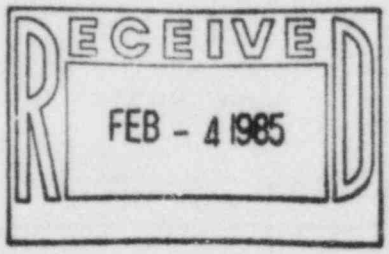
Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

January 21, 1985
Fort St. Vrain
Unit No. 1
P-85018



Regional Administrator
Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Attention: Mr. Eric H. Johnson

Docket No.: 50-267

Subject: Radiological Emergency Response Plan (RERP)

Dear Mr. Johnson:

We are transmitting herein revisions to Fort St. Vrain's Station RERP Inplementing Procedures.

One copy of the RERP-PLANT Section 5, Issue 7; Section 6, Issue 8; Section 9, Issue 5; RERP-HOME, Issue 13; RERP TSC, Issue 14; RERP-PHONE LISTS, Issue 25; RERP-MET, Issue 5 procedure is being transmitted for filing. Attachments, data sheets, checklists, and control list should immediately follow the procedure.

If difficulties or questions arise in filing this procedure, please contact Ms Sharilyn Johnson (303) 785-2224, extension 275.

Sincerely,

J. W. Gahm
Manager, Nuclear Production

JWG/dal

A045

~~E005~~

RETURN ORIGINAL TO RIV 1/1

NRC Regional Administrator
1/15/85

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FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

RADIOLOGICAL EMERGENCY RESPONSE PLAN - PLANT

NO.	SUBJECT	ISSUE NUMBER	EFFECTIVE DATE
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	Introduction	3	10-08-82
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Section 2	Scope and Applicability	4	01-03-83
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Section 10.C	Maps of Exclusion Area, Low Population Zone, Environmental Dosimetry, Population Densities	3	10-08-82
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Section 10.F	Cross Reference to NUREG-0654, Rev. 1	4	01-03-83

TITLE: RADIOLOGICAL EMERGENCY RESPONSE PLAN, SECTION 5

ISSUANCE AUTHORIZED BY	/s/ Faulkner for T. W. Cobb	
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE 1-15-85

5.0 Organizational Control of Emergencies

5.1 The Normal Station Organization is shown, in chart form, on Figure 5.1-1 and is detailed in station Operating Technical Specifications. A shift of 8 operating and 9 security personnel, under the direction of a Shift Supervisor, is on duty at all times (Figure 5.1-2). Duties and responsibilities of operating personnel are set forth in station administrative procedures.

5.2 The Onsite Emergency Organization for the four categories of incident classification is depicted on Figures 5.2-1 and 5.2-2. In the event of an emergency, the on-duty Shift Supervisor has the responsiblity to initiate immediate actions to limit the consequences of the emergency and to return the plant to a safe and stable condition. He is, further, assigned the authority for direction of site emergency operations (Emergency Coordinator) and retains this authority until relieved by the Control Room Director or Technical Support Center Director. In this interim capacity, he is responsible for: classification of the emergency event; initial notification of appropriate governmental emergency response agencies; and, initiation of protective actions for station personnel. He may confer with FSV and PSC management for advice or concurrence with initial accident classification, if desired. (In the event the Shift Supervisor is unable to perform as Emergency Coordinator, the most senior Reactor Operator assumes that role.)

The Emergency Coordinator is responsible for initially classifying the incident, recommending protective actions, initiating corresponding emergency actions, notifying offsite authorities of the incident, and establishing communications with the TSC. Responsibility for the decision for notification and protective action recommendation may not be delegated.

Further responsibilities include: diagnosing the accident condition and estimating radiological exposures based on radioactive material releases and prevailing

meteorological conditions. To ensure this function is covered at all times, the Shift Supervisor is an authorized Emergency Coordinator. The on-duty Shift Supervisor continues to function as the Emergency Coordinator at least until the emergency organization is activated.

The Fort St. Vrain Nuclear Generating Station emergency organization operates from three onsite emergency centers - Control Room (CR), Technical Support Center (TSC), and Personnel Control Center (PCC). It is supported by three offsite emergency centers - Forward Command Post (FCP), State Emergency Operations Center (State EOC), and Executive Command Post (ECP). The station emergency organization will be manned and operational within 90 minutes after classification of an ALERT or higher level incident.

Onsite and offsite emergency organization interrelationships are shown in schematic form in Figure 5.2-3. PSC's role in the offsite (local and state) emergency control centers is diagrammed in Figure 5.2-4 (FCP) and Figure 5.2-5 (State EOC). Augmentation in the form of headquarters support is shown in Figure 5.2-6 (ECP) and is discussed in Section 5.3. The function, responsiblities, and staffing of the offsite emergency organization is also described in Section 5.3 and is shown in Figure 5.2-7. Post-emergency plant recovery plans and organization are described in Section 9.0. Emergency personnel assignments are shown by function. For clarity, normal job titles are also indicated. Qualification requirements (per the normal titles) are given in corporate job descriptions.

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5.2.1 Direction and Coordination

Initial direction and coordination of onsite emergency operations will be the responsibility of the Shift Supervisor, as shown in Figure 5.2-1 and discussed in Section 5.2. This responsiblity will remain with the Shift Supervisor until such time as the emergency organization for an ALERT or higher level accident is activated (Figure 5.2-2).

During an ALERT, or higher level accident, overall command of PSC emergency operations will be exercised by the Corporate Emergency Director (Vice President of Production) at the FCP. He will provide direction to, and coordination for, the TSC Director (Manager, Nuclear Production) and the Assistant Vice President, Governmental Affairs (assigned to the State EOC). He will coordinate additional headquarters support via the ECP.

a. The Corporate Emergency Director (CED) - (Vice President of Production) is in command of PSC emergency operations and is responsible for direction and coordination of:

1. PSC onsite and offsite emergency functions;

2. Interface between PSC and local/state/federal emergency response activities;

3. Transmission of plant status updates and radiological release data to FCP and State EOC emergency response and media center personnel;

4. Notification of state and local agencies concerning recommended protective actions;

5. Provision of administrative, technical, and logistic support to station emergency operations; and,

6. Continuity of emergency organization resources.

In the event the Vice President of Production is not available, the Vice President of Engineering and Planning will assume command of PSC emergency operations.

b. The TSC Director - (Manager, Nuclear Production) is in command of onsite emergency operations. The TSC Director is authorized to initiate emergency actions, including declaring a particular class of emergency and providing protective action recommendations to offsite authorities. (The alternate TSC Director is the Station Manager).

