GEN 55 REV. 2 (5/

Interoffice Memorandum

TO (Name and Location)	DATE
See Attached	March 28, 1980
FROM (Name and Location)	REFERENCE NO.
L. Starr	LS-84-80

SUBJECT: Corporate Reviews of Operating Divisions' Environmental, Health and Safety Programs

Attached are the procedures which the Corporate DEHSA will use during its formal reviews of Operating Company practices and programs in environmental, industrial hygiene and safety. These written procedures formalize the type of program reviews of the subject areas that we have been performing for over a year. They have had extensive review by your company personnel and the resulting procedures are the distillation of their comments. These review procedures have been mentioned at President's Council meetings and been discussed at meetings of the Public Responsibility Committee. It is one mechanism that the Celanese Corporation uses to insure that:

1. we are in compliance with all existing environmental, health and safety laws and regulations;

2. we have the programs in place to anticipate and address upcoming regulations that will affect our business, and

3. we are following Celanese Policy AP 1-29 (attached).

Reports resulting from program reviews are written by the operating division locations and are in the form of action items. Follow-up on the action items is the responsibility of both the Corporation and the affected Operating Company. The feedback we have received on the reviews performed to-date have been extremely positive. Plant managers and their staffs have indicated that this process is beneficial in making them aware of potential problem areas and in re-inforcing their positive efforts in protecting their employees and the environment.

I request that you circulate these to the appropriate personnel in your ~~company~~ plant or Dept. and thank you for your continued support of this program.

L. Starr

LS:fl
Att.

PLAINTIFF'S EXHIBIT
tabbies
CEL-173

002041

Distribution List
LS-84-80
March 28, 1980

TO: R. C. Andrews - Chatham
H. B. Bartley - Dallas
J. A. Fennie - 18
M. D. Sellers - Charlotte
R. D. Smith - Charlotte
B. M. Rushton - 27

cc: R. L. Mitchell - 27
A. R. Dragone - 27
R. A. Longman - 27
I. B. Wheeler - 27
G. A. Rodenhausen - 26
J. J. Clary - 25
E. M. Dixon - 25
H. J. Kolodner - Charlotte
J. M. Ramey - 25
J. D. Underwood - 25
J. A. Tins - 25
H. H. Flegenheimer - Louisville
G. W. Halek - Chatham
L. I. Horner - Charlotte
B. A. Nelaas - Dallas
V. A. Parrillo - Summit
J. C. Pullen - Charlotte
P. M. Smith - Charlotte

CELANESE CORPORATION

ADMINISTRATIVE PROCEDU

RESPONSIBLE ISSUING DEPT.	SECTION:	PROCEDURE NO.
Environmental and Health Affairs	GENERAL ADMINISTRATION	1
	SUBJECT: General Policy Statement Environmental and Health Affairs	PAGE 1 of 1
SUPERSEDES PROC. DATED		DATES: ISSUED January 19
New		EFFECTIVE January 19

The Corporation will not knowingly expose any employee, customer, or carrier to an unreasonable health risk associated with the manufacture, use, or transport of our materials.

The Corporation will commit whatever resources are necessary to minimize these health and environmental risks through an effective and responsive risk management program.

The Corporation recognizes that the ultimate responsibility for an individual's on-the-job safety and health is shared by management and the individual employee. It is incumbent on the Corporate staff to provide consultation, guidance and technical assistance to management in the discharge of these responsibilities. Effective support can only be given after the development of comprehensive safety and health data. The individual companies and subsidiaries have the responsibility to initiate appropriate programs to obtain these data on all products they manufacture or use where this information is necessary to define and establish safe handling procedures.

Celanese recognizes and accepts its responsibility as a corporate citizen to participate in the development of effective government regulations to control unreasonable risks associated with hazardous materials. The Corporation will make available its expertise and experience to the appropriate government agencies for this purpose.

CELANESE CORPORATION

CORPORATE-COMPANY ENVIRONMENTAL REVIEW PROGRAM

I. Overview.

Because of the increasing complexity of environmental regulation, Celanese adopted in 1979 a program of regular facility visits for consultation among corporate, company and facility staffs.

The consultation includes two major elements:

1. Compliance of present operations with regulations and Celanese policies;

2. Planning for future trends in regulations and Celanese policies.

Approximately 10 to 15 Celanese facilities are visited each year. The company Environmental Manager will help set priorities for and coordinate visits. Corporate staff will be represented by the Director or Manager of Environmental Control and a member of the Law Department.

