DOW CHEMICAL U.S.A.
LOUISIANA DIVISION - PLAQUEMINE, LOUISIANA
SOLVENTS / EDC 1

OSHA 29CFR 1910.1200
HAZCOM PROGRAM
(HAZARD COMMUNICATIONS - RIGHT TO KNOW)

OSHA 29CFR 1910.120
HAZWOPER PROGRAM
(HAZARDOUS WASTE OPERATIONS AND
EMERGENCY RESPONSE)

1991

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OSHA 29CFR 1910.1200
SOLVENTS / EDC 1

In accordance with OSHA 29CFR 1910.1200, the Dow Chemical U.S.A. Louisiana Division SOLVENTS / EDC 1 plant has instituted a "written" Hazard Communications Program.

The program is administered by a number of people that have the necessary access to resources and information needed to execute the elements of the program. These people include, but is not limited to; plant technical staff, supervisors, safety, health, industrial hygiene, training and environmental personnel.

The SOLVENTS / EDC 1 plant program is incorporated with the program of the Dow Chemical Company Louisiana Division.

All work units of the company will participate in the Hazard Communications Program. This written program will be available in the SOLVENTS / EDC 1 control room for review by any interested employee.

SOLVENTS / EDC 1 PROGRAM OUTLINE

OSHA 29CFR 1910.1200 HAZCOM

I. COMPANY POLICY
II. IN-PLANT LABELING POLICY
III. MSDS (MATERIAL SAFETY DATA SHEET) OR EQUIVALENT
IV. EMPLOYEE TRAINING AND INFORMATION SYSTEM
V. HAZARDOUS ROUTINE TASKS
VI. CONTRACTOR INFORMATION
VII. LIST OF HAZARDOUS MATERIALS

OSHA CFR29 1910.120 HAZWOPER FOR RCRA TSD FACILITIES

VIII. LIST OF HAZARDOUS WASTE
IX. HAZARDOUS WASTE AREAS (MAP ATTACHED)
X. MEDICAL SURVEILLANCE PROGRAM
XI. DECONTAMINATION PROCEDURES
XII. NEW TECHNOLOGY
XIII. HAZARDOUS MATERIAL HANDLING
XIV. HAZWOPER TRAINING
XV. HAZWOPER EMERGENCY RESPONSE

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I. COMPANY POLICY

To insure that information about the dangers of all hazardous chemical used in the plant are known by all affected personnel, the following information programs have been established;

OSHA HAZCOM training and film "What's it All About"
Consequences of Exposure to Toxic Amounts training
Hazardous Chemical Review
Proper packaging of hazardous waste training and film
Industrial Hygiene Review
Monthly safety meetings
Daily 5 minute "Tailgate" safety meetings
Annual "RCRA" training class
Annual "TSCA" training class
Plant indoctrination film and test
Personal Protective Equipment Training

II. IN PLANT LABELING POLICY

CONTAINER LABELING

The Senior Lab Specialist will verify that all containers received for use will be clearly labeled as to the contents, note the appropriate hazard warnings, and list the name and address of the manufacturer. The Senior Lab Specialist will also insure that all secondary containers are labeled with either an extra copy of the manufacturers label, or with a label that properly identifies the material and the appropriate hazard warnings. For help with labeling problems or questions, contact the Senior Lab Specialist.

ALTERNATIVE CONTAINER LABELING PROGRAM

Any material transferred from a labeled container to any other container need not be labeled as long as the person that makes the transfer uses the material transferred, and then disposes of the contents of the container and the container itself. The possession of the container cannot be transferred to any other persons possession without the appropriate labeling being attached to the container.

The Senior Lab Specialist will review the container labeling policy once a year and update it as required.

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EQUIPMENT LABELING

All equipment in the plant that contains hazardous materials will be labeled in the following manner;

Tanks, vessels, process drums, exchangers, columns, incinerators, reactors, etc., will have the DOW equipment number stenciled on to it in a paint of contrasting color from the equipment. Pumps and compressors will have the DOW identification number on a signboard attached to the field switch.

III. MATERIAL SAFETY DATA SHEETS (MSDS)

The Environmental Specialist is responsible for establishing and monitoring the plant MSDS program, and for insuring that procedures are developed to obtain the necessary MSDS's. The Environmental Specialist will review all MSDS's annually to insure that they are current and for new or significant health or safety information. All new or significant information must be passed on to all affected employees.