Duties and responsibilities of the TSC Director include direction and coordination of:

1. The TSC staff, which is responsible for collecting and analyzing the technical information necessary for assessment of plant operational aspects, providing technical counsel in support of the Control Room (CR), and assessment of radiological release consequences.

2. The CR Director (Superintendent of Operations), who is responsible for control of plant operations, assessing plant operational aspects, and implementing recommended corrective actions. (The alternate for the CR Director is the Shift Supervisor, Training).

3. The PCC Director (Scheduling/Stores Coordinator), who is responsible for continued personnel accountability, assembling personnel for repair/damage control or radiological survey teams, search and rescue teams, reserve operating staff, and establishing radiological control areas as directed. (The alternate for the PCC Director is the Training Supervisor).

5.2.2 Plant Staff Emergency Assignments

Three principal onsite groups comprise the station emergency organization. Each group operates under the supervision of a director at an emergency center (TSC, PCC, and CR) as discussed in Section 5.2.1. Each center Director is responsible for center communications and for assigning an individual to keep a record of important events, decisions, and actions. Plant staff emergency assignments and functions for these centers are summarized in the following paragraphs. Primary

and alternate leads are shown for continuous 24-hour operation.

a. Technical Support Center

1. Plant Condition Assessment

Diagnose plant conditions, provide recommended corrective actions, and coordinate systems analysis and procedures. (Primary and Alternate: Off-duty Shift Supervisors)

2. Engineering & Technical Analysis

Direct core physics analysis, electrical and mechanical engineering, licensing, procedures development, and system analysis. Maintain liaison with offsite technical support such as NSSS, AE, EPRI. (Primary: Technical Services Engineering Supervisor; Alternate: Senior Plant Engineer)

3. Health Physics/Radiological Monitoring

Assess onsite radiological doses, direct radiological/radiochemical surveys and decontamination actions. (Primary: Health Physics Supervisor; Alternate: Health Physicist)

4. Radiological Assessment

Assess offsite radiological doses and consequences, determine potentially affected offsite areas, and confer with the Technical Support Center Director and the Radiological Assessment Coordinator at the FCP regarding plant status, offsite dose computations, and protective actions (Primary: Senior Plant Engineer; Alternate: Technical Services Engineer)

5. Emergency Maintenance

Determine and recommend repair/damage control and corrective actions for plant mechanical and electrical systems. (Primary: Superintendent of Maintenance; Alternate: Maintenance Supervisor - Electrical)

6. Emergency I&C Support

Determine alternative I&C capabilities or configurations; repair/install/modify instrument and control equipment. (Primary: Superintendent of Nuclear Betterment Engineering; Alternate: Results Engineering Supervisor)

7. Administrative & Logistics Support

Provide needed technical documents, communications and analytical equipment, clerical assistance, and food, transportation/housing support. (Primary: Nuclear Documents Supervisor; Alternate: Nuclear Documents Specialist)

8. Computer Services

Provide technical support in the areas of computer hardware and software development/modification. Provide assistance to TSC Radiological Assessment individual as needed. (Primary: Senior Analyst; Alternate: Senior Programmer)

b. Personnel Control Center

1. Personnel Accountability

Maintain continued personnel accountability, including personnel contamination surveys, control areas, and exposure records. Handle search and rescue efforts, first aid, medical transportation, and personnel decontamination. (Health Physics Technicians, Scheduling/QC staff, and other personnel)

2. Operating Staff Support

Relieve and support plant operations personnel as necessary in operating plant equipment, processing effluents, and performing emergency maneuvers. (Off-duty operations personnel)

3. Maintenance, Repair & Damage Control

Perform mechanical and electrical repair/damage control, emergency maintenance, and temporary modifications. (Maintenance staff and I&C Technicians, augmented as necessary by PSC personnel from offsite locations)

4. Hazards Control

Extinguish fires, purge hazardous gases, combat natural emergencies. (Fire Brigade personnel) During the day shift, the Fire Brigade receives initial direction from the CR Director and is subsequently assigned to the PCC.

5. Security

Coordinate site access security with the Security Supervisor. The Lead Security Officer is the alternate for the Security Supervisor.

c. Control Room

1. Plant Control

Direct plant operation to terminate the incident, regain plant control, and minimize accident consequences. See Section 5.2 for further details. (Shift Supervisor)

2. Plant Operation

Assist the Shift Supervisor in implementing plant corrective actions. (Reactor Operators)

3. Technical Assistance

Provide technical analysis/advice and recommend corrective actions necessary to bring the plant to a safe and stable condition. (Technical Advisor)

5.3 Augmentation of Onsite Emergency Organization

Onsite emergency operations are augmented by headquarters support (corporate resources) dispatched directly to the PCC or to an appropriate onsite location. Agreements have been executed with local and Denver-based service organizations to provide ambulance, firefighting, and medical aid services. Augmentation for detailed core physics analysis, thermal-hydraulic analyses, radiation monitoring, dose assessment, and decontamination/radioactive waste disposal will be provided on a contract basis. Headquarters and service agency augmentation and support are described in the following sections.

5.3.1 PSC Headquarters Support

Provision for direct augmentation to the staffing of onsite emergency functions by non-station personnel may be quickly accomplished. These personnel may be utilized in support roles to supply additional manpower for repair/damage control teams, survey teams, access control, and logistical assistance.

Additional headquarters management, administrative, and technical support requested by the Corporate Emergency Director will be coordinated by the Executive Command Post Director.

The ECP is manned by senior corporate personnel with the authority to activate corporate personnel, facilities, equipment, and financial resources in an emergency situation. The ECP supports PSC personnel stationed at onsite and offsite emergency centers. The ECP is located in Room 620, PSC Headquarters Building, Denver. In the event the ECP cannot utilize this location for any reason, an alternate facility located at the PSC Lookout Center in Golden, Colorado will be activated.