Environmental reviews should take 1 to 3 days, depending upon size of operation and complexity of issues.

II. Procedure.

1. Advance Preparation. Four weeks in advance of visit, Facility should receive Environmental Checklist (attached).

   (a) Advance Data (first heading of Checklist) should be supplied to all participants by Facility 2 weeks before visit.

   (b) Remaining data should be collected before visit. Records such as permits and monitoring reports should not be reproduced but should be available during visit.

002044

2. First Meeting at Facility. This meeting will review present operations and future requirements in detail.

   (a) Participants should include Facility Environmental Coordinator, company Environmental Manager, corporate Director or Manager of Environmental Control, member of Law Department, and others as Facility desires.

   (b) Subjects reviewed will include the Environmental Checklist, capital plan, and compliance problems. Facility tour if necessary.

   (c) Time required may be 1/2 to 2 days.

3. Second Meeting at Facility. This meeting will review action items from First Meeting.

   (a) Participants should include Facility Manager and other staff at Facility Manager's discretion, in addition to those at First Meeting.

   (b) Findings of First Meeting will be reviewed and an action plan agreed upon.

   (c) Time required may be 1/2 to 1 day.

4. Action Plan and Follow-Up Reports. At the conclusion of the review, the Facility Environmental Coordinator will issue the agreed action plan to resolve environmental control problems.

   (a) The plan should be in the form of a report to the Facility Manager with copies to review participants and others at Facility Manager's discretion.

   (b) Follow-up reports should follow the same format, and be issued quarterly until all action items are completed.

5. Future Impacts Report. Corporate or company Environmental Manager may prepare a report on significant future impacts of new policies and regulations. Such report should be distributed to appropriate facility, company and corporate personnel, and may request further analysis by other departments.

002045

III. Development of Program.

Any comments on how to improve the review program would be welcomed by the Corporate Department of Environmental, Health & Safety Affairs and the Law Department.

Law Department
Environmental, Health and Safety
Affairs Department

January 2, 1980

002046

ENVIRONMENTAL CHECKLIST

1. ADVANCE DATA: (Facility should forward this data to participants in First Meeting 2 weeks prior to meeting).

1.1 Available Facility maps showing: discharge points, intake points, surface water flow, underground tanks, major emission points, waste sites and contours.

1.2 Available flow sheets showing waste streams of Facility or individual processes. Where possible include volumes.

1.3 Available geohydrologic data.

1.4 History statement:

- 5 year: notices of violation received
- 5 year: enforcement proceedings (in agency)
- 5 year: litigations (in court, pending or threatened)
- 2 year: excursions from permit or contract limitations (reported and unreported)
- 2 year: spills (reported and unreported)

1.5 Facility capital plan.

1.6 Environmental controls capital and expense report for current, previous and next year.

2. FIRST MEETING:

2.1 Air.

2.1.1 Attainment and non-attainment designations for each pollutant.

2.1.2 Last emissions inventory and update:

- Company/Facility procedure for perpetual inventory

002047

2.1.3 Volatile organic compounds:

- Emissions by process and Facility total
- Control technologies in use and planned
- Current regulatory requirements
- Future regulations

2.1.4 Construction permits and applications for processes under construction and planned projects:

- PSD and non-attainment planning (monitoring)
- Offset opportunities

2.1.5 Operating permits and applications for ongoing processes and processes under construction:

- Monitoring effectiveness of control equipment

2.1.6 Reports to agencies: emission monitoring and compliance reports.

2.1.7 NESHAPS:

- Asbestos program and reports
- Applicability of other NESHAPS
- Impact of generic carcinogen standard

2.1.8 NSPS and CTGs:

- Which present and future standards apply?
- Participation in rulemaking

2.1.9 Non-point source emissions:

- Status of regulation
- Process fugitives
- Waste treatment facilities and ponds
- Cooling towers
- Landfills; coal piles

