PLAINTIFF'S EXHIBIT
UC-1735

# PLANT SAFETY AUDIT GUIDE

Remarks

## A. Organization and Administration

1. How is the plant manager involved in the formulation and administration of safety policies and practices?

2. Is the safety responsibility and accountability clearly defined at each management level?

3. What is the organizational structure of the plant safety and security groups?

4. Describe established plant safety committees.

5. Are measurable plant objectives stated in writing? How are they communicated?

   (Note: If available obtain copies of pertinent organizational charts)

## B. Safety Programs and Activities

1. Is the plant safety policy clearly displayed?

2. Are safety meetings held periodically with all employees? Describe.

   a. What records are kept?

   b. How is subject matter developed?

3. What is the program for investigating injuries?

   a. Do supervisors investigate all injuries to their employees and prepare a report on each incident.

   b. What is the procedure for investigating and reporting disabling injuries, other serious injuries, and near misses?

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4. Is the injury experience analyzed?

   a. What are the major causes of accidents?

   b. What are the trends in the serious injury and disabling injury frequency rates?

5. What are the programs for safety and housekeeping inspections?

6. Describe safety incentive or award programs.

7. How is the safety indoctrination system conducted for new or transferred employees?

8. Describe the safety training program for supervisory and technical personnel.

9. What is the current status of the Reactive Chemicals Program?

10. To what extent is Job Safety Analysis employed?

11. Describe the Hazardous Condition Report or Safety Suggestion Program.

12. Describe other safety promotions and activities such as -

    a. Non-process safety reviews

    b. Off-the-job safety.

C. Safety Rules and Procedures

1. Evaluate written procedures covering:

   a. Vessel entry

   b. Lockout

   c. Ladder safety

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d. Hazardous work permits

e. Master tag warning system.

f. Disaster planning.

2. What policies have been established for eye, head, and foot protection?

3. What safety procedures have been established to control contractors and other non-plant personnel.

4. What is the procedure for insuring priority attention to safety shop orders?

5. Are departmental safety rules prominently displayed?

D. Environmental Safety

1. Inspect and evaluate compliance with UCC design standards and safe practices for the following:

a. Pressure cylinders

b. Portable ladders

c. Fixed ladders

d. Temporary scaffolding

e. Building and structure exits and emergency escapeways.

f. Standard and emergency lighting

g. Platforms and stairs - toe plates, handrails, etc.

h. Machine guarding

i. Aisleways

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j. Grating

k. Eye baths

l. Safety showers

m. Other.

2. Are valves, control buttons and switches which are operated frequently readily accessible?

3. Are windows, which are exposed to potential explosion conditions, fabricated of safety glass, or equivalent?

4. Are good housekeeping practices evident?

5. Are maintenance work areas properly barricaded or roped off and warning signs posted?

6. Evaluate compliance with Walsh-Healey regulations concerning:

a. Radiation standards

b. Occupational noise

c. Dusts, vapors, and mists.

7. Evaluate the condition and location of personal protective equipment such as face shields, gloves, acid suits, self-contained breathing equipment, etc.

E. Process Safety

1. What major hazard surveys have been conducted? Review action plans and current status.

2. When plant revisions are made, how complete is the loss prevention review. (Pertains to new or changed equipment and to new or changed operating procedures.)

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3. Do all operating units have written operating procedures? Are they updated periodically?

4. Are unit emergency procedures clear and understood by all unit personnel?

5. Inspect and evaluate the following for compliance with UCC design standards and safe practices:

   a. Sight glasses

   b. Normal and emergency relief devices

   c. Equipment grounding

   d. Inerting

   e. Subsurface filling.

F. Fire and Explosion Control

1. Describe the fire fighting and rescue organization:

   a. Personnel and staffing

   b. Turnover

   c. Drills

2. Describe the fire fighting and rescue equipment:

   a. Mobile

   b. Stationary.

3. Describe liaison with the public fire fighting agency and/or the industrial mutual aid organization.

4. Describe the fire and emergency alarm system:

   a. Is alarm system audible throughout all plant locations?

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b. Is there an emergency power supply?

c. Are location booklets and plot plans available and posted?

5. Is there an up-to-date drawing prominently posted indicating location of fire service mains, hydrants, sprinkler systems, fire service water supplies and all valves in the fire protection system?

6. What is the program for inspecting, testing and maintaining fire protection facilities such as:

a. Sprinkler systems

b. Water spray systems

c. $CO_2$, dry chemical, steam, and halide extinguishing systems

d. Fire hydrants and hose houses

e. Hose cabinets

f. Reservoirs and elevated tanks

g. Fire pumps

h. Fire trucks

i. Portable fire extinguishers

j. Fire doors.

Are adequate records maintained of fire protective equipment inspections?

7. Are there potential hazards from non-plant sources?

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8. Evaluate bulk flammable liquid storage concerning:

   a. Layout

   b. Diking

   c. Drainage (including valves)

   d. Inerting

   e. Trash, weeds, grass, etc.

9. Evaluate drum handling and storage.

   a. Filling facilities and procedures

   b. Storage criteria.

10. Examine tank car and tank truck facilities concerning:

    a. Grounding

    b. Drainage

    c. Fixed protection

    d. Loading and unloading procedures.

11. Check proximity of flammables to potential and continuous sources of ignition.

12. Evaluate cable tray protection.

13. Review plant traffic control policy.

G. Test and Inspection

1. Review schedules and records for the inspecting, maintenance, and testing of the following safety devices and equipment.

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a. Relief valves

b. Rupture discs

c. Interlocks and alarms on direct fired equipment (boilers, Dowtherm heaters, etc.).

d. Fixed breathing air systems

e. Other.

2. Review procedures and records for the inspection, maintenance, and testing of hoists, elevators, and cranes.

3. What system is maintained for periodic inspection of:

a. Pressure vessels and reactors

b. Atmospheric tanks

c. Distillation columns

d. Heat exchangers

e. Other process equipment.

H. Electrical Distribution System

1. Transformer station and substation inspection:

a. Housekeeping

b. Oil level and temperature

c. Ground connections

d. Is the station protected from corrosive and flammable vapors? From plant vehicles?

2. Examine poles, guy wires, and overhead power lines with respect to:

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a. Fire exposure

b. Mechanical damage from traffic, maintenance and construction equipment.

3. Inspect motor control centers for cleanliness, ventilation, and equipment identification.

I. Security

1. Describe perimeter protection - fencing, patrolling, lighting, signs, etc.

2. Describe guard system, number of guards, and their duties.

3. What are the pass and admittance practices for employees and visitors?

4. How are automobiles, trucks, and railroad cars checked entering and leaving the premises?

5. What is the opportunity for unchallenged entry to the office area, laboratory area, or other plant area.

6. What emergency plans have been developed to maintain security in the event of civil disorder or other emergency?



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