The ECP contains up-to-date copies of station, state, and local government emergency plans, the corporate Emergency Plan, maps of the Fort St. Vrain area and its environs, regional maps, and station layout drawings. Other equipment, facilities and services located within, or immediately adjacent and available to the ECP, include stenographic assistance, reproduction equipment, simultaneous commercial television station monitoring equipment (all VHF channels) and radio-television recording equipment for media announcements.

The ECP will be operational within ninety (90) minutes after classification of an ALERT or higher level accident. The ECP staff includes a Director and four functional Managers. The roles and responsibilities of key members of the ECP staff are described in the following sections.

a. The Director of the ECP - (President & CEO) will assume overall responsiblity for providing the Corporate Emergency Director with the counsel, expertise, and resources available within the PSC organization. He coordinates emergency assistance, provides reentry and recovery support, station and site modifications review by Nuclear Facilities Safety Committee, and supervises the following ECP emergency operations managers. (Alternate: Executive VP & General Counsel)

b. The Manager of Technical Support - (Nuclear Site Engineering Manager) will provide the Corporate Emergency Director and onsite emergency operations with technical advice in nuclear, mechanical, civil, and electrical engineering. He provides engineering support, technical experts, and consultants as requested. (Alternate: Nuclear Design Manager)

c. The Manager of Media Relations - (VP of Public Affairs) will coordinate communications between the ECP and the site, the FCP, the State EOC, and federal emergency operations not included in the site communications system. He assists the Director of the ECP and PSC media relations personnel in preparation of press releases, announcements, and interviews. (Alternate: Manager of Public Relations)

d. The Manager of Resources - (VP of Accounting and Corporate Secretary) will coordinate provision of manpower and equipment from within PSC, and from consultants/contractors, to support onsite emergency operations. He provides requested technical and craft manpower; personnel or consultants for engineering/design and construction reviews; temporary housing, office, transportation, and construction equipment; purchasing, financial, legal, and general office support; and, food deliveries and related logistics support to

designated emergency operations. (Alternate: VP of Finance & Treasurer)

e. The Manager of Security - (Manager, Risk Management) will coordinate PSC security operations with public law enforcement agencies. He acquires additional security manpower, hardware, and equipment, as requested. (Alternate: Safety Director)

5.3.2 Local Services Support

In emergency situations, assistance from outside companies and services may be required. Assistance available from outside companies includes ambulance service to transport injured and/or contaminated personnel, medical treatment, and hospital facilities for station personnel who require such assistance. In addition, a specific agreement has been developed with the Platteville Volunteer Fire Department for onsite fire protection assistance.

Letters of agreement for these services are contained in Section 10, Appendix A. Table 5.3-1 lists these agencies by the type of service provided. The State RERP, to which participating agencies and PSC are signatory, is cited in lieu of letters of agreement for emergency assistance from other local service agencies.

5.3.3 Contract Support

Specialized assistance from contractors may also be required in an emergency situation. Contract support may include nuclear steam supply system (NSSS), architect-engineer, construction, dosimetry and laboratory analysis, and decontamination and rad-waste disposal assistance. Provision has been made for selected contract support firms to provide this assistance, on request. Table 5.3-1 lists these contractors by type of service provided. (Section 10, Appendix A contains Letters of Agreement covering these contracted services).

5.4 Coordination with Participating Government Agencies

The State of Colorado, through the Division of Disaster Emergency Services (DODES), has responsibility for control of offsite actions during a radiological emergency. The concept of operations for discharging this responsibility, together with a discussion of action responsibilities assigned to various state/local governmental agencies is contained in the State RERP. Since participating agencies

and PSC are Plan signatories, the State RERP is cited in Section 10, Appendix A in lieu of separate letters of agreement.

Governmental entities having jurisdiction within the 5 mile plume exposure EPZ are the State of Colorado; Weld County; and, the towns of Platteville, Johnstown, and Gilcrest.

A brief summary of the involvement and responsibilities of the major governmental agencies is shown in tabular form in Table 5.4.1. For a complete discussion of authority, assigned responsibilities, capabilities, and activation and communication arrangements, refer to the State RERP.

5.4.1 Station personnel coordinate onsite emergency operations with state/local government offsite emergency centers (Forward Command Post and State Emergency Operations Center). The role and function of PSC emergency personnel stationed at the FCP and the State EOC are described in the following sections.

a. The Forward Command Post (FCP) functions as the control and coordination center for on-scene state/local/federal emergency response forces. The FCP communicates with the State EOC (the primary point through which the Governor exercises overall control and coordination of offsite emergency operations) and with the Weld County EOC (Weld County Communications Center) for effective coordination of county forces.

The FCP is located in the PSC Garage at Ft. Lupton, approximately 12 miles south-southeast of the Station. Provision is made adjacent to the FCP for a facility to accomodate the needs of the media (State RERP, Annex S). A senior representative of DODES is responsible for control and coordination of FCP emergency response activities.

Staffing of the FCP, as shown on Figure 5.2-4, consists of authorized representatives of:

1. State Division of Disaster Emergency Services

2. Weld County Sheriff's Office

3. Colorado State Patrol

4. Colorado Department of Health

   Radiological monitoring, and health units, as required.
   Public information representative.

5. Public Service Company of Colorado

   Vice President of Production
   Station Technical Liaison
   Radiological Assessment Coordinator
   Public Relations Representative
   Nuclear Documents Staff

6. Others, as notified/required.

The Vice President of Production is in overall command of PSC emergency operations and is the main link between the station and governmental authorities. A PSC technical liaison representative (Primary: Technical/Administrative Services Manager; Alternates: Manager, Nuclear Engineering and Manager, Quality Assurance) from the station, the Radiological Assessment Coordinator (Support Services Manager), one public relations representative from PSC corporate headquarters, and members of the station clerical staff are also assigned to the FCP. Communications between the FCP, the site Technical Support Center, the State Emergency Operations Center, and the PSC Executive Command Post will be accomplished through commercial telephone service and/or radio.