2.1.10 Incinerators.

002048

2.1.11 SIP:

- Status of revision
- New requirements/impact

2.1.12 Odor emissions.

2.1.13 Transportation control plan.

2.1.14 Alert/cutback/shutdown plans.

2.1.15 Facility problems, e.g. relations with neighbors.

2.2 Water.

2.2.1 Discharge permits and monitoring reports:

- NPDES Permits:
  .. update agency on new product or production data
  .. modifications which have been or should be requested
  .. signature authority
- Point sources and monitoring stations
- Non-permitted point sources:
  .. rain water
  .. sanitary sewers
  .. coal piles
- Renewals; BMP requirements
- New or modified facilities planned or under construction

2.2.2 Priority pollutants:

- Inventory of priority pollutants presently discharged and adequacy of data base
- Program to develop a reliable data base
- Regulation development
- Regulation impact

2.2.3 Conventional pollutants:

- BCT requirements, impact

002049

2.2.4 "Grey Area" pollutants (non-priority and non-conventional):

- Inventory of pollutants discharged:
  .. regulated (by law)
  .. non-regulated (subject to internal standards)
- Reductions in discharges required by regulation or planned internally

2.2.5 SPCC Plans:

- Oils
- Hazardous materials:
  .. what materials and quantities on site are on reportable quantity list?
  .. permitted point source exemption
  .. State chemical spill plan requirements

2.2.6 Description of receiving water:

- Classification
- Maximum pollutant levels allowable
- Pollutant levels upstream and downstream of plant (at a stated flow rate) and levels at 7Q10 conditions (estimated if necessary)

2.2.7 Discharges to POTW:

- POTW NPDES permit
- Contract, terms and conditions
- Local rules, restrictions, impacts (current and future)
- Federal pretreatment standards

2.2.8 Underground tanks:

- Condition and design
- Groundwater monitoring

2.2.9 Deep wells:

- Permits
- Flow rates, pollutant concentrations (BOD, COD, pH, TSS, TDS, Compounds)
- Availability of surface treatment

2.2.10 Water conservation:

- R & D activity
- Current and future requirements

2.2.11 Wetlands:

- Identification
- Construction, discharge or dumping permits

2.2.12 EIS:

- Previous EIS submittals
- Presently required submittals and status

2.2.13 TSCA 8(e) and CWA 311:

- Incidents reported/reports pending:
  .. on-site
  .. off-site
  .. during transport after leaving Facility
- Excursions reported, not reported

2.2.14 Potable water supply:

- Permits and monitoring reports

2.2.15 Analytical references on hand for wastewater.

2.2.16 Relations with neighbors:

- Surface runoff onto Celanese property
- Chemical waste disposal by others in vicinity

2.2.17 Operation of Treatment Plant:

- Immunization against typhoid and tetanus
- Power loss
- Treatment bypasses

002051

2.3 Land Disposal.

2.3.1 Inventory of "hazardous wastes" being generated, including wastes that:

(a) Are likely to be hazardous as defined in RCRA regulations (whether sold or discarded);
(b) Are not included in (a) but are hazardous in the judgment of Facility or company (whether sold or discarded).

Included land disposal methods are landfills, ponds, lagoons, tanks, incineration, land farming and other disposal techniques.

- For each waste stream listed include:
  .. source
  .. generation rate
  .. composition
  .. transport method

2.3.2 Control of hazardous wastes at Facility:

- Roles of Purchasing and Environmental Manager in:
  .. control on materials brought into Facility
  .. control on selection of disposal method

2.3.3 Active Celanese sites (i.e., Celanese owned or leased):

For each site:

- Inventory of wastes presently in site
- Inventory of wastes currently flowing to site
- Site design/location:
  .. size
  .. permeability and thickness of soil beneath site
  .. distance between bottom of site and groundwater
  .. leachate control
  .. groundwater monitoring
  .. proximity of drinking water or process water wells
  .. remaining life

- Site operation:
  .. operator capability
  .. organizational responsibilities
  .. daily cover
  .. record-keeping
- Permits
- Impact of RCRA regulations
- Relations with agencies, community and press
- Sources of Celanese knowledge

2.3.4 Inactive Celanese sites:

For each site:

- Period of use by Celanese
- Inventory of wastes presently in site
- Site design/location:
  .. size
  .. permeability and thickness of soil beneath site
  .. distance between bottom of site and groundwater
  .. leachate control
  .. groundwater monitoring
  .. proximity of drinking water or process water wells
- Likelihood of leachate containing groundwater
- Surface water run-off contamination
- Present management of site
- Permits, record-keeping
- Impact of regulations
- Relations with agencies, community and press
- Sources of Celanese knowledge

