent landmark case, three officials of a Chicago company (including the plant supervisor) were convicted of murder for the chemical exposure death of an employee. The court found that the officials were directly responsible for unsafe working conditions which caused the employee's death.

Of course, these substantial criminal penalties are not the only liabilities presented by violations of environmental laws. Civil penalties (including large fines of up to 50K per day of violation), compliance orders and possible plant shut-downs, as well as irreparable damage to the Company's image, can be equally significant.

Digital's continued commitment to proactive environmental compliance should prevent any corporate or individual criminal environmental liabilities. If you have any questions regarding your facility's environmental program, please contact your environmental coordinator or Jim Rogers, Manager of Corporate Energy and Environmental Affairs (DTN 223-3837).

CC Distribution\*: Environmental Coordinators  
ESHAB  
Facility Managers  
Foster Knight  
Jeff Gibson  
Doug Hammond  
Harold Trenouth  
Bruce Holbein  
Tom Huppuch  
John Saarinen  
Stephen Greene  
Kevin Donahue  
Harry Murphy

\* A copy of this memo also has been sent to senior

## ENVIRONMENTAL LAWS: CRIMINAL PENALTIES

### I. RCRA (HAZARDOUS WASTE MANAGEMENT)

- o Up to \$50,000 for each day of violation and/or two years in jail for violations such as:
  - Knowing transportation to an unpermitted facility;
  - Treatment, storage or disposal without a permit or in material violation of a permit;
  - Knowing violation of any material condition or requirement of RCRA regulations or standards;
  - Knowingly omitting information or making a false statement or representation in any RCRA manifests, labels or other written compliance documents.

(All of these penalties double in the event of a second conviction.)

- o Up to \$250,000 (or 1,000,000 if a corporation) for any RCRA violations which knowingly endanger human health.

### II. CLEAN WATER ACT

- o Up to \$25,000 per day of violation and up to one year in jail for negligent or willful violation of permits, pre-treatment or effluent standards, or reporting and monitoring requirements. (Second convictions double the fines and jail terms.)
- o \$10,000 and up to 6 months in jail for knowingly making false statements in any reports, records or permit documents; or falsifying, tampering with or "rendering inaccurate" any monitoring device or record required to be maintained.

### III. TOSCA

- o Up to \$25,000 per day of violation and up to one year in jail for knowing or willful violation of testing and notice rules, failure to report findings of substantial health or environmental risks, or violation of any TOSCA regulation.

### IV. SUPERFUND

- o Up to \$10,000 and one year in jail for failure to notify EPA of hazardous spills or the existence of sites requiring remedial action.

d	i	g	i	t	a	l
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I N T E R O F F I C E M E M O R A N D U M

3.25

TO: Plant Managers                      DATE: 23 OCTOBER 1985  
FROM: Laura Goldin  
CC: Distribution                         DEPT: LAW  
EXT : 223-5831  
MAIL STOP: MSO/C05

SUBJ: LEGAL LIABILITY: WORKPLACE HEALTH AND SAFETY

Recently, I sent out a memo concerning criminal liability for environmental violations. As a result, I have received a number of questions from plant and field service facility managers and others about the equally significant area of occupational health and safety. Given Digital's commitment both to maintaining a safe and healthy work environment and to complying with all applicable laws, we do not anticipate that major health and safety problems will arise. It is essential, however, that managers continue to be aware of the Company's responsibilities in this area.

State "Right-to-Know" laws, the federal Hazard Communication Standard, and regulations of the Occupational Safety and Health Administration (OSHA), subject employers to comprehensive workplace safety and health requirements. These laws and regulations impose detailed job health and safety standards, and generally require that the workplace be free from recognized hazards. In addition, they give employees the right to be informed fully of potential job-related health and safety risks.

The "right-to-know" applies particularly to risks associated with hazardous material exposures. For example, employees in manufacturing facilities must receive periodic training regarding the safe use and handling of process chemicals and the potential health effects of chemical exposures. Even employees working in an office setting must be informed of any potential hazardous exposures. Generally, these risks would be directly related to chemicals used in certain office jobs (for example, solvents used in copy centers; acids, bases and solvents used by cleaning staff). In addition, if unforeseen situations arise which could pose a health or safety risk, such as the discovery of metals in a facility's drinking water or asbestos in the piping system, employees must be appropriately notified. In some instances, state, local and federal agencies must also be informed.



Failure to notify employees or governmental agencies as required by law for negligently failing to maintain a safe workplace may result in substantial penalties, including fines (up to \$10K per day for some violations) and court injunctions. Further, a company's image can be irreparably harmed.

Aside from statutory requirements, employers may be sued for exposing employees to unsafe conditions on the job. Although employees are generally limited to recovering through the Workmen's Compensation system for work-related health problems, in some cases that system can be bypassed. In an increasing number of so-called "toxic tort" cases, the courts are determining that if the employer knew of the potential health risk and failed to take appropriate action, the employer committed an "intentional tort" and is liable above and beyond Workmen's Compensation. These cases can result in large judgements against employers - potentially in the millions of dollars for serious injury or death. Also, contract workers are not limited to workmen's compensation in filing claims against an assigned employer. In a recent landmark case, company officials and a plant supervisor were even found criminally liable for murder where they "intentionally" exposed an employee to a serious workplace health risk which resulted in the employee's death.

Digital has one of the best occupational safety and health records in the industry. Through progressive programs and diligent efforts, we plan to remain at the forefront. The significant liabilities inherent in this area make essential the continued support by all involved.

If you have any questions regarding your facilities' occupational health and safety programs, please contact your safety coordinator or Jim Stewart, Corporate Manager, Industrial Hygiene and Toxicology (DTN 251-1931). If you have questions concerning health and safety in field operations, contact Chuck McGrail, Field Service Environmental Health and Safety Manager (DTN 285-6152).