ALTERNATIVE MSDS PROGRAM

In lieu of MSDS's, DOW TIME (Toxicology, Industrial Hygiene, Medical, Environmental) Data sheets may be substituted. Other exposure information may be obtained from the CETA (Consequences of Exposure to Toxic Amounts) Data sheets.

Information data sheets of all types will be kept in the plant control room and are available on a continuous basis.

IV. EMPLOYEE TRAINING AND INFORMATION

The Training Supervisor and the Environmental Specialist are responsible for the plant training program. They will insure that all of the elements of the program specified below are carried out.

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NEW EMPLOYEES

New employees, prior to starting work, are required to complete training in each of the following;

A. An overview of the requirements of the Hazard Communication Standard.
B. Hazardous Materials present in the plant.
C. Physical and Health risks of the Hazardous Materials.
D. The symptoms and consequences of exposure to toxic materials.
E. How to determine the presence of or the release of Hazardous Materials.
F. How to reduce or prevent exposures to Hazardous Materials through the use of control procedures, work practices, and personal protective equipment.
G. Steps the plant has taken to reduce, control, or prevent exposure of employees to Hazardous Materials.
H. Procedures to follow if employee's are exposed to toxic amounts of hazardous materials.
I. How to read labels and MSDS's to obtain hazard information.
J. The location of the HAZCOM MSDS's and written program.
K. Line and equipment opening procedures.
L. Red tag procedures.
M. OSHA lockout/tag out of electrically powered equipment.
N. Operating or working on electrical equipment.
O. Portable ladder safety.
P. JLG manlift an forklift training.
Q. Respirator fit testing and training.
R. Fire fighting training.
S. Responding to emergency situations.
T. HAZWOPER.
U. RCRA.
V. TSCA.
W. Emergency Response duties.

In addition, all new employees are required to pass a complete physical exam prior to starting work.

CURRENT EMPLOYEES

Current employees are required to attend annual training classes on all of the above listed programs. In addition, they also must continue training and evaluation in the operations aspects of the plant.

All employees are required to pass a complete physical exam every two years and are requested to submit to partial physical exam annually.

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V. HAZARDOUS NON-ROUTINE TASKS

Periodically employees are required to perform hazardous non-routine tasks. some examples are;

Confined space entries (vessel entry)
Tank cleaning
Painting reactor vessels

Prior to starting work on such projects, each affected employee will be given information by qualified personnel about the hazardous materials that they may encounter during such activities. This information will include specific chemical hazards, personal protective equipment use and training, safety equipment use and training, safety procedures and measures, and steps the plant is taking to reduce the hazards involved with the task. Such steps include, but are not limited to, ventilation, respirators, safety observers, hole watchers, and emergency procedures.

VI. INFORMING CONTRACTORS

It is the responsibility of qualified plant personnel to provide contractors with information about the hazardous materials in the plant that their employees may be exposed to. This information will include the precautions needed for the protection of the employees.

Outside companies contracted for work must be contacted before the work is started to gather and distribute information concerning the hazards of any materials they may or will bring into the plant.

VII. LIST OF HAZARDOUS MATERIALS

A listing of all hazardous materials used in the plant is located in the SOLVENTS / EDC 1 HAZARD COMMUNICATION MANUAL. The manual is located in the plant control room, BLDG. 1617. The hazardous material list is cross-referenced with the plant equipment list and the MSDS list to facilitate the distribution of hazard warnings.

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VIII. LIST OF HAZARDOUS WASTE
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(2)

Hazardous waste is generated in the plant as a byproduct of product manufacturing. These waste are normally specific in nature and are RCRA regulated. Hazardous waste can be generated from all areas of the plant.

Solid Waste Streams - A listing of all solid waste streams is kept in the HAZCOM Manual.

Liquid Hazardous Waste Streams - A listing of the liquid hazardous waste streams is kept in the SOLVENTS / EDC 1 RCRA PERMIT book. This book is located in BLDG. 1701 in the file room. The list includes, but is not limited to, RCRA hazardous waste codes, compositions of waste streams, and origin and disposal points. The list is formatted as a RCRA HAZARDOUS WASTE ANALYSIS PLAN of the RCRA Permit.

Solid Hazardous Waste Streams - A listing of the solid hazardous waste streams is kept in the HAZCOM Manual.The list includes, but is not limited to, RCRA hazardous waste codes, compositions of waste streams, and origin and disposal
points. The list is formatted as a DOW CHEMICAL LOUISIANA DIVISION UNIFORM (HAZARDOUS) WASTE CHARACTERIZATION.