2.3.5 Inactive sites formerly owned or leased by Celanese (include sites on facilities sold to others):

For each site:

- Period of use by Celanese
- Present owner
- Present use of site
- Inventory of wastes presently in site

002053

- Site design/location:
  - .. size
  - .. permeability and thickness of soil beneath site
  - .. distance between bottom of site and groundwater
  - .. leachate control
  - .. groundwater monitoring
  - .. proximity of drinking water or process water wells

- Likelihood of leachate containing groundwater
- Surface water run-off contamination
- Present management of site
- Permits, record-keeping
- Impact of regulations
- Relations with agencies, community and press
- Sources of Celanese knowledge
- Knowledge of present owner about site history and requirements for safe operation
- Financial responsibility of present owner
- Celanese legal liability; contracts

2.3.6 Inactive sites always owned by others, sometimes used by Celanese:

- Period of use by Celanese
- Present owner
- Present use of site
- Inventory of wastes presently in site
- Site design/location:
  - .. size
  - .. permeability and thickness of soil beneath site
  - .. distance between bottom of site and groundwater
  - .. leachate control
  - .. groundwater monitoring
  - .. proximity of drinking water or process water wells

- Likelihood of leachate containing groundwater
- Surface water run-off contamination
- Present management of site
- Permits, record-keeping
- Impact of regulations

002054

- Relations with agencies, community and press
- Sources of Celanese knowledge
- Knowledge of present owner about site history and requirements for safe operation
- Financial responsibility of present owner
- Celanese legal liability; contracts

2.3.7 Active sites, owned by others, now in use by Celanese, including off-site incineration:

- Present owner
- Inventory of wastes presently in site
- Inventory of wastes currently flowing to site
- Site design/location:
  .. size
  .. permeability and thickness of soil beneath site
  .. distance between bottom of site and groundwater
  .. leachate control
  .. groundwater monitoring
  .. proximity of drinking water or process water wells
  .. remaining life
- Site operation:
  .. operator(s) capability
  .. organizational responsibilities
  .. daily cover
  .. record-keeping
- Permits
- Problems, past and future
- Impact of RCRA regulations
- Relations with agencies, community and press
- Sources of Celanese knowledge
- Knowledge of present owner about site history and requirements for safe operation
- Financial responsibility of present owner
- Celanese legal liability; contracts

2.3.8 RCRA "solid" (non-hazardous) wastes:

- Status of regulations
- Facility requirements to meet regulations

2.3.9 Disposal of used drums:

- Where and how
- Company policies
- Celanese legal liability; contracts

2.3.10 Disposal of spill waste.

2.3.11 Contracts, Purchase Orders:

- Written and unwritten
- Recommended formats
- Purchasing Procedures

2.3.12 PCBs:

- Labelling
- Annual document
- In use, in storage
- Disposal

2.3.13 Lab wastes.

2.4 General.

2.4.1 Procedure for agency inspections:

- Number and experience
- Rapport with agencies

2.4.2 Control of agency contacts:

- Record-keeping
- Submission of documents to agencies

2.4.3 Double-check procedures for monitoring reports:

- Outside lab checks (blind sampling)
- Internal review

002056

2.4.4 Facility internal audit systems:

- Need
- Design

2.4.5 Environmental awareness at Facility:

- Lab procedures
- Spill response
- Procedures for training
  .. environmental coordinators
  .. other employees

2.4.6 Corporate guidelines and policies:

- Need
- Dissemination at Facility

2.4.7 Company guidelines and policies.

002057

Celanese Corporation

Corporate-Company Industrial Hygiene Review Program

I. OVERVIEW

The Corporate Industrial Hygiene Program Review is a formal examination of the manufacturing and research facilities of Celanese Corporation and its subsidiaries on a biennial cycle.

The objectives of the review are as follows:

1. To evaluate compliance with current and proposed OSHA standards and Celanese internal standards (related to Industrial Hygiene).

2. To review the overall industrial hygiene monitoring program and to assess employee exposure to chemical and physical agents.

3. To review other factors such as training, future planning, analytical capabilities, industrial hygiene aspects of medical surveillance, etc.