Distribution

Environmental Coordinators

ESHAB

Foster Knight

Jeff Gibson

Doug Hammond

Harold Trenouth

Bruce Holbein

Tom Huppuch

John Saarinen

Bob O'Brien

Stephen Greene

Kevin Donahue

Don Miner

Ted Sares

Ray Michel

Harry Palmer

Jon Crowley

Mark Liffers

Chuck Mc Grail

Tom Siekman

John Gunther

Marietta Ethier

Sy Sackler

Bob Roache

Ron Glover

Ron Lamb

Brian Casey

Geoff Sackman



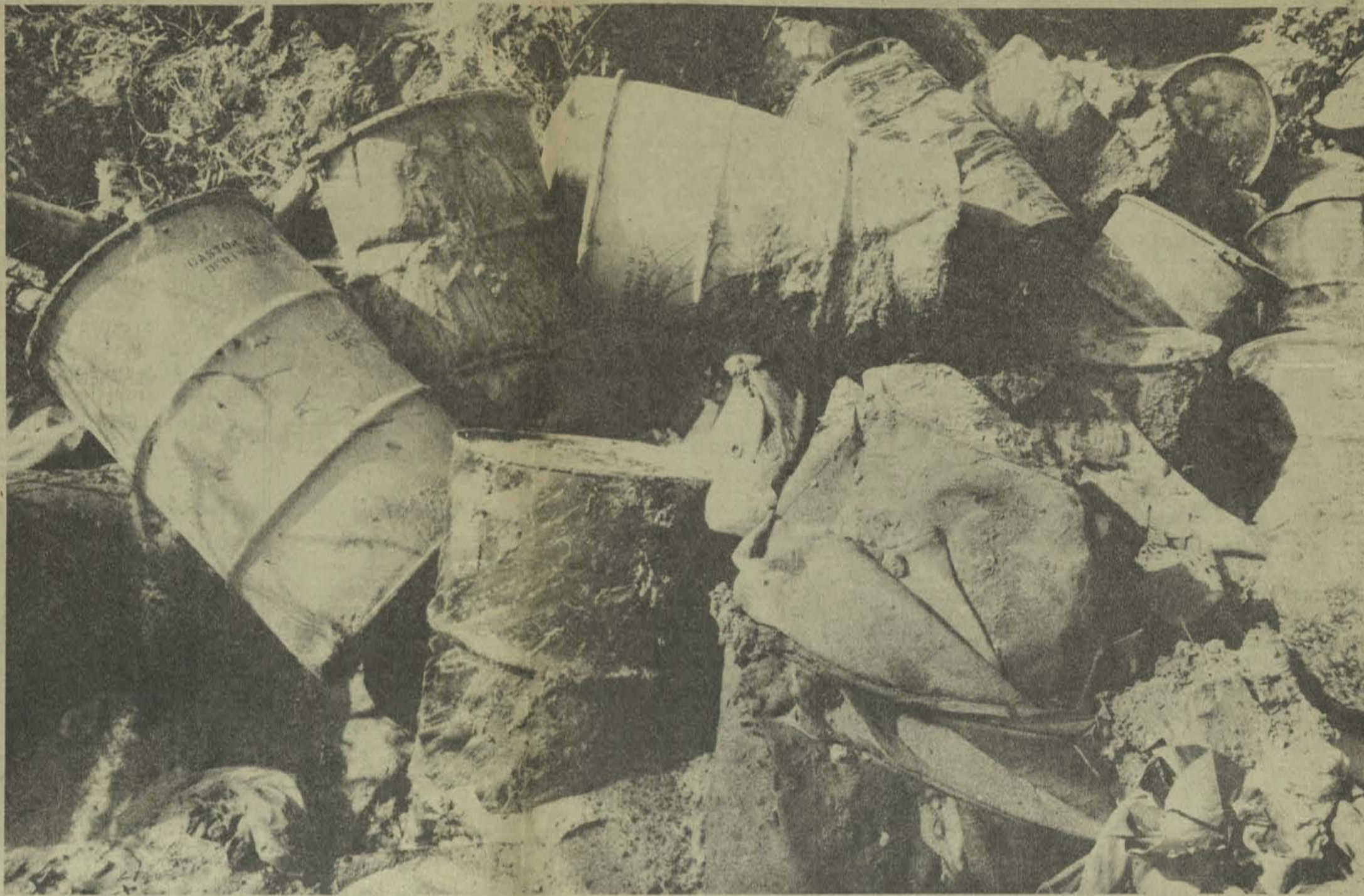
# Possible waste sites listed

The following is a preliminary list of possible hazardous waste storage, disposal or treatment sites in Massachusetts. The owners have not been accused of polluting the environment.

The purpose of the list is to identify areas which deserve further investigation and classification since some of the sites will prove to be harmless while others will demand immediate action.

Not included is a list of 30 confirmed hazardous waste sites that are in various stages of litigation, study or clean-up. Also not included are 21 hazardous waste sites where corrective action has been completed.