The responsibilities of PSC personnel assigned to the FCP include:

- Providing assistance and substantiated data on site emergency status and conditions;
- Coordinating company emergency response actions with those of state/local/federal agencies;
- Coordinating radiological assessment activities between PSC and those of state/local/federal agencies;
- Providing assistance to the FCP Public Information Coordination Team (PICT) in the preparation of news and related media

releases, and control of rumours in accordance with the PSC RERP Public Information Plan; and,

- Maintaining communications flow between PSC personnel stationed at onsite and offsite emergency centers.

b. The State Emergency Operations Center (State EOC) is the primary point through which the Governor, or his authorized designee, exercises overall control and coordination of emergency response operations through the Colorado Division of Disaster Emergency Services (DODES).

The State EOC is located in DODES headquarters at Camp George West in Golden, Colorado, approximately 40 miles southwest of the Fort St. Vrain Nuclear Generating Station. Provision is made at Camp George West for a facility to accomodate the needs of the media (State RERP, Annex S).

Staffing of the State EOC, as shown on Figure 5.2-5, consists of authorized representatives of:

1. Office of the Governor
2. Division of Disaster Emergency Services
3. Colorado Department of Health
4. Colorado State Patrol
5. Colorado National Guard
6. Federal Emergency Management Agency
7. Public Service Company of Colorado
8. Others, as notified/required

PSC staffing at the State EOC includes the Vice President of Governmental Affairs or the Manager of Nuclear Engineering, the Manager of Corporate Communications or Media Relations Director, technical assistance personnel, a radiation specialist, and supporting clerical personnel.

The responsbilities of PSC personnel assigned to the State EOC include:

- Providing assistance and substantiated data regarding site emergency status and conditions to local/state/federal emergency response agencies assigned to the State EOC;

- Coordinating company emergency response activities with those of state/local/federal agencies; and,

- Providing up-to-date site information to the Public Information Coordination Team (PICT) Chief (Governor's Office representative) and assisting the PICT in the preparation of mutually acceptable news releases, fact sheets, rumor control in accordance with the PSC RERP Public Information Plan, and background material media releases.

5.4.2 In addition to extensive coordination with state/local governmental entities, technical assistance from certain federal agencies in the area of communications, radiological monitoring and laboratory analysis, transportation, weather forecasts, and disaster relief may be required in an emergency situation. The State of Colorado, through DODES, will officially request federal assistance. PSC will, therefore, channel contacts with federal agencies (except NRC) through DODES. The following agencies will be notified/requested to provide assistance, as necessary:

a. The Nuclear Regulatory Commission, Office of Inspection and Enforcement, Region IV, and the NRC Incident Response Center Bethesda, MD.

b. The Department of Energy (DOE) - Radiological Assistance Teams (RAT), Idaho Falls, Idaho and Rocky Flats, Colorado; Aerial Monitoring System (AMS), Las Vegas, Nevada. DOE will activate the Interagency Radiological Assistance Plan (IRAP) as necessary.

c. Federal Emergency Management Agency (FEMA), Region VIII, Denver, Colorado.