4. To develop key action items with plant and operating company with regard to Objectives 1-3.

5. To identify those areas where direct assistance by Corporate Industrial Hygiene may be required.

The review will be an evaluation of the plant's industrial hygiene programs, policies, procedures and problems. Specifically the items on Attachment A will be evaluated. Areas requiring additional assistance from the corporation will be identified.

The plant will issue a report on specific action items that come out of the review. Highlights of the review will be given to the plant manager and his staff during an exit interview. A mechanism and timeframe will be defined by which the plant and operating company will periodically report on progress made in achieving the action items.

II. PARTICIPATION

To assure the complete effectiveness of each program review, the following participation is recommended:

* a. Corporate Industrial Hygienist.

** b. Company Industrial Hygienist and/or Company Safety Manager (depending on primary responsibility for Industrial Hygiene).

* c. Plant Industrial Hygienist (or person with equivalent responsibility).

* d. Plant Safety Professional - To review overlapping responsibilities.

* e. Plant Industrial Relations Manager - To review company-employee information transfer and training.

* f. Company and/or Corporate Medical Director.

* g. Plant Nurse

h. Plant Manager - To review findings, recommendations and future action.

* i. Law Department Representative.

j. Other company personnel at the discretion of the company.

* Review Team ** Team Coordinator

III. PROCEDURE

1. Advance preparation - In order to facilitate the review, the plant I.H. should assemble available information on the following:

a. Facility IH program, policy, and organization.

b. History statement of recent OSHA citations or local citations or violations.

c. Facility capital plan.

d. IH controls capital and expense report for current, previous, and coming year.

e. Process flow sheets; listings of raw materials, products, by-products.

f. IH SOPs related to controlling specific exposures.

g. Representative exposure data.

PROCEDURE (Cont'd)

2. On-site IH review - The review should take 1 to 2 days, depending upon size of operation and complexity of issues.

    a. With the plant manager (and/or his staff) discuss the review process and objectives.

    b. Walk-through survey of facility, including manufacturing, laboratory, and maintenance shop area.

    c. Review of Program Components Checklist by Review Team (Attachment A).

    d. Formulation of Action Items List, in order of priority, with assignment of responsibility for each item, a timetable for achieving the items, and a schedule for follow-up reports from the plant. Distribution should include operating company, IH and Safety personnel, Corporate DEHSA, and Law Department.

3. Follow-up - The plant will have primary responsibility for issuing quarterly follow-up reports until all the action items are completed. Distribution of the reports will be the same as for the Action Items (item 2(d)).

ATTACHMENT A (I.H. REVIEW CHECKLIST)

I. Plant Policies and Procedures Used to Implement the Industrial Hygiene Program

A. Organization of Industrial Hygiene Functions

B. Industrial Hygiene Policy

C. Plant Administrative Procedures for Industrial Hygiene

II. Specific Industrial Hygiene and Related Plant Programs

A. Chemical Hazards Industrial Hygiene Evaluation

1. Recognition and Evaluation of chemical exposures.

2. Monitoring/Analysis Program.

3. Interpretation of Monitoring Results, including Interpretative Statements.

4. Control Strategy.

5. Reporting of Sampling Results

a. Management

b. Employees

c. Contractors

B. Health Surveillance Program

1. Policy and Procedures

2. Specialty Chemical Physical Examination

3. Audiometric Examination Program

4. Chemical-Related Illness and Injury Reports

C. Hearing Conservation Program

1. Industrial Hygiene Responsibility

2. Engineering Control Strategy

3. Administrative Controls and Work Practices

D. Respiratory Protection Program

1. Review of Policies and Procedures
2. Industrial Hygiene Responsibility
3. Equipment Selection Criteria
4. Maintenance
5. Enforcement/Discipline

E. Radiation Control Program

1. Industrial Hygiene Responsibility
2. Radioactive License Material Maintenance

F. Heat Stress

1. Recognition and Evaluation
2. Monitoring and Analysis Program
3. Interpretation of Monitoring Results, including Interpretation Statements.
4. Control Strategy
5. Reporting of Sampling Results

G. Ergonomics

1. Recognition and Evaluation
2. Monitoring and Analysis Program
3. Interpretation of Monitoring Results, including Interpretation Statements
4. Control Strategy
5. Reporting of Sampling Results