- ACTON** — Airco Inc. Industrial Gases Division, Lawsbrough road, two impoundments (industrial gases)-A. Town of Acton, 14 impoundments (reuse systems)-B. Acton Town Landfill, Rte. 2 (chemical disposal) n.a.
- ADAMS** — Fullan Inc., 101 Howland ave., one impoundment, (sewage system)-B. Howland Co., Inc., 153 Howland ave., three impoundments (industrial inorganic chemicals)-B. Pfizer Minerals, Pigments and Chemical, six impoundments, n.a.-C. Adams Sanitary Landfill, East road (chemical disposal) n.a.
- AMESBURY** — Town of Amesbury, 19 Merrimack st., nine impoundments (sewage systems)-B.
- AMHERST** — Town of Amherst, Town Hall, one impoundment (sewage system)-B.
- ANDOVER** — Raytheon Corp., York & Haverhill streets, one impoundment, (non-residential building operators)-A. Gillette Mfg. Co. Toilettes Division, 30 Duff rd., two impoundments (toilet preparations)-A. Andover Landfill, Chandler road (chemical disposal) n.a.
- ASSONET** — Polaroid Corp., 283 South Main st., one impoundment, (optical instruments and lenses)-C.
- ATHOL** — Athol Municipal Wastewater Treatment Plant, Rte. 2A, (sewage system)-B.
- ATTLEBORO** — Leavens Mfg. Co. Inc., Summer street, three impoundments (metal stampings)-A. Ghines & Rhodes, Inc., 189 East st., three impoundments, (miscellaneous fabricated wire products)-A. Teknor Apex Inc. Hebronville Plant, Pakhill avenue, one impoundment, (plastics materials and resins)-A. City of Attleboro, 25 South Main st., 26 impoundments, (sewage systems)-B. Attleboro Landfill, 36 Thrandreau ave. (chemical disposal) n.a.
- AYER** — Massachusetts State Game Farm, Fishburg road, two impoundments, (land, mineral, wildlife conservation)-B. Town of Ayer, Brook street, 10 impoundments, (sewage systems)-B.
- BALDWINVILLE** — Hospital Cottages for Children, Hospital road, 31 impoundments, (nursing care facilities)-C. Templeton Sewage Treatment Plant, Erving Paper Mills, one impoundment, (sanitary paper products)-B. Fernald State School, one impoundment, (residential care)-B.
- BARRE** — Leonard Martone Landfill, five impoundments (reuse systems)-A. Barre Wood, Vernon avenue, three impoundments, (sewing and spinning)-A.
- BARNSTABLE** — Defiance Bleaching Co., 138 Barrows st., seven impoundments, (finishing, cotton)-C.
- (line haul operations)-A. Middlesex County House of Correction, Treble Cove road, three impoundments-B.
- BARNSTABLE** — Barnstable County Hospital, Main street, one impoundment (medical and surgical)-B. Barnstable Public Works Department, Main street, 16 impoundments (sewage systems)-B. Town of Barnstable, Main street, four impoundments (reuse systems)-B.
- BEDFORD** — Veterans Administration Hospital, Spring road, 16 impoundments (medical and surgical)-D.
- BELCHERTOWN** — Belcher-Town State School, State street, 13 impoundments (sewage systems)-B.
- BELLINGHAM** — Benzenoid Organics, Rte. 140, eight impoundments (cyclic crudes and intermediates)-A. New England Rug, South Main street, one impoundment (floor covering stores)-D.
- BILLERICA** — Roy Bros. Haulers, 764 Boston road, one impoundment (industrial organic chemicals)-A. Town of Billerica, 250 Boston road, 23 impoundments (sewage systems)-B. Iron Horse Park, Boston & Maine Railroad, three impoundments
- BRIDGEWATER** — Jenkins Products Inc., 120 High st., three impoundments-A. Massachusetts Correctional Institute at Bridgewater, Tilt-out street, 13 impoundments (sewage systems)-C. Carrions Engineering, First street (waste reclamation)-A. Cumberland Farms, 145 Curve st., one impoundment (milk product)-D.
- BROOKFIELD** — Brookfield Wire Co., Rte. 9, two impoundments (fabricated metal products)-B.
- BUZZARDS BAY** — Otis Air Force Base, one impoundment-A.
- CAMBRIDGE** — Organic Chemical Div./PLA, Harvey street (chemical disposal) n.a.
- CANTON** — Alton Plastics, 58 Pequit st. (chemical disposal) n.a. Plymouth Rubber Co. Inc., Revere street (chemical disposal) n.a.
- LIST, Page 11**



Barrels of toxic chemicals are strewn about site in Kingston, one of many communities in Massachusetts where such hazardous materials have been illegally dumped.

GLOBE PHOTO

## Explanation of terms used in list of sites

The following is an explanation of certain key words and letters in the list of sites designated as deserving further investigation.

• An impoundment is a pit, pond or lagoon designed to hold liquid and semisolid waste until it evaporates, solids settle out, it is stabilized or discharges and filters through the soil.

• Words in parentheses, when avail-

able, designate the service or work performed by a company or institution.

• A, B, C, D designate the relative priority of need for further investigation. A is the highest and D is lowest. The ratings are based on DEQE's priorities which are determined by probable types of waste and type of ground table and proximity to drinking water source.

• The letters n.a. mean information was not available.

# Hazardous waste sites target

★ WASTE  
Continued from Page 1

Some of the sites could, according to Cortese, either prove to be harmless or could demand immediate attention.

The report said its preliminary list "... is a first round approximation of the numbers and types of sites which require both investigation and verification. It is not designed to provide complete data on site specific hazardous waste issues.

"The DEQE has made no determination concerning the accuracy of all the site information ... More importantly, the department is not accusing the owners and/or operators of specific sites listed of polluting the environment."

Virginia Hunt, a spokesman for the DEQE, said the report's criteria for estimating the types of waste and assigning their priority for departmental investigation are based on standard formulas.

For example, she said, in evaluating a plating company, there are national standards which outline what types and concentrations of waste to expect. Combine those factors with information about local aquifers, she said, and a priority assessment can be determined.

She emphasized that most of the sites have not been analyzed and that the priority values assigned to them are estimates.

The list is expected to provide the impetus for completing the naming of local hazardous waste committees and coordinators who will investigate potential hazardous waste problems.

The use of local hazardous waste coordinators is a first in the nation, according to Hunt, Cortese has asked officials of the 351 cities and towns in the state to name hazardous waste coordinators. So far, almost half of the state's communities have appointed local residents as unsalaried hazardous waste coordinators.

Hunt said the response by localities in naming so many local waste coordinators in less than two months is a clear indication of the communities' concern and willingness to participate.

But Sheila Cheimets, spokesman for the Massachusetts Municipal Association, thinks the use of local citizens is another example of the state placing another burden on communities.

Local coordinators and committees would not only identify waste sites but would help clarify the

responsibilities of various municipal agencies in such emergency situations as a spill of hazardous material, chemical fire, or release of toxic gases.

The coordinator also could press the state and federal governments for action on problems beyond the capabilities of local officials.

The report emphasized that "community residents know their town better than anyone else and important site-specific information is available to them. They are well qualified to perform the needed assessments in their own communities."

That information may range from something as informal as an oldtime resident recalling that he helped dump arsenic wastes in a certain location many years ago to studies on the flow of groundwater near a suspected hazardous waste site.

But DEQE officials cautioned local coordinators not to attempt their own investigations of suspected toxic chemicals. "Preliminary site information should be gathered without going on the site or examining the wastes," the report said.

When basic information, such as the site's history, types of wastes suspected and property ownership has been gathered from local records and interviews, it should be reported to the DEQE. The state agency, in turn, will establish a priority for investigating the site. The list will be revised every six months since many of the sites named yesterday are expected to be dropped and new sites added.

In Massachusetts, the site owner, or the party responsible for illegal disposal must fund the studies to determine the extent of contamination and must pay for the clean-up of hazardous wastes.

About a half million tons of hazardous waste are generated in Massachusetts each year from a variety of sources including schools, hospitals, research laboratories, however most are from industrial sources. Massachusetts accounts for about 7 percent of the national annual total of 7.5 million tons of hazardous waste.