Procedures for proper handling and disposal of waste streams are located in the plant computer system (PDP 11 LASLP1 / LASLP2) and are communicated to employes frequently throughout the year.

IX. HAZARDOUS WASTE STORAGE AREAS

There are several areas in the plant designated for hazardous waste storage, both temporary (< 90 day) and permitted.

< 90 Day Areas

Container area # 1 - north block 17
Container area # 2 - southeast block 16
Container area # 3 - northwest bldg. 1703 block 17

< 90 Day Tanks

T-106 - north block 17
D-42B - southeast block 16

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Permitted Tanks

D-13 - block 16
D-15 - block 16
D-92A - southeast block 16
D-700 - southeast block 16
D-701 - southeast block 16
V-201 - northwest block 16
T-749 - northwest block 16

NOTE : MAP ATTACHED

X. MEDICAL SURVEILLANCE PROGRAM
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(3)

Employees are required to wear respiratory protection for more than 30 days per year which subjects them to the Medical Surveillance requirements of paragraph P, section 3, 29CFR 1910.120 HAZWOPER. All employees are involved in a biennial medical surveillance program that meets the requirements of this regulation. In addition to the biennial program, employees are requested to submit to annual blood chemistry tests and audiograms.

XI. DECONTAMINATION POLICY
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(4)

The plant decontamination procedure for clothing is found in the plant clothing policy.

The plant decontamination procedure for equipment normally follows the following steps.

1. Red tag equipment
2. Empty contents as best physically able through draining, pumping or purging.
3. Some equipment requires flushing with a compatible solvent to decontaminate.
4. Some equipment requires purging with air or nitrogen to decontaminate.
5. Some equipment requires washing with water to decontaminate.
6. Liquid residues may be removed by mopping with absorbant materials.
7. Decontaminated equipment leaving the plant must be proved to be decontaminated by analytical testing. A DOW decontamination tag must also be attached.

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Most of the equipment decontaminated is done so using the above methods. However, some equipment require special procedures and these are developed on an as needed basis.

Tools may be decontaminated by water washing, solvent washing, or by removing residues via absorbant materials. All tools that can not be decontaminated are discarded and properly disposed of.

XII. NEW TECHNOLOGY
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(5)

Continuous monitoring of appropriate discipline literature is conducted in order to stay abreast of technological developments. Those developments deemed applicable will be implemented on an as needed basis. A DOW Technology Center that specializes in the incineration of hazardous waste also provides guidance.

XIII. HAZARDOUS MATERIAL HANDLING
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(6)

Hazardous Material Handling is covered in the plant policy concerning this.

NOTE: SEE ATTACHED

XIV. HAZWOPER TRAINING
REFERENCE HAZWOPER CFR29 1910.120 PARAGRAPH (P)(7)

1. Annual HAZWOPER training is conducted and documented as per the requirements of OSHA 29CFR 1910.120. The training includes some or all of the following:

   a. Explanation of the HAZCOM Standard.

   b. Hazardous Material Handling and Decontamination

   c. Emergency Contingency Plan

   d. Respirator Fit Testing and Training

   e. Safety Equipment Training

   f. RCRA Training

   g. Industrial Hygiene Review

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h. Department Daily and Monthly Safety Meetings

i. Pre-job review (Job Specific)

k. HAZWOPER Proficiency Test for Annual Certification

The above represents safety and health training annually exceeding the minimum 8 hour requirements.

2. New employees, in addition to the above, are required to accumulate 24 hours training in safety and health prior to specific department required training. They are then given written certification attesting to the fact that they have successfully completed the necessary training.

XV. HAZWOPER EMERGENCY RESPONSE TRAINING
REFERENCE HAZWOPER 29CFR 1910.120 PARAGRAPH (P)(8)

All employees are trained to be able to identify releases of hazardous materials and to notify the proper personnel in the event of such releases. Personnel trained to this level would be required to evacuate the plant site during an emergency.

Operations personnel are trained under the requirements of the Emergency Contingency Plan of the RCRA permit for the plant. Emergency Drills are conducted on a quarterly basis to insure that operations personnel are competent in the required procedures. Each operations shift annually conducts 1 "walkthrough" (simulated) drill and 3 written drills. All simulated emergency drills are observed and critiqued by qualified safety and health personnel and reviews of the written drills are also done.

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