H. Training Programs

I. Recordkeeping

J. Industrial Hygiene Involvement and Responsibility in Emergency Situations

K. OSHA Inspection Protocol

L. Mechanisms by which plant responds to anticipated regulatory trends and actions.

III. Procedures To Anticipate, Recognize, Evaluate, and Control Potential Industrial Hygiene-Related Problems.

A. New Process Evaluation and Design Review

B. Process Raw Material, Intermediates, and Product Hazard Evaluation

C. Purchase Chemical Review and Approval

D. Process and Work Practice Review and Hazard Update Procedures.

E. Hazard Notification from Supervision

F. Employee Input

G. Capital Plan breakdown for anticipated process changes and installation of engineering controls.

IV. What Specific Health Hazard and Industrial Hygiene-Related Problems and Exposures Have Been Identified and What Is Being Done To Evaluate and Control Them?

V. Is There Any Assessment of Overall Program Compliance with Respect to OSHA, Company, Corporate, and Plant Regulations or Guidelines?

A. OSHA 200 Log Entries

B. Non-reportable incidents

C. Employee exposure-related complaints (e.g., irritations, dry skin, headache, etc.)

D. OSHA Inspections

E. Previous Program Reviews

CELANESE CORPORATION

CORPORATE-COMPANY SAFETY, SECURITY & FIRE PROTECTION

REVIEW PROGRAM

I. Overview.

Because of the increasing complexity of governmental regulation, Celanese adopted in 1979 a more formalized program of regular facility visits for consultation among corporate, company and facility staffs.

The consultation includes two major elements:

1. Compliance of present operations with regulations and Celanese policies;

2. Planning for future trends in regulations and Celanese policies.

Approximately 10 to 15 Celanese facilities will be visited during 1980 and each year thereafter. Where there is a company safety manager, he will help set priorities for and coordinate visits. Corporate staff will be represented by the Director or Manager of Safety, Security and Fire Protection.

These reviews should take 1 to 3 days, depending upon size of operation and complexity of processes.

II. Procedure

1. Opening Conference at Facility. The plant manager or his representative will be briefed on the purpose and scope of the program review. Participants should include facility safety personnel, company safety manager (where appropriate), corporate director or manager of safety, and others as facility desires.

   Subjects reviewed will include past recommendations, capital plan, and compliance problems.

2. Closing Conference at Facility. This meeting will take place at the conclusion of the facility program review. Participants should include facility manager and other staff at facility manager's discretion, in addition to those at first meeting. Findings of program review will be reviewed and an action plan agreed upon. Facility safety personnel will issue the agreed action plan to resolve identified problem areas. The plan should be in the form of a report to the facility manager with copies to review participants and others at facility manager's discretion. Follow-up reports should follow the same format, and be issued quarterly until all action items are completed.

1. Fire Protection

1.1 Hazard Control References:

- Are NFPA Codes and Corporate Administrative Procedures being implemented?
- Have additional plant SOP's been promulgated, reviewed with employees involved and implemented?

1.2 Handling Flammable and Explosive Material:

- Do storage facilities meet or exceed appropriate fire engineering requirements?
- Do containers (regardless of size) carry name of contents?
- Is all dispensing equipment UL and/or FM approved and is bonding and grounding equipment in use?
- Is the supply of flammable, toxic or other hazardous materials at work area limited to one day requirements?
- Is a strong policy in evidence relative to the safe handling, storage and use of materials?

1.3 Human Element:

- Is a systematic checklist of fire protection and safety equipment used during routine plant safety inspections?
- Are inspections and tests of fire protection and safety equipment properly documented according to Celanese, insurance carrier and governmental requirements?
- Are procedures to cover responsibilities of the plant emergency brigade in writing and fully implemented?
- Is regular periodic training of brigade members, with backup personnel provisions, being provided at Texas A&M, Celanese Fire Training Center, or the equivalent, at least annually?
- Is handling and reporting of fire protection impairments and implementing of safety precautions in accordance with Celanese and insurance carrier guidelines?

1.4 Fire Protection Systems:

- Are water supplies adequate considering pressure, volume and quantity in regard to the fire protection needs of the plant?

- Is testing and maintenance of fire pumps documented according to Celanese, insurance carrier and NFPA requirements?
- Has sprinkler system been analyzed and does it provide adequate protection for each area in question?
- Are foam systems provided with adequate reserve, and are employees trained in the use of foam as an effective means to control and extinguish fires?
- Is the design and location of CO_2 Halon and other extinguishment systems utilized for maximum protection results?