877 2960  
2215

①

We ~~do~~ do not

Practice  
~~Policy~~ — all chemicals stored above ground.  
with the exception of petroleum products (fuel oil,  
gasoline, — some fire codes require underground  
storage of flammable

Until 1970 we were only in one location, thus  
nearly all our fuel tanks are ~~now~~ relatively new

---

We instituted a leak-testing program even prior to new  
regulations — about 2 years ago—

---

Toxic chemicals

all stored above ground.

In our facilities, they are stored in special  
chemical storage facilities, which are designed to  
collect and control any spills.

Inside dikes, floor drains that go to a special  
spill collection tank

Temp → overfilling a tank

Mtl →

never had a leaking tank

most of our facilities are less than 10 years old.

---

Toxic wastes.

bulk of chemicals used are in a few sites

that ~~have~~ <sup>use</sup> chemical processes.

Hudson; Andover; Westfield

large quantity  
generator

↓  
Sewer

CXO, CFO, GSO, SGO

all other Deptel facilities are small quantities  
other solvents.

Small quantity  
generator.

Oil is considered a hazardous waste in some  
states (Massachusetts).

Toxic

Hazardous

Flammable

shipped out to  
an incinerator (Branitree)  
Chlorinated (out of state)

Corrosive

treated on-house  
Connecticut

Toxic

some recycled  
some incinerated  
some to treated facilities

Reactive

~~incinerated~~

We have a  
video tape training -  
Awareness for people  
that all employees who  
deal with chemicals must

all toxic waste are hazardous.

video.

recycled

where possible recycle

~~get~~ precious metals  
recovery

all employees

almost always deal

with waste management firms.

Clean Harbor  
Branitree

We use only licensed; high integrity firms

things that can be recovered & dredged

TM

d | i | g | i | t | a | l

I N T E R O F F I C E M E M O R A N D U M

TO: BILL HANSON  
CC: DAVID BARRETT  
LOU GAVIGLIA  
JEF GIBSON  
STEPHEN GREENE  
FOSTER KNIGHT  
CINDY LEWIS

DATE: MAY 30, 1989  
FROM: LAURA GOLDIN *LJG*  
DEPT: LAW  
EXT: 223-5831  
LOC/MAIL STOP: MS01-1/C5

SUBJ: ELLIS ROAD HAZARDOUS WASTE SITE

\*\*\*\*\* RESTRICTED DISTRIBUTION \*\*\*\*\*  
ATTORNEY-CLIENT PRIVILEGED

Attached for your review and signature is a Consent Order with the Environmental Protection Agency (EPA) regarding surface cleanup and soil investigation at the Ellis Road hazardous waste site in the Jacksonville, Florida area. The Law Department recommends that you sign this Order, which requires Digital to pay \$8,143. David Barrett proposes to pay this out of his cost center.

In April, 1988 Digital and a number of other generators entered into a Consent Agreement with EPA for preliminary cleanup and further study of the Yellow Water Road hazardous waste site in Baldwin, Florida. The site formerly was used for PCB disposal and became a significant environmental problem due to mishandling of the PCBs.

The Department of Defense was the largest contributor to the site, with approximately 27% of the wastes. From 1979 through 1984, Digital shipped 31 PCB transformers from Springfield to the site for disposal. Our share of the wastes at Yellow Water Road currently is estimated to be .54%, and we already have paid \$21K for preliminary cleanup and study of the site.

Some of the hazardous wastes at Yellow Water Road later were shipped to the Ellis Road site. As a result, generators responsible for Yellow Water Road are now responsible for cleanup of the Ellis Road site as well.



Please let me know if you have any questions. Thank you.

---

COPY NO: TRUSTEES

SUSAN COOKE  
JEFF GIBSON

Corporate Information

OCT 30 1986

United States  
Environmental Protection  
Agency  
Region I

Office of  
Public Affairs  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

Received



# Environmental News

October 14, 1986

Joel Balmat, Project Manager  
(617)565-3651

For more information call

Geoff McGean, Public Affairs  
(617)565-3419

## REMEDIAL INVESTIGATION CONTINUES AT SILRESIM SITE

Boston--The U.S. Environmental Protection Agency announced today that field work is being conducted at the Silresim Superfund Site in Lowell, Massachusetts.

The field studies, which began on October 6, are part of phase II of a remedial investigation (RI). The RI will determine the nature and extent of contamination at the site.

Phase I of the field studies was completed in the Spring of 1986. This phase included installation and sampling of groundwater monitoring wells as well as sampling of soils and surface waters.

The field work is being conducted by the Silresim Trust, a group of potentially responsible parties (PRPs) at the site. EPA officials are overseeing and reviewing all work performed at the site. The field activities taking place for phase II of the RI include:

- Additional groundwater monitoring well installation and sampling
- Vent sampling study to determine possible air contamination
- Surface soil sampling
- Test pit sampling under the existing clay cap to determine the nature of subsurface soil contamination

Field activities for the RI are expected to be completed by December 1986. A remedial investigation report will then be made available to the public in the Spring of 1987. At that time, EPA will hold a public meeting to discuss the results of the RI and to present plans for a feasibility study (FS). The FS will use the information collected during the RI to evaluate cleanup options for the site. EPA will carefully consider public comments before choosing the most environmentally sound and cost effective cleanup alternative.

The Silresim Chemical Corporation Site covers 4.5 acres in an industrial area 1 mile south of the central business district of Lowell, Massachusetts. In 1971, Silresim began reclaiming (under a State permit) a variety of chemical wastes, waste oil, solvents and sludges containing heavy metals. In 1977, Silresim declared bankruptcy and abandoned the site, leaving behind 30,000 decaying drums and several large storage tanks. When the owner abandoned the site, the State undertook a \$2.2 million cleanup of the drums and tanks.

In 1984, EPA installed a clay cap over the site to prevent air emissions from underlying soils and to prevent the passage of rain water and snow melt carrying contaminants into groundwater. At the same time, EPA removed remaining tanks and structures for disposal and constructed a fence around the site. In August 1986, EPA extended the site fence to an area where contaminated soils were identified during Phase I of the remedial investigation.