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FIGURE 5.1-1

FIGURE 5.1-1
NORMAL STATION ORGANIZATION
FORT ST. VRAIN NUCLEAR GENERATING STATION

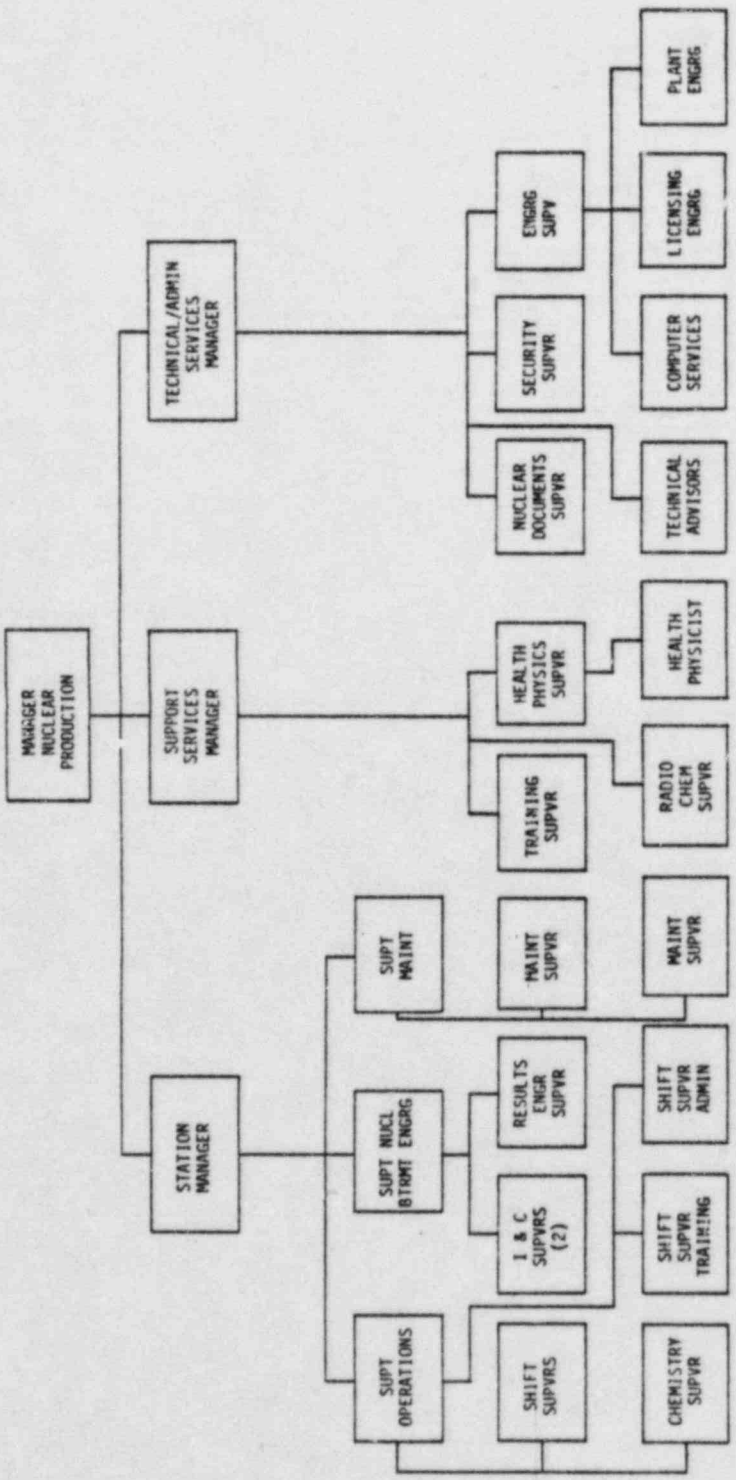
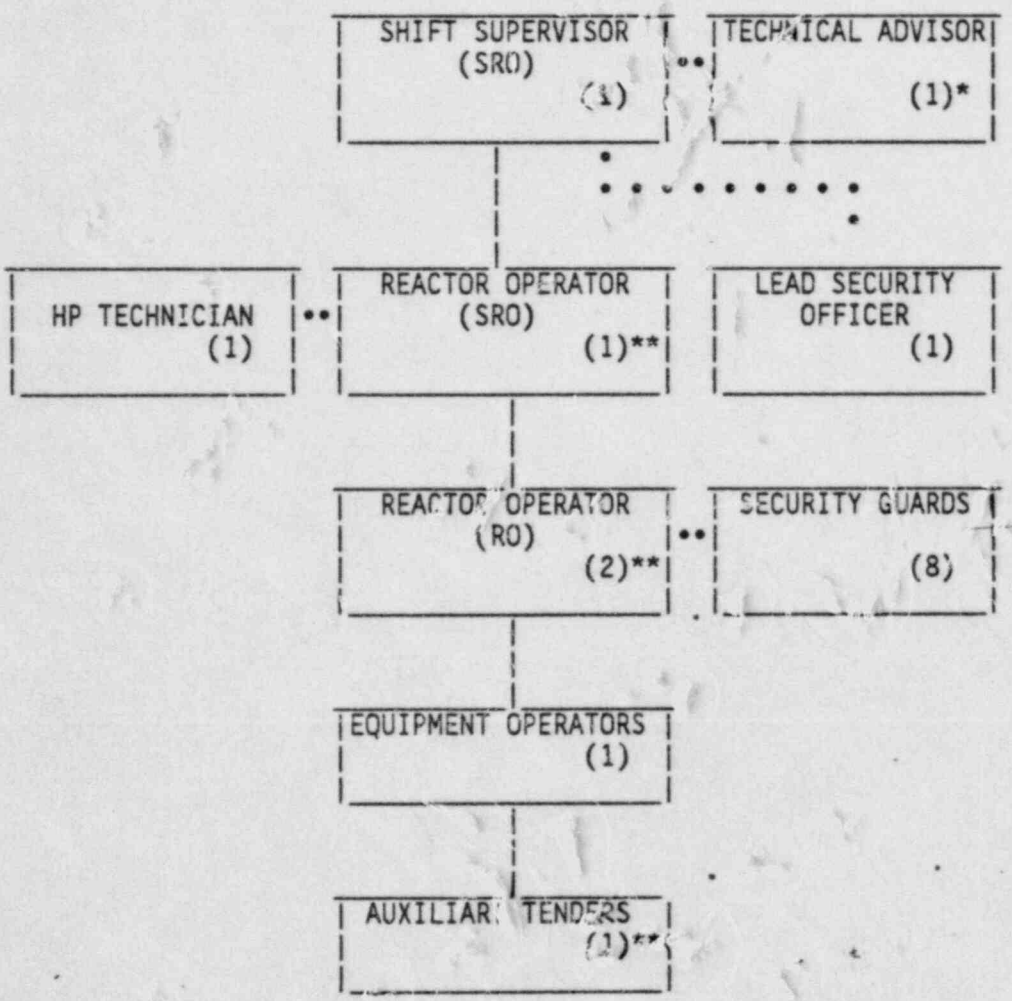


Figure 5.1-2

NORMAL SHIFT ORGANIZATION

Fort St. Vrain Nuclear Generating Station



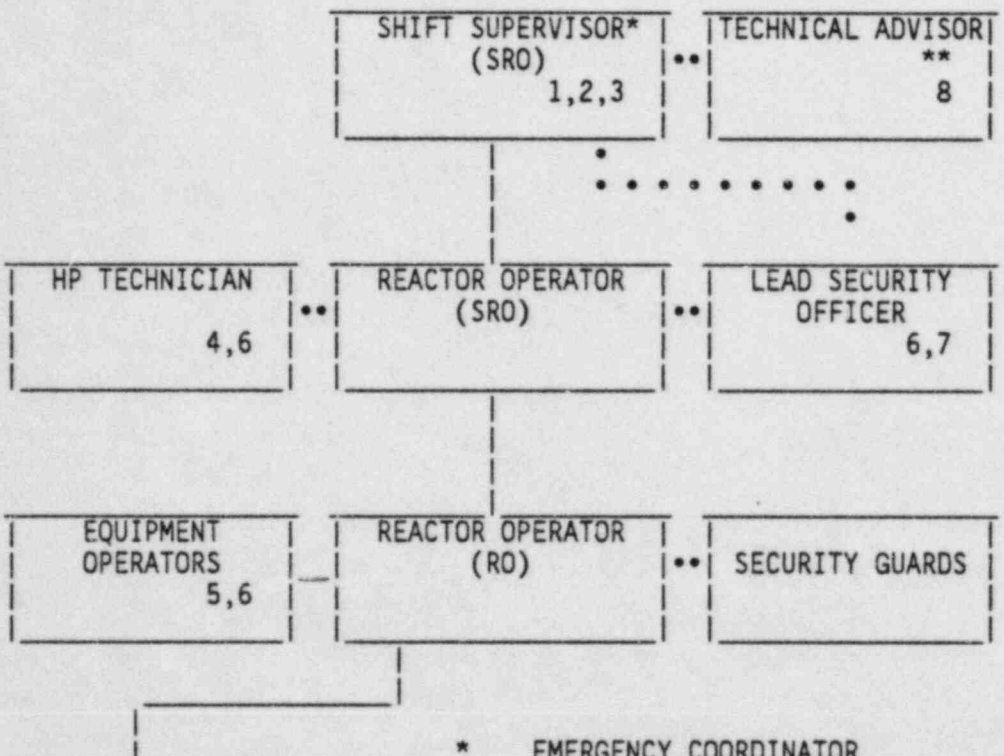
NOTES:

SRO	SENIOR REACTOR OPERATOR.
RO	REACTOR OPERATOR.
HP	HEALTH PHYSICS TECHNICIAN
*	TECHNICAL ADVISOR IS ON CALL 24 HOURS PER DAY AND WILL REPORT TO THE CONTROL ROOM WITHIN 1 HOUR.
**	DURING HOT, COLD, OR REFUELING SHUTDOWN, ONLY ONE RO IS REQUIRED TO BE ON DUTY. AN INDIVIDUAL WITH AN SRO LICENSE OTHER THAN THE ON-DUTY SHIFT SUPERVISOR IS NOT REQUIRED, NOR IS AN AUXILIARY TENDER.
--------	LINE OF AUTHORITY
••••••••	COMMUNICATION

Figure 5.2-1

EMERGENCY ORGANIZATION
(NOTIFICATION OF UNUSUAL EVENT)

Fort St. Vrain Nuclear Generating Station



* EMERGENCY COORDINATOR
** ON CALL 24 HOURS A DAY, ONE HOUR MAXIMUM RESPONSE TIME

1 PLANT OPERATIONS AND CONTROL
2 OFFSITE NOTIFICATION
3 PLANT CONDITION ASSESSMENT
4 HEALTH PHYSICS & RADIOLOGICAL ASSESSMENT
5 REPAIR AND DAMAGE CONTROL
6 HAZARDS CONTROL
7 PERSONNEL ACCOUNTABILITY
8 TECHNICAL ASSISTANCE

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PUBLIC SERVICE COMPANY OF COLORADO