1.5 Fire Control:

- Are damage limiting construction materials being used in areas where a fire and/or explosion potential exists?
- Is adequate protection provided against materials or processes that create an exposure due to fire or explosion as prescribed by Celanese and NFPA guidelines?
- Are SOPs posted in appropriate areas?

2. Safety

2.1 Organization and Administration:

- Are loss prevention policy and responsibilities assigned and reviewed annually with emphasis on responsibility and accountability in supervisory performance evaluation?
- Are all hazardous operations covered by appropriate procedures posted at the job location? Is an annual review conducted regarding documentation to determine adequacy?
- Does management review all injury and property damage reports and hold supervision accountable for verifying firm corrective measures?
- Do written procedures for all types of emergencies exist, with controlled testing of plans, as set forth in Celanese Administrative procedures?

2.2 Industrial Hazard Control:

- Is housekeeping and storage of materials ideally controlled eliminating aisle storage?
- During process design, is personnel safety given prime consideration?
- Are machine hazards effectively controlled to the extent injury to employees is minimized?
- Are controls for both hand and mechanized handling of materials in effect with measures to prevent conflict between other workers and materials being moved?
- Is the preventive maintenance system programmed for hazardous equipment and devices, to insure safety features are inspected, tested and repaired, if necessary?
- Are safety records maintained, reports filed, and safety department consulted for corrective action when abnormal conditions are found?
- Does personal protective equipment comply with OSHA, NFPA and Celanese standards? Is the use of this equipment an employment requirement?

2.3 Accident Investigation, Statistics and Reporting:

- Does line supervision make complete and effective investigations of all accidents: the cause determined, corrective measures initiated immediately and a completion date established?
- Are accident cause and injuries graphically illustrated to develop the trends and evaluate performance?
- Is an investigation conducted of every accident within 24 hours of occurrence with reports subsequently reviewed by department and plant manager? Are reports forwarded to company and corporate safety offices?
- Is a close liaison maintained between the insurance carrier and plant management?

2.4 Supervisory Participation, Motivation and Training:

- Do supervisors participate in division safety training sessions a minimum of twice a year?

- Is a formal indoctrination program in effect for the orientation of new employees?
- Is job safety analysis performed on a regular basis and conducted for all applicable operations?
- Is training for specialized operations given on a regular basis, evaluated annually, and revised if necessary?
- Are there now in effect internal self-inspections, made to identify and evaluate hazardous practices and/or conditions, with a written program outlining inspection guidelines, responsibilities, frequency and follow up? Are inspections documented in files?
- Are the safety displays and demonstrations used on a regular basis and are they keyed to special themes?

3. Boiler and Machinery

3.1 Equipment Controls:

- Do controls and safety devices meet or exceed appropriate standards per NFPA or other jurisdictions having authority?
- Is operator training accomplished on a continuing basis, with emphasis on emrgency procedures?
- Is a complete record maintained of the operating conditions of all boilers, pressure vessels, rotating equipment, etc?
- Are safety tests performed and recorded as scheduled, according to the appropriate guidelines set forth by NFPA or other jurisdictions having authority?

3.2 Preventive Maintenance Programs and Documentation:

- Is preventive maintenance being practiced with scheduling and recordkeeping integral parts of the system, as prescribed by ARM, FM and Celanese procedures?
- Are tests and inspections conducted on all electrical and mechanical equipment to detect conditions that are below appropriate requirements?

3.3 Corrosion and Vibration Control:

- Does the plant maintain appropriate inspection equipment and/or contract for inspections by an outside agency?

- Are plant personnel or an outside agency qualified to examine equipment?
- Are inspections recorded and reviewed with appropriate corrective action applied?

3.4 Process Hazards Review:

- Does a program exist to solve safety problems using a cause and effect pattern of sequential events?
- Does a review occur whenever a new project or modification is planned?
- Are plant personnel trained in systems safety analysis and review?
- Does the review group include a representative from each of the functions concerned with the operation to be analyzed?

3.5 Nondestructive Testing:

- Is nondestructive testing used by the plant as a regular part of planned maintenance programs?
- Are company and/or outside specialists in nondestructive testing being used to augment plant personnel?