###

United States  
Environmental Protection  
Agency

Region I  
Office of Public Affairs — 2203  
John F. Kennedy Federal Building  
Boston, MA 02203

Official Business  
Penalty for Private Use  
\$300

Postage and  
Fees Paid  
Environmental  
Protection  
Agency  
EPA-335



Corporate Information

MAR 26 1987

Received

d i g i t a l

Interoffice Memo

TO: Distribution

DATE: 20 MAR 87  
FROM: Jim Rogers  
DEPT: Corporate Energy & Environmental  
EXT: 223-3837  
LOC/MAIL STOP: MLO1-4/P11

SUBJECT: MANAGEMENT OF AN ENVIRONMENTAL, HEALTH, SAFETY OR PRODUCT SAFETY CRISIS

Attached is a proposal I received from ADL for a two day seminar on crisis management for environmental, health and safety issues.

Please review this proposal and let me know your feelings about it.

JKR:jnr

Attachment

Distribution:

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 Arthur D. Little, Inc.

Acorn Park  
Cambridge, Massachusetts 02140-2390  
617 864-5770 Telex 921436

FEB 20 1987

February 13, 1987

1986  
At the frontier  
1886

Mr. James K. Rogers  
Corporate Manager  
Energy and Environmental Affairs  
Digital Equipment Corporation  
146 Main Street  
Maynard, MA 01754

Dear Jim:

I am writing today to call your attention to an important new service which Arthur D. Little's Center for Environmental Assurance is offering its corporate clients -- an intensive, two-day Seminar on Crisis Management.

The seminar would be tailored to the specific requirements of your individual company. It is designed to help your senior line managers and key headquarters staff anticipate and deal effectively with a potentially wide range of environmental, health, safety, and product safety crisis situations.

The types of crises the Seminar will address include but extend well beyond those envisioned by the Chemical Manufacturers Association's CAER planning program and the new Superfund community reporting provisions. We're concerned about the truly major incidents which, should they occur, can threaten not only public wellbeing but the future financial survival of the company itself. Decision-making requirements in these situations clearly transcend the responsibility of facility-level management and demand the active involvement and leadership of corporate officials.

*See attached proposal.*

CORPORATE ENERGY AND  
ENVIRONMENTAL AFFAIRS  
DIGITAL EQUIP. CORP.

*Rec'd 2/18/87*

▲ Arthur D. Little, Inc.

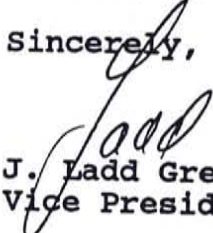
The Crisis Management Seminar will help your company's headquarters management to:

- Organize, in advance, to handle the unique technical, logistical, and communication problems facing decisionmakers under conditions of extreme time pressure and uncertainty;
- Identify potential crisis situations the company could encounter, before they arise, and develop scenario-specific response plans for managing them;
- Learn from the first-hand experience of other companies which have undergone similar crises to understand their successes and avoid their mistakes; and
- Build a heightened sense of team identity and competence in crisis management, through shared participation in group training exercises designed to simulate realistic crisis response situations.

I've taken the liberty of enclosing a preliminary prospectus describing the Seminar in greater detail and identifying the senior Arthur D. Little, Inc., consultants available to lead it. Further tailoring may be required before conducting it for your specific organization.

If you have any questions about the Seminar or would simply like to explore the idea further, please do not hesitate to contact John Willson of my staff who can be reached at (617) 864-5770 extension 2791.

Sincerely,

  
J. Ladd Greeno  
Vice President

# PROPOSAL

Cost -  
About  
\$20K

DEVELOPMENT AND PRESENTATION  
OF A TWO-DAY SEMINAR  
ON  
CRISIS MANAGEMENT  
FOR  
Digital Equipment Corporation

## INTRODUCTION

Arthur D. Little's Center for Environmental Assurance now offers an important new service to its corporate clients -- an intensive, two-day Seminar on Crisis Management.

The Seminar is designed to help senior line managers and key corporate headquarters staff anticipate and deal effectively with a potentially wide range of environmental, health, safety, and product safety crisis situations. The types of crises the Seminar addresses are the truly major incidents which, should they occur, can threaten not only public wellbeing but the future financial survival of the company itself. Decisionmaking requirements in these situations clearly transcend the responsibility of facility-level management and demand the active involvement and leadership of top corporate officials.

This prospectus presents our general approach to developing and conducting such a seminar on Crisis Management for Digital Equipment Corporation. It also summarizes our specific qualifications for undertaking this very important management training program.

## PURPOSE AND SCOPE

The purpose of the proposed seminar is to provide senior managers and key headquarter environmental, health, and safety staff of Digital Equipment Corporation with:

- An increased understanding of the general principles of crisis management, including their illustration through a review of the experiences of other large industrial corporations which have faced situations similar to those of concern to Digital Equipment Corporation;

- Information on specific approaches to identifying and prioritizing individual crisis scenarios that could confront Digital Equipment Corporation in the future, and for developing anticipatory plans for managing your response to them; and
- A heightened sense of team identity based on shared participation in a series of exercises designed to help members learn to work together to resolve hypothetical but realistic crisis management problems presented to them.

The principal output of the program will be a two-day seminar for selected Digital Equipment Corporation personnel, to be held in Cambridge, Massachusetts. We believe that holding the seminar at a location away from your company's headquarters is preferable because it helps free participants from the distractions of competing job-related activities, and thus enables them to concentrate their full attention on the subject at hand. Furthermore, holding the seminar in Cambridge would allow Arthur D. Little to make the most cost-effective use during the day of the full range of its available senior professionals having special expertise in risk management and crisis response.

As part of the program, Arthur D. Little will also deliver to you all collateral materials developed especially for the seminar, including the course outline, presentation notes, display graphics and audio/visual aids. In addition, a brief written report will be submitted as discussed below.

