

**GENERAL ELECTRIC COMPANY
NUCLEAR ENERGY BUSINESS GROUP**

**FIRE PROTECTION PLAN
VALLECITOS NUCLEAR CENTER
C-5**

**Plan Maintenance Responsibility;
Relations Services
April 1978**

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**FIRE PROTECTION PLAN
GENERAL ELECTRIC COMPANY
VALLECITOS NUCLEAR CENTER
Pleasanton, California**

1.0 PURPOSE

The purpose of this plan is to establish a program which will prevent fires at the Site, and if a fire should occur will minimize danger to personnel and damage to General Electric facilities. Authority for preparation of this plan is contained in NED OPG 100.5, dated March 15, 1976.

2.0 SCOPE

This plan is intended to provide guidance and instruction concerning fire fighting, fire prevention, fire protection equipment, alarm systems, and emergency equipment for all Vallecitos facilities.

3.0 FIRE FIGHTING

3.1 ORGANIZATION

3.1.1 Normal Work Hours

During normal work hours (8:00 a.m. to 4:30 p.m., Monday through Friday) the Building Emergency Control Team, under the direction of the Building Emergency Coordinator, is responsible for fire fighting in their building. The Site Fire Marshal and the Shift Fire Squad will respond to all fire alarms to assist the Building Emergency Control Team. Upon arrival at the scene, the Site Fire Marshal will assume command of fire fighting efforts and Building Emergency Team members will assist as directed.

3.1.2 Outside Normal Work Hours

Outside normal work hours (4:30 p.m. to 8:00 a.m., Monday through Friday and during weekends and holidays) the Shift Fire Squad, under the direction of the Emergency Operations Leader (GETR Shift Supervisor), is responsible for fire fighting in all areas of the Site. The Shift Fire Squad is composed of Reactor Plant operators, one of whom is designated as Captain. This squad will respond to all fire alarms with the fire truck and radiation detection instruments. Other General Electric employees who may be on Site shall assist the Shift Fire Squad as directed by the Captain. Members of the Custodial group shall report to the Captain at the scene of the fire. In addition, members of the Security Force shall assist as available without compromising the safeguarding of nuclear materials.

3.2 ACTION LISTS

3.2.1 Building Emergency Team Response

1. Sound alarm.
Dial 4211 and announce "Fire, Building ____." Identify yourself and give fire location as clearly as possible.

2. Ensure that HICON phone is attended by the Assembly Area Leader or alternate. Advise the Emergency Operations Leader of developments.
3. Attack fire with proper extinguisher and/or hose.

CAUTION:

DO NOT attempt to fight a fire involving radioactive material or chemicals unless wearing self-contained breathing apparatus (SCBA). Such equipment shall be operated in the pressure mode.

4. Rescue trapped or injured personnel.
5. Ensure building evacuation. If Site All Call is not heard to order evacuation, send team members or others through building and order evacuation.
6. station one person on access road near building entrance to direct the Shift Fire Squad to proper entrance to the affected area in building.
7. When fire is out:
 - a. Post fire watch to guard against flareup.
 - b. Evaluate extent of radioactive material hazards if applicable.
 - c. Start salvage action to limit loss.
 - d. In conjunction with Shift Fire Squad replace sprinkler heads as needed and restore sprinkler system to service.
8. Notify Emergency Operations Leader (GETR Shift Supervisor), when the emergency is "all clear."
9. Commence restoration of damaged area to operation with assistance of maintenance force.

3.2.2 Shift Fire Squad

When alarm is received at Control Room:

1. Repeat message to verify accuracy.
2. Evacuate building involved. Use Site All Call to announce: "ATTENTION, ATTENTION, FIRE IN BUILDING _____. ALL PERSONNEL IN BUILDING _____ EVACUATE THE BUILDING. GO TO YOUR ASSEMBLY AREA." Repeat once.
3. Man HICON phone. Verify that HICON phone in affected area is manned.
4. Dispatch fire truck. Ensure that additional radio is taken.
5. Test radio with fire truck while enroute. Leave sets on with volume turned up.
6. If outside assistance is needed, dial 9*862-2196 or 9*862-2197 Sunol Forestry Station. If fire is out of control tell them Mutual Aid is needed. Captain can contact Sunol on Channel 2 (154.235) of the radio in the fire truck.

7. Evaluate possibility of additional hazards as result of fire:

- a. Spread of contamination.
- b. Exposure to other buildings, utilities.

Based on this evaluation, commence protective measures.