4. Security

4.1 Perimeter Protection:

- Is the security fence inspected regularly for proper maintenance (holes, breaks, posts down, etc)?
- Are No Trespass signs properly posted?
- Is adequate lighting of perimeter and internal critical areas provided and checked regularly?
- Are vehicles parked outside and not less than 6' from fence?
- Is adequate lighting provided in parking areas? (5fcp)
- Is patrol of perimeter areas in effect?
- Are adequate emergency vehicle entrances unobstructed and available for access during fire or other emergencies?

4.2 Lock Security:

- Is there a key control officer designated?
- Are locks changed immediately upon loss or theft of key?
- Are locks on inactive gates or storage areas under seal - checked periodically?

4.3 Protective Lighting:

- Are lights checked for proper operation prior to darkness?
- Do light beams overlap to provide coverage in case a bulb burns out?
- Is there a dependable auxiliary source of power for emergency lighting?

4.4 Access Control/Personnel Identification:

- Are identification cards or badges used to identify all personnel within the confines of the facility? Controlled issuance of this identification media adequate?
- Are badges not in use adequately secured?
- Are proper sign in/out logs maintained at guard entrance - reviewed regularly by management?
- Is there a materials gate pass in effect and adequately monitored?

4.5 Guard Force:

- Is the number of guards provided adequate for conditions and needs?
- Does the selection of guards assure proper personnel based upon qualifications for the job? (age, physical, mental, education, background).
- Is training of guards sufficient to carry out duties and responsibilities properly?
- Is the system of supervision adequate to provide the plant with the measure of security appropriate for the risks involved?

4.6 Theft Control:

- Are investigations conducted to determine causes of losses of tools, equipment, materials, etc?
- Are investigation reports prepared on all thefts?
- Is there a program in effect to prevent pilferage, sabotage or other significant losses to the plant?

4.7 Emergency Communications:

- Are emergency telephone numbers posted on all telephones?
- Has an alternate means of internal/external communications been established? (mobile radios, walkie-talkies)

4.8 Law Enforcement Agencies:

- Has liaison with local agencies been established? (police, sheriff, F.B.I.)
- Are any members of any of the above agencies periodically invited to the facility to familiarize them with plant layout and introduction to plant management?

4.9 Use of Specialized Equipment:

- Is closed circuit television (CCTV) utilized in critical areas where guard force cannot physically monitor?
- Are special security locks and keys available to secure storage areas or equipment which contain high value items or sensitive (confidential) data? (computer rooms, valuable catalyst storage, process drawings, etc)?

4.10 Security Training:

- Are any plant personnel (other than security guards) instructed periodically on procedures for self-security audits?

- Are these personnel instructed on any of the following subjects:

  1. Bomb Threat Procedures? (controlled evacuation, search). Has responsibilities and authority for making decisions on the conduct of search and on plant evacuation been clearly defined?

  2. Immediate emergency repairs:

     a. Internal

     b. External

  3. Fire fighting organization response.

  4. Disaster planning

  5. Refresher courses:

     Are they provided on a regular bases, preferably on six to twelve month cycles?

CELANESE CHEMICAL COMPANY, INC.
DALLAS, TEXAS

MRS-51-79
Questions and Answers Relating to Exposure Zones

BAY CITY
DG BREMER
LE HACKFELD
DH MILLER

CJ SCHAEFER
CW WHALEY

BISHOP
AR HANCOCK
CW HARRISON
G ILLE
RW JAMES
MP NEFF
KA ROSE
PM SYKES

CCCTC
RA GANGEMI
RM GUEDIN
JP HAWTHORNE
ES RAMEY

CHARLOTTE
AG HOLTON
TE RICHARDSON
RV TAYLOR

CLEAR LAKE
KF BAILEY
JJ BRUNER
CR DEROSE
JW DUNN
RE GREEN
JR LAIRD
JL WARD

DALLAS
CD BARRETT
RE LARSEN
BA MELAAS
RW SWANBECK
GA VOS

NYO
LR BIRKNER
CS LAUBLY

PAMPA
CE LOEFFLER
KL LOMBARDOZZI
AA MILLER
HA THOMAS
WH TUKE
JD WILSON

CC: CCCTC
RD DAMRON
GJ FISHER

CC: DALLAS
BL PRITCHARD

CC: NYO
EM DIXON
MJ SAMEK
L STARR