#### APPROACH

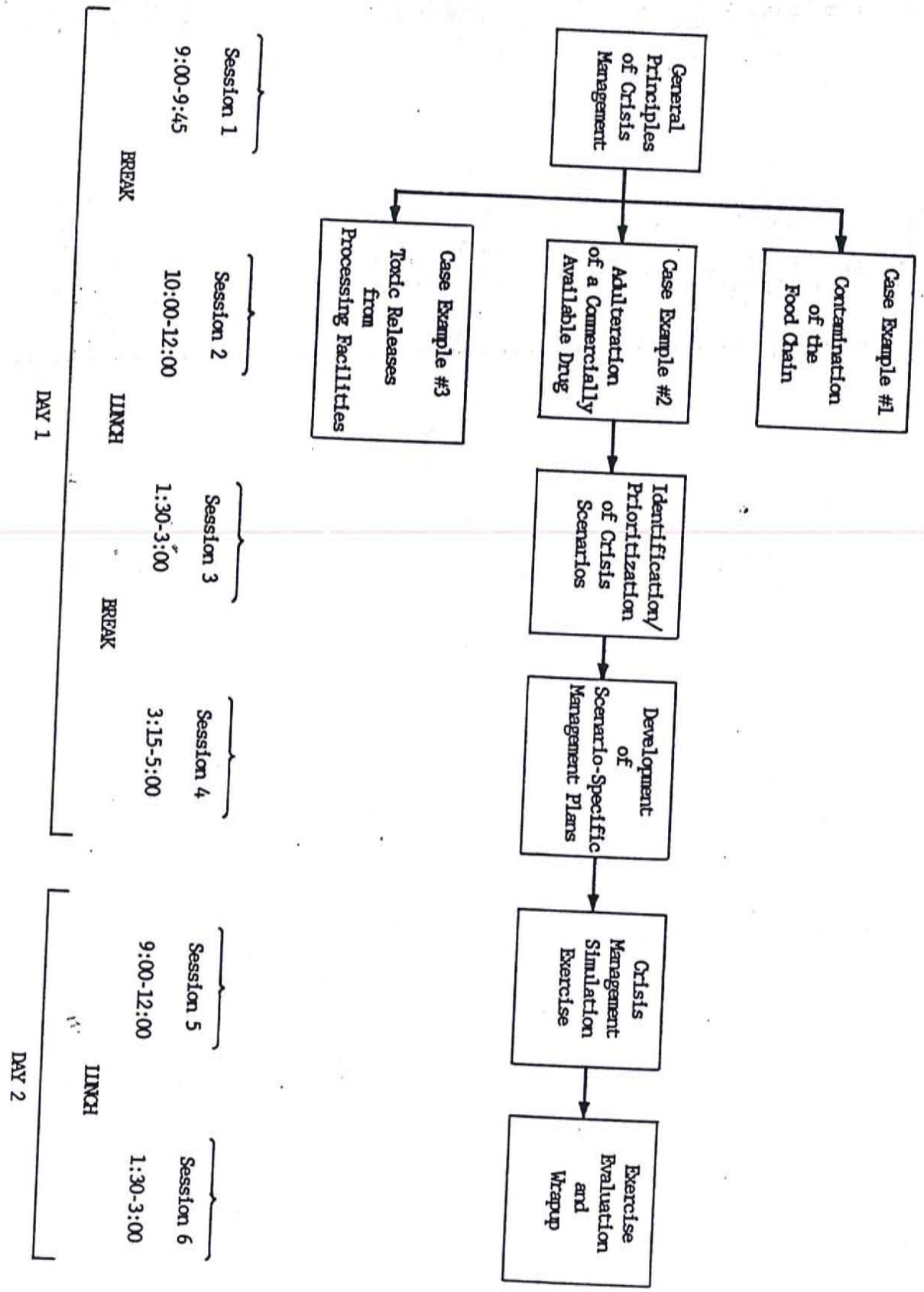
At the outset of the project, the Arthur D. Little Case Leader will visit your corporate offices to meet with you as well as with key senior staff whom you designate. The objective of this initial meeting will be for us to learn about your specific environmental, health, and safety concerns and to review the general content and format of the proposed Seminar to ensure that it provides an appropriate framework for meeting your information and training needs in crisis management. We will also use this opportunity to gain a better understanding of your company's current organizational and management arrangements for handling potential crisis situations, including facility-level response, so that the proposed training effectively extends your existing capabilities.

Arthur D. Little currently envisions a two-day Seminar on Crisis Management structured as shown in Figure 1. The proposed Seminar will consist of six distinct but closely related sessions, organized to build logically on one another while offering a balance between strictly tutorial presentation and participatory give-and-take. The times indicated for each session are suggestions only, reflecting our preliminary thoughts on their



PROPOSED TWO-DAY SEMINAR STRUCTURE

Figure 1



## Session 1. General Principles of Crisis Management

This first session will start with a consideration of what is a "crisis", or what distinguishes a particular incident as "major". We will examine Digital Equipment Corporation's definition of a major incident against a general construct which identifies situations having the potential for significant risks of:

- Human Health Effects. Deaths and acute illnesses and functional disorders; chronic effects and functional disorders (carcinogenic, mutagenic, teratogenic).
- Environmental Effects. Air, water and groundwater pollution; also impacts on soils and soil microorganisms, plants, aquatic organisms, birds and mammals, aesthetics.
- Economic Loss. Lost product sales; also potential tort damages, cleanup and/or resource replacement costs, regulatory fines and penalties.
- Diminished Corporate Image. Lost Company prestige, market leadership or public credibility.

The intent of this initial probing will be to determine the scope of crisis management as it would be practiced by Digital Equipment Corporation, and whether the Company has considered the full range of criteria appropriate to identifying potentially major incidents requiring a crisis management response.

From an operational standpoint, the distinguishing feature of a crisis is still the need to make decisions extremely rapidly, often on the basis of inadequate information, where the costs of being indecisive or wrong can be very high. Therefore, the bulk of this first session will then be devoted to a discussion of a series of management principles for dealing with this fundamental reality. The presentation will draw upon and synthesize management lessons learned by a number of major chemical and other industrial companies in handling crisis situations involving product manufacture, distribution, use, and disposal.

Among the principles of crisis management which will be covered in the session are those for:

- Anticipating and Pre-Planning. Identifying potential crisis situations through evaluation of "near misses" and "weak signals", as well as through selective risk assessment.
- Organizing Internally. Pre-delegation to a crisis management team by the Company's Board of Directors of specific operating authority. Definition of team assignments and roles/responsibilities. Designation of back-ups for individual team members.