8. Notify as soon as possible (considering urgent needs of immediate situation)

- a. Building Emergency Coordinator
- b. Site Fire Marshall
- c. Manager - IPO or alternate

9. When fire is under control:

- a. Fire Crew posts one member as fire watch in case of flareup.

10. Start salvage action to limit loss. Turn over to Building Emergency Control Team as they become available.

11. If sprinklers have operated, replace fused heads and restore sprinkler service in conjunction with Building Emergency Team members.

12. Evaluate extent of radioactive materials hazards if applicable.

Reports:

- a. Record actions taken.
- b. Notify management of status.
- c. Recharge SCBA cylinders that were used.
- d. Restore fire truck and equipment to ready condition.

3.3 OUTSIDE FIRE DEPARTMENT ASSISTANCE

3.3.1 California Division of Forestry (CDF)

The CDF station at Sunol is responsible for first response to alarms at VNC. Communication with the CDF station is by Pacific Telephone. The telephone numbers at the station are 9*862-2196 and 9*862-2197. Channel 2 of the fire truck radio is in the Twin Valley Mutual Aid Fire Net. The CDF (Sunol) is also on the net.

3.3.2 Twin Valleys Mutual Aid

Fire Departments of Livermore, Pleasanton, Lawrence Livermore Laboratory, Alameda County Fire Patrol, Valley Community Services District, U.S. Veterans Hospital, Camp Parks, San Ramon Fire District, Alameda County Sheriffs Department, and the California Division of Forestry comprise the Twin Valleys Mutual Aid association. Members of this association will respond to a major fire at VNC if requested by the CDF. VNC requests for Mutual Aid should be made through the CDF by telephone, as described above. If the telephone system at VNC is inoperative the base radio at the Central Alarm Station or the fire truck radio (channel 2) should be used to contact the CDF on the fire network frequency (154.235 MHz). The radio installed in the VNC fire truck is equipped to transmit and receive on the Site radio network (153.080 MHz) and on the county fire network (154.235 MHz). The VNC fire truck and/or squad are not expected to respond to

Mutual Aid calls off-Site since such response would leave the VNC Site without protection. VNC contribution to the Mutual Aid association is the provision of trained radiation monitors and detection equipment requested by other association members.

3.3.3 Calls for Mutual Aid Assistance

If, in the judgment of the Site Fire Marshal, Site Emergency Director, or Shift Squad Captain, a fire is large enough or has potential for involving more than one building, the CDF should be informed that Mutual Aid is needed. The CDF has radio contact with the Mutual Aid Dispatcher at the Lawrence Livermore Laboratory and will initiate Mutual Aid assistance.

3.4 FIRE IN RADIOACTIVE MATERIAL AREAS

Any fire in a Radioactive Materials area must be considered to have the potential for creating airborne particulate matter. Therefore, it is mandatory that self-contained breathing apparatus be worn. The turn-out coats, pants, boots, and gloves provided on the fire truck for the firemen will provide effective contamination protection. Caution should be exercised if it is necessary to fight a fire while wearing the standard radiation protection coveralls, or lab coats. Due to repeated laundering those items are easily burned.

4.0 FIRE PREVENTION

4.1 GENERAL

The primary purpose of this plan is to prevent fires by identifying and eliminating potential fire hazards, by periodic inspections and by implementing the recommendations which result from these inspections.

4.2 INSPECTIONS

Factory Mutual Engineering Division, as a service to both General Electric and to our underwriters, makes semi-annual inspections of the General Electric VNC facilities. The Fire Marshal or his representative will accompany the Factory Mutual inspector on all visits to the Site. Their recommendations will be submitted to the Manager-Facilities (VNC) and responsible Facility Managers who will take the necessary action to eliminate potential hazards.

4.3 RESPONSIBILITIES

4.3.1 Fire Marshal

The Fire Marshal shall periodically inspect all areas and recommend the necessary action to correct any hazardous conditions.

4.3.2 Area Managers

The operating managers have the ultimate responsibility to see that their areas are free of fire hazards. Periodic inspections should be made by managers, and corrective action taken as necessary.

4.3.3 Building Emergency Control Teams

Members of the teams should be continually on the alert for potential fire hazards, and should report such hazards to their manager and to the Fire Marshal who will investigate the hazard and recommend corrective action to be taken. Monthly inspections shall be made by the teams as required by VNC Site Instruction 90-3.

5.0 FIRE PROTECTION EQUIPMENT

5.1 GENERAL

The Fire Marshal shall ensure the availability of adequate fire protection equipment and shall approve all material requests for fire protection items.