FIGURE 5.2-2

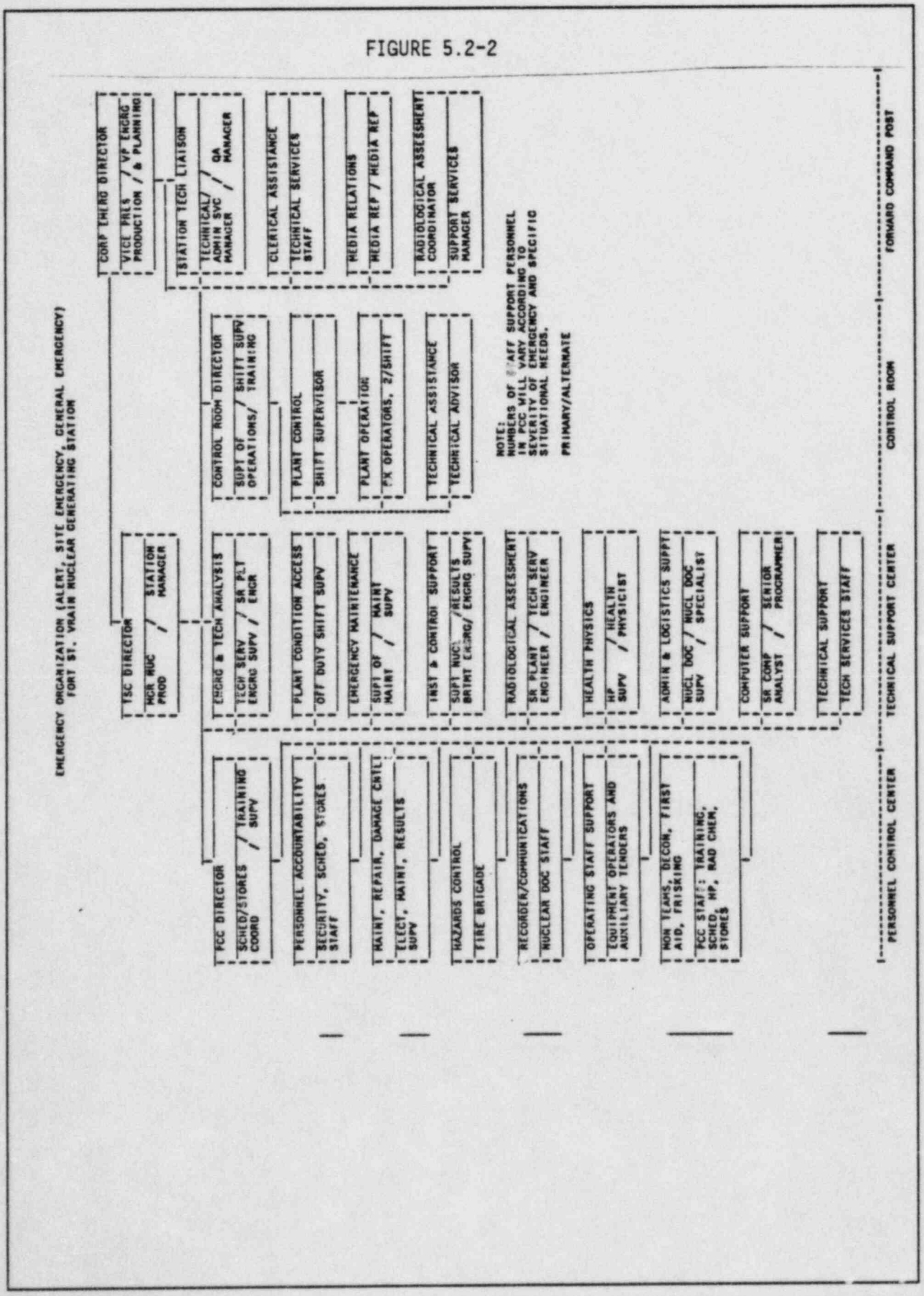

Figure 5.2-3

ONSITE-OFFSITE EMERGENCY ORGANIZATION

Fort St. Vrain Nuclear Generating Station

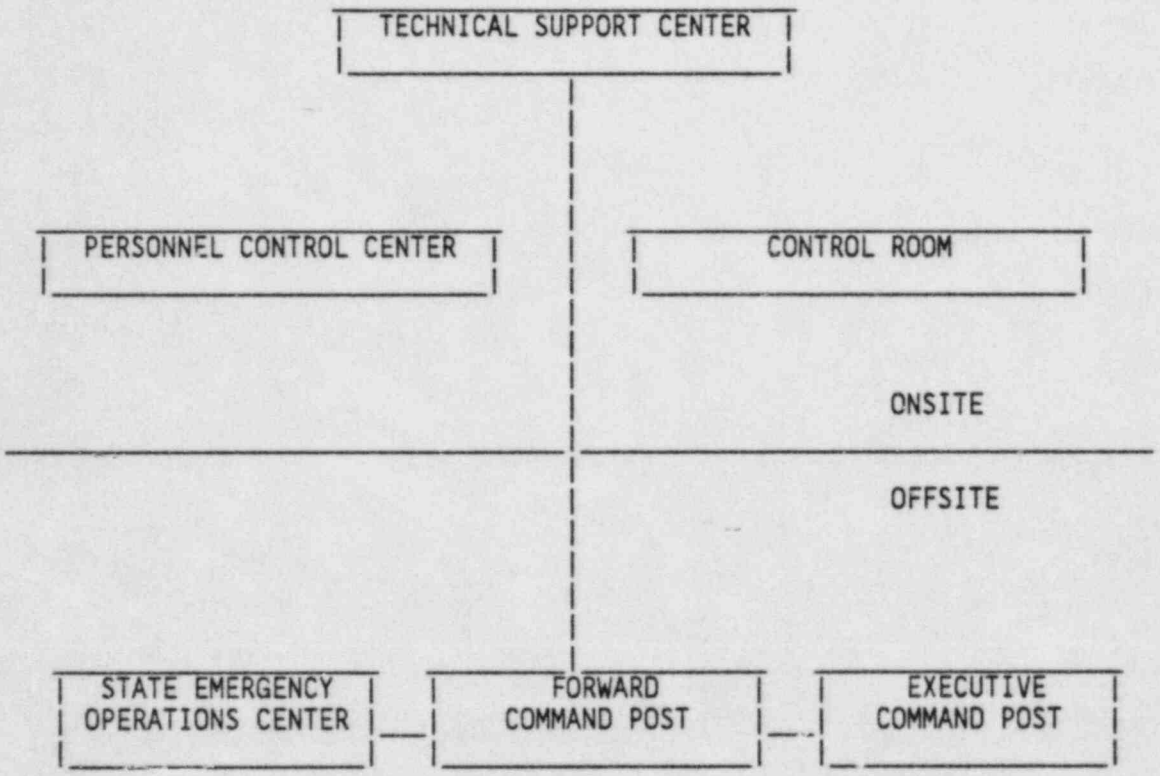

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FIGURE 5.2-4

Figure 5.2-4
FORWARD COMMAND POST ORGANIZATION
Fort St. Vrain Nuclear Generating Station

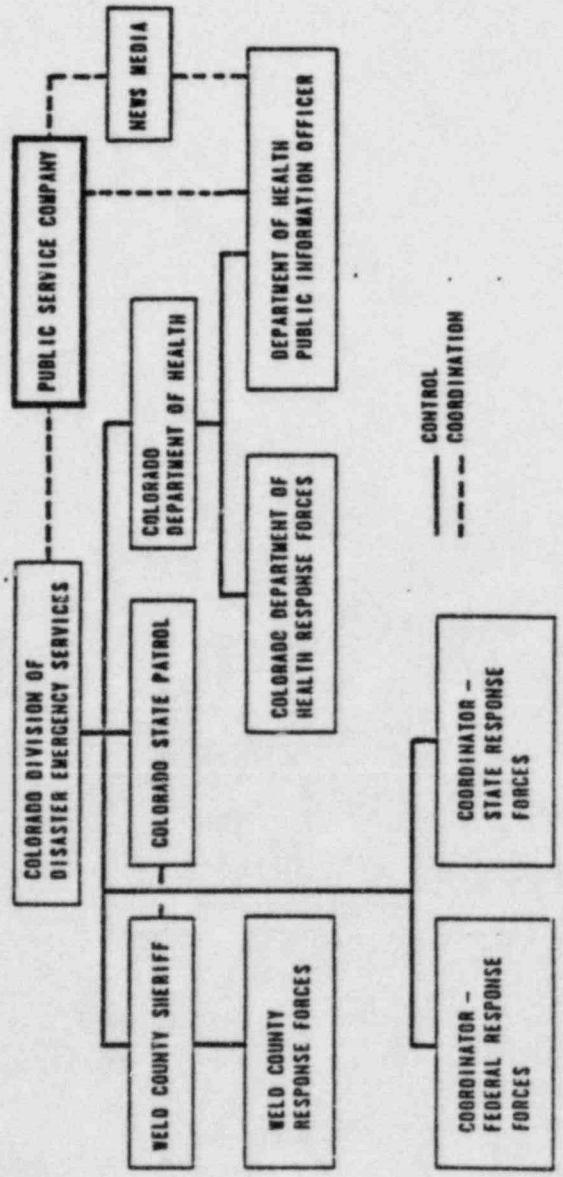
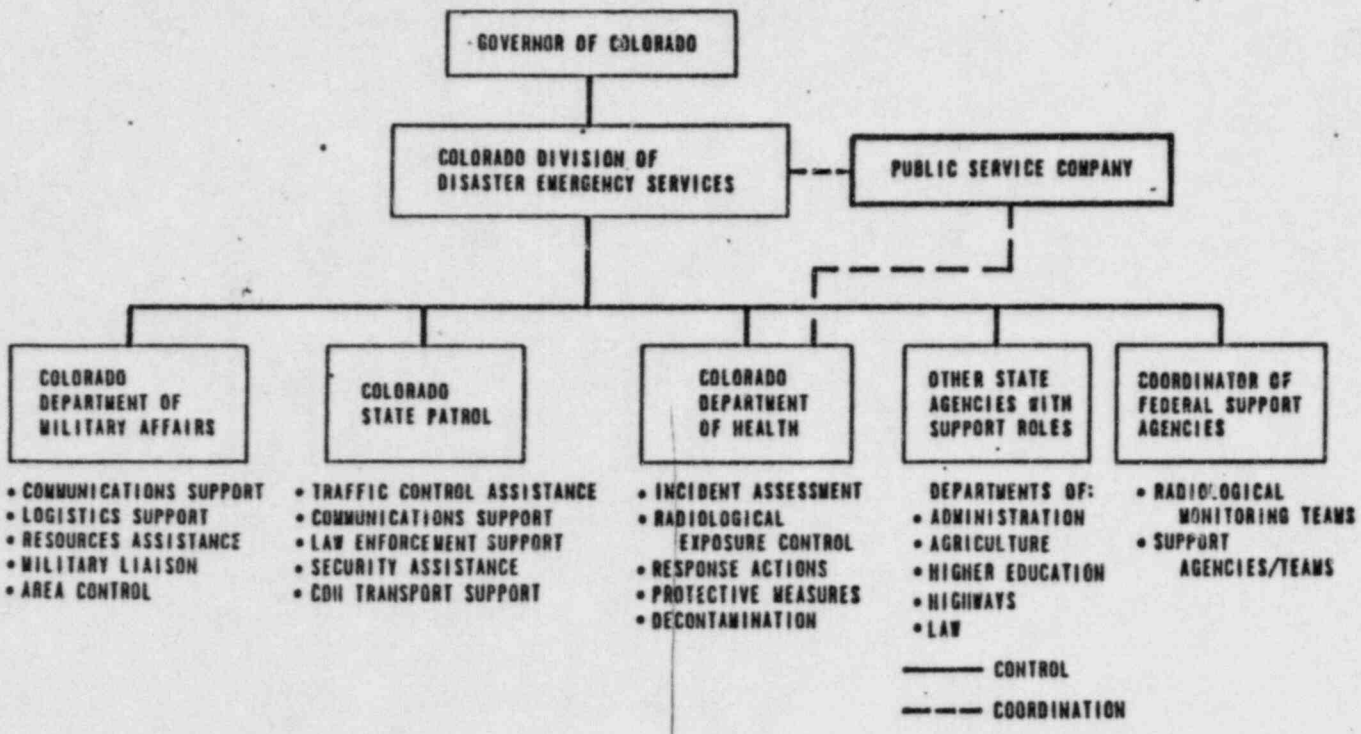