- Mobilizing Critical Resources. Access to immediate cash, emergency transportation, cleanup teams, specialized consultants. Special support teams needed for technical issues; financial issues; media and public relations; operation of a "command post"; pre-deployment of specific resources.
- Crisis Fact-Finding and Data Analysis. Taking maximum advantage of corporate reach and available communications/ data management technology.
- Monitoring Public Perceptions. Understanding what the general public, the media and the regulatory agencies "think" is happening, regardless of whether it is based on the facts or not.
- Communicating Information Internally. Providing for information flows and controls not only for decisionmaking but also for informing employees and maintaining morale.
- Identifying Management Options and Making Choices. Uses and limits of contingency plans; determining if an option is truly "available"; decisionmaking under extreme uncertainty; making only those decisions needed at the time; delegation and review procedures.
- Communicating Information and Decisions Externally. The value of candor and early disclosure; taking the initiative in setting the terms of the public debate; having a clear policy on who speaks for the company on which matters; the use of outside PR resources.
- Documenting Information. Balancing communication and decisionmaking needs with the increased threat of possible future litigation.
- Post-Crisis Evaluation of Outcomes. The need for systematic "learning from experience" and how to do it.

## Session 2. Selected Case Examples

The second session will extend the previous discussion of general management principles by examining a limited number of hypothetical crisis scenarios similar to those recently experienced by major industrial corporations. Arthur D. Little proposes to use these crisis situations and the details of how they can be handled in order to illustrate the more general principles involved and the management lessons to be learned.

We plan to present three such case examples, chosen mainly for their relevance to the business interests and technical concerns of a wide range of industrial corporations. The three incident scenarios covered will involve (1) contamination of the food chain through inadvertant introduction of an industrial chemical into animal feed, (2) adulteration of a widely used over-the-counter drug resulting in several poisoning deaths, and (3) leaks of a highly toxic gas into the atmosphere at major chemical processing facilities leading to deaths and acute illness among the neighboring population. Arthur D. Little will develop the proposed case examples based on research and our general familiarity with similar crisis situations.

Each of the three cases will be used to consider specific instances of where general management principles covered earlier in Session 1 can be applied, the resulting consequences, and their potential relevance for crisis management at Digital Equipment Corporation. By actively involving group members in the discussion of these situations and the conclusions to be drawn from the case examples, we hope to increase the utility of the lessons learned for future planning and decisionmaking.

### Session 3. Identification and Prioritization of Crisis Scenarios

The next session focuses on methods and techniques for identifying crisis scenarios that Digital Equipment Corporation may face in the future, and for prioritizing pre-planning efforts to manage them.

Arthur D. Little will present a systematic approach to scenario generation which involves constructing hypothetical crisis situations out of different combinations of key problem elements and circumstances, including the following:

- Life Cycle Stages
  - Product Transport
  - Product Storage
  - Product Use
  - Product Disposal/Recycling
  
- "State" of the Product
  - Normal Product
  - Off-Spec Product
  - Adulterated Product
  - Stand Alone Product vs. Ingredient in Someone Else's Product
  - Uncertainty as to Whose Product It Is

● Proximate Causes

- Accidental Use
- Inadvertent Misuse
- System Failure
- Natural Catastrophe
- Fraud
- Extortion
- Sabotage
- Terrorism

● Problem "Setting"

- Single vs. Multiple Locations
- Threat Perceived as Localized vs. Widespread
- Number of People Potentially Affected
- National vs. International Location
- Unique Environmental Values or Resource Characteristics Threatened?

In this fashion we will generate multiple possible crisis scenarios, resulting quickly in a total number of crises much too large for each one to then be considered individually. At that point Arthur D. Little will seek to involve the members of the group in helping shorten the list, drawing on their knowledge of Company operations to eliminate some as infeasible (i.e., nonexistent combinations) while combining others which may be closely related into a smaller number of more general "classes" of incidents. The objective would be to reduce the initial long list of crisis scenarios to one containing perhaps 10-12 prototypical incidents. These general classes of incidents would presumably reflect and be consistent with Digital Equipment Corporation's current mix of products, markets, and business risks.

The next step will be to engage group members in a scenario ranking exercise, asking them to rank-order these prototypical crises based on members' individual judgements as to the likelihood of their occurrence. Arthur D. Little would then use one of a number of available techniques for iterating the individual rankings until a group consensus emerges regarding the relative ordering of likely crisis scenarios.

As a final activity in Session 3, the Arthur D. Little consultant leading the discussion will select one of the crisis scenarios rated most likely to occur and use it to illustrate the basic steps involved in completing an assessment of health and safety risks. Simplifying assumptions will be made concerning the known adverse effects of the product on humans or the environment, as well as about the particular conditions of exposure. Effects and exposure data will then be combined with information on the

likelihood of occurrence to yield estimates of societal and individual risk resulting from the given crisis situation. The objective of this last step is not to train Team members to perform quantitative risk assessments, but instead to acquaint them with a set of analytic tools which can be useful for further prioritizing likely crisis scenarios as part of a management pre-planning activity.

#### Session 4. Development of Scenario-Specific Management Plans

The fourth session will then focus on pre-planning itself, the development of tailored plans for managing or containing specific types or classes of crisis scenarios.

Arthur D. Little will select a particular scenario in advance of the Seminar, presumably one that will bear close resemblance to at least one of the prototypical crises to be generated during Session 3. For this scenario, we will prepare the outlines of a suggested crisis management plan responding to it. The plan, at a minimum, will address each of the ten management areas identified earlier in the Session 1 discussion of general principles. For each of these management areas, the plan will describe both generic and, as appropriate, crisis-specific steps that should be taken in anticipation of, or in the event of, that particular scenario occurring. For example, if the crisis involved contamination of a public drinking water supply in a remote area, the section of the plan on "Crisis Fact-Finding and Data Analysis" might suggest generally that Digital Equipment Corporation maintain field-mobile capability to sample and analyze drinking water sources and, depending on the individual chemical involved, also present specific sampling and analysis protocols and indicate known safe levels.

We will present such a scenario-specific plan to the group at the beginning of Session 4. The plan will be discussed in detail, and team members will have the opportunity to recommend specific changes and additions to the plan as well as more general improvements in its format. At this point Arthur D. Little will ask the team to pick a second prototypical crisis scenario from the list developed in Session 3 and prepare a management plan for dealing with it. The Arthur D. Little consultants will be available to respond to any questions that team members might ask, and our Session Leader will serve as overall facilitator for the group, recording specific plan suggestions on a flip-chart.