Area managers shall ensure that adequate fire protection and equipment is provided for their area. They shall report any changes in area needs for fire protection or equipment to the Fire Marshal.

5.2 FIRE EXTINGUISHERS

5.2.1 General

Fire extinguishers shall be selected and located as required by the hazard to be controlled. It is the responsibility of the Site Fire Marshal to evaluate new or modified facilities and to provide area management with recommendations for type and location of extinguishers needed. Area management is responsible for purchase and mounting of fire extinguishers. All requests for purchase of fire extinguishers must be approved by the Site Fire Marshal. Fire extinguishers will be mounted in an easily visible, unobstructed location and location signs shall be provided.

5.3 BUILDING EMERGENCY EQUIPMENT

5.3.1 Breathing Apparatus

Self-contained breathing apparatus (SCBA) is provided in Buildings 102-B, 200, the Advanced Fuels Laboratory and on the fire truck. The apparatus is for use in rescue of trapped or injured personnel and initial fire fighting by the Building Emergency Control Teams. Employees designated as fire fighters, radiation monitors and alternate fire fighters shall be trained in the use of SCBA as required by the VNC Respiratory Protection Program.

5.3.2 Emergency Equipment Cabinets

Emergency equipment cabinets are located in Buildings 102, 103, 106, 200, 300, 400 and the Advanced Fuels Laboratory. The cabinets contain protective clothing, masks, etc., for protection from airborne radioactive particulate matter and loose radioactive contamination.

5.3.3 Inspection of Emergency Equipment

The Building Emergency Coordinator is responsible for assuring that emergency equipment in his area is inspected monthly. A tag shall be affixed to breathing air apparatus or storage box and to emergency equipment cabinets to record each inspection. Self-contained breathing apparatus (SCBA) shall be inspected by a certified SCBA repairman.

6.0 ALARM SYSTEMS

6.1 SITE ALL CALL

The Site All Call system is the primary alarm system for fire. Any person discovering a fire must call extension 4211 and give the location of the fire as precisely as possible. Extension 4211 is located in the GETR control room and the Emergency Operation Leader (GETR Shift Supervisor) or the designated alternate is located in that area continuously. Upon receipt of an alarm, the Emergency Operations Leader will use the Site All Call system to initiate response of emergency control personnel, building evacuation and to alert management. The Site All Call system may also be activated from the Central Alarm Station in Building 102-B.

6.2 HICON TELEPHONE SYSTEM

A High Level Conference (HICON) circuit of telephones is provided for use of the Manager - IPO, the Emergency Operations Leader (GETR Shift Supervisor), Building Emergency Coordinators, and designated area managers during emergency situations. The circuit allows instant interchange of information necessary for management decision. Telephones are located near the work station of designated managers and at or near building assembly areas. The system is tested monthly.

6.3 SPRINKLER ALARM SYSTEMS

Automatic sprinkler systems installed in Buildings 102, 102-A, 103, 104, 105, 106, 200, 210, 217, 300, 400, 401, Advanced Fuels Laboratory and in the reactor cooling towers (3) are provided with alarm bells that are activated by water flow in the system. Bells located outside the buildings give a loud audible alarm. The alarm system is designed for future display of water flow alarms in the Central Alarm Station of Building 102-B.

6.4 DETECTION AND ALARM SYSTEMS

Fixed temperature detectors are provided in the laboratory areas, and in glove boxes in the Advanced Fuels, Plutonium Analytical Laboratories, and hot cell filter banks located in Building 102. Alarm panels are located at the entrance area of the Advanced Fuels Laboratory, in Building 102-A, 102-B, the northwest outside corner of Building 102, and at the NW entrance to the 300 area. Remote alarm indications from these panels are displayed in the GETR Control Room.

6.4.1 Alarm Tests

All fire alarm systems shall be tested monthly by the Site Fire Inspector and the results of the test reported, in writing to the Site Fire Marshal.

7.0 REPORTS

7.1 REPORTS OF FIRE

All fires, regardless of extent, shall be reported to the Site Fire Marshal. The Site Fire Marshal is responsible for investigating the cause and extent of damage of all fires.

7.2 INSURANCE REPORTS

The Site Fire Marshal is responsible for reporting fire losses to the Corporate insurance office and to insurance underwriters. Dissemination of reports and recommendations of corporate insurance and insurance underwriters to appropriate managers shall be made by the Fire Marshal.

8.0 PREPAREDNESS

Preparedness of emergency teams shall be maintained through the use of training sessions and drills developed and implemented by each responsible emergency function.

Annual exercises shall be planned and performed which implement and test the coordinated response of all emergency functions.

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