The output of Session 4 will be a first "rough draft" of a scenario-specific crisis management plan for a real problem potentially confronting Digital Equipment Corporation today. In the process, team members will also have gained additional insight into crisis pre-planning and the types of information and thinking it requires.

### Session 5. Crisis Management Simulation Exercise

On the second day of the Seminar, Arthur D. Little proposes to help team members consolidate and make use of their newly gained knowledge by involving them directly in a crisis management situation. The means for accomplishing this will be a management "game" which simulates a hypothetical yet realistic crisis that could confront Digital Equipment Corporation and asks the team to identify management options and make decisions for dealing with it. Arthur D. Little will develop the management game and the needed collateral materials by drawing on our own industry knowledge of product safety problems as well as specific information on Digital Equipment Corporation obtained from Company sources. The crisis scenario will be sufficiently detailed in order to simulate real world operating conditions and to elicit specific management responses. On the other hand, the information made available to the team will also contain significant gaps and ambiguities requiring that they gather additional data and make important assumptions. The game will be structured to reflect the compressed time schedules typically available for making major crisis management decisions, and also allow introduction of outside pressures for information and action from representatives of the media, regulatory agencies, general purpose government, and the public. Ultimately there will be no "right" answers, only a series of questions, choices and consequences intended to illuminate the complex nature of the crisis management problem and the many difficulties of responding to it.

Our Session Leader will conduct the game and serve as overall "referee". Ideally, the simulation exercise would be held in a specially equipped "focus" room which would allow other Arthur D. Little consultants to listen and observe unobtrusively through a one-way mirror while simultaneously videotaping the proceedings. In the room with the Session Leader would be a second Arthur D. Little staff person who would provide new, updated, or confounding "facts" on crisis events at key intervals during the course of the game. At several points, team members will be given the opportunity to rank-order their choices among types of additional information they could request in order to aid their management decisionmaking, employing a trade-off evaluation technique frequently used by Arthur D. Little called "CONJOINT".

### Session 6. Exercise Evaluation and Wrap-Up

At the conclusion of the management game, the Arthur D. Little observers will join the group in the focus room for a mutual evaluation of insights gained and lessons learned. The observers will have had the advantage of taking notes during the course of the exercise, so they will be asked to lead-off by sharing any specific points regarding group process or decisions that they

found especially interesting. All participants will be encouraged to contribute their own individual observations, and the group will also have the ability to consult the videotape of the game, as needed, to resolve any disputes which might arise concerning what did or didn't happen when.

The main purpose of this evaluation is to help Digital Equipment Corporation learn as much as possible about how to make decisions under crisis conditions before they actually have to confront them. Therefore, the evaluation will focus on the following key issues:

- Is your current organization structure for crisis management adequate to the purpose? Sufficient in and of itself?
- What types of eventualities can reasonably be foreseen in a given crisis situation and, therefore, should be accounted for in anticipatory crisis management plans?
- What kinds of information will prove most useful in a particular crisis, and can provision be made ahead of time to make sure it exists and is accessible?
- What steps can be taken in advance of a crisis to set up faster, more efficient corporate decisionmaking processes so that the Company can meet its special responsibilities when it has to, under the very tight time pressures it is likely to face?
- Are there any specific procedures or "rules of the game" that pre-designated crisis managers should adopt for decisionmaking in a crisis, and should these steps be taken now?

One crisis simulation under very controlled circumstances cannot provide definitive answers to any of these questions. But it can provide Digital Equipment Corporation a realistic forum where it can think about the questions and begin to formulate partial answers that may have real value even in the short-run. Arthur D. Little will document all such findings that emerge from the post-game evaluation session and submit them to you as a separate final report.

#### SPECIAL QUALIFICATIONS OF ARTHUR D. LITTLE, INC.

Arthur D. Little is particularly well qualified to provide the crisis management training described above. For two decades we have worked for industry on both technical and management issues related to risk assessment, product safety, environmental protection, and occupational safety and health. We have helped



companies develop corporate-wide emergency response programs, as well as contingency plans for managing crises at individual facilities. We also have had extensive experience in conducting workshops and other training programs, seminars, and conferences on corporate risk management.

Arthur D. Little has a dedicated staff of over 100 professionals who make health, safety, and environmental risk management the major focus of their consulting practice. Among our recent project assignments directly relevant to anticipating and managing environmental, health, and safety crisis situations are the following:

- For the agricultural division of a large U.S. chemical producer, we prepared a series of crisis-specific management plans for organizing and directing headquarters-level response to various types of major environmental, health, and safety incidents which could occur in product manufacture, distribution, and use.
- As part of a larger assessment of off-site health, safety and environmental risks for the chemicals division of a major tire manufacturer, we evaluated emergency response plans, programs and procedures at the corporate level and at 10 processing facilities and made recommendations for improving them.
- For a large, diversified chemical and energy concern, we developed and conducted a specialized training program for a divisional task force established to help identify and evaluate unrecognized hazards associated with chemical manufacturing operations.
- For a large chemical company, we reviewed their product safety program for assuring the integration of product safety considerations in research and development, manufacturing and marketing decision making.
- For the management of a specialty chemical manufacturer, we assisted in the design and implementation of a corporate product safety program that has significantly raised the level of awareness of product safety concerns within the company.
- For a major chemical producer, we developed an in-house risk management system for transportation of hazardous materials.

- For the chemical division of a large conglomerate, we assessed the risk to the environment and the corporation resulting from production and sale of a particular organic chemical.
- For a major aerospace company at a 5000 acre manufacturing and research facility, we developed a comprehensive materials containment plan that combined emergency actions required under the Clean Water Act and the Resource Conservation and Recovery Act.
- For a specialty chemicals company, we developed a corporate environmental management system that included an anticipatory approach to environmental risks as well as compliance with environmental laws and regulations.
- For the Federal Emergency Management Agency (FEMA), we developed a planning guide for state and local officials on how to prepare a comprehensive hazard analysis for use in managing risks associated with transportation, storage, processing, use, and disposal of hazardous materials within their jurisdictions.

We are confident that this type and depth of experience with the management of health, safety and environmental risk will enable Arthur D. Little to make an especially valuable contribution to your company's efforts to identify and effectively deal with major incidents potentially affecting its various businesses.

*Tal. W. /son*