FIGURE 5.2-5

Figure 5.2-5
STATE EMERGENCY OPERATIONS CENTER ORGANIZATION
Fort St. Vrain Nuclear Generating Station



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FORM 181 372 - 22 - 3643

Figure 5.2-6

EXECUTIVE COMMAND POST ORGANIZATION

Fort St. Vrain Nuclear Generating Station

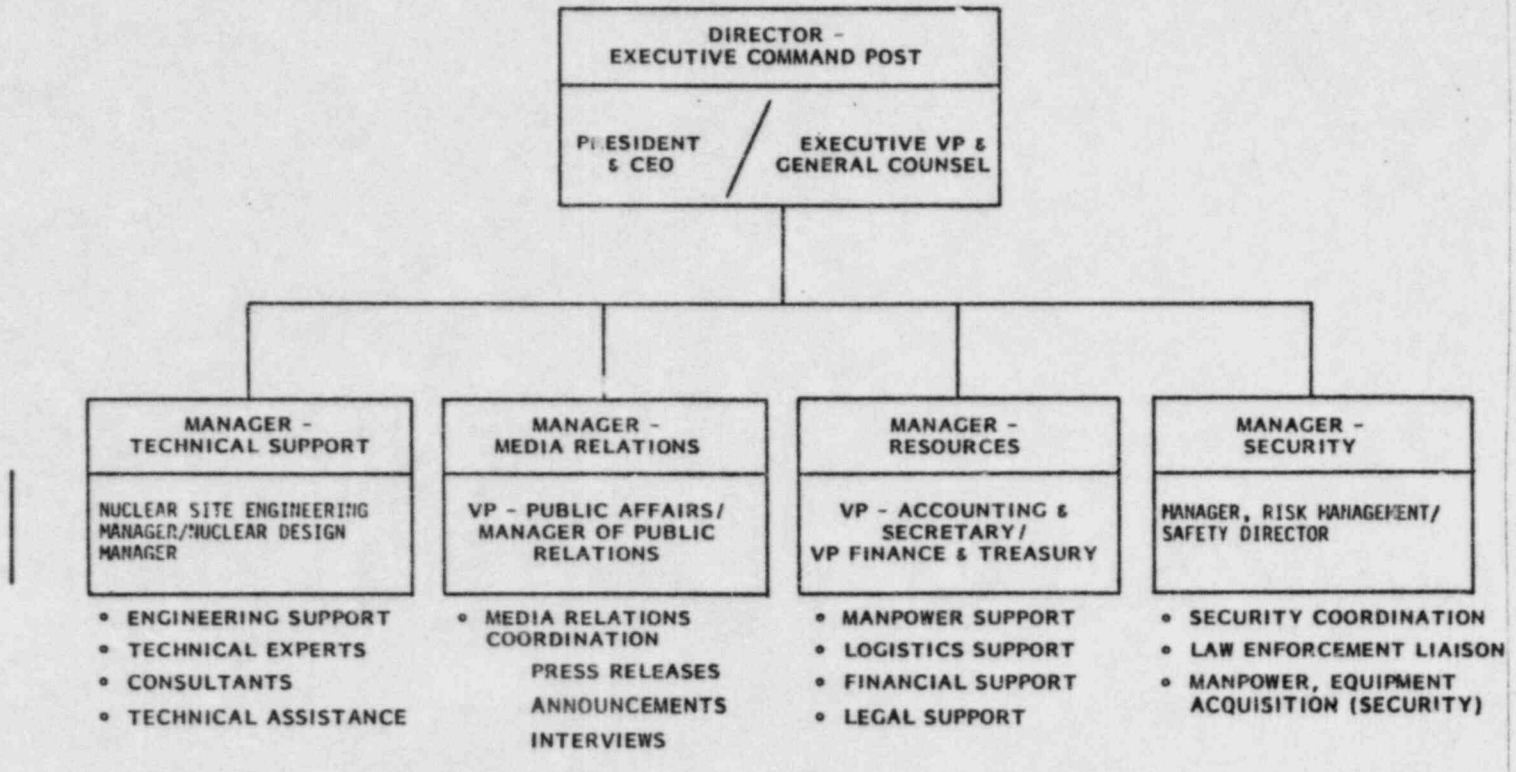

FIGURE 5.2-6

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PUBLIC SERVICE COMPANY OF COLORADO

FIGURE 5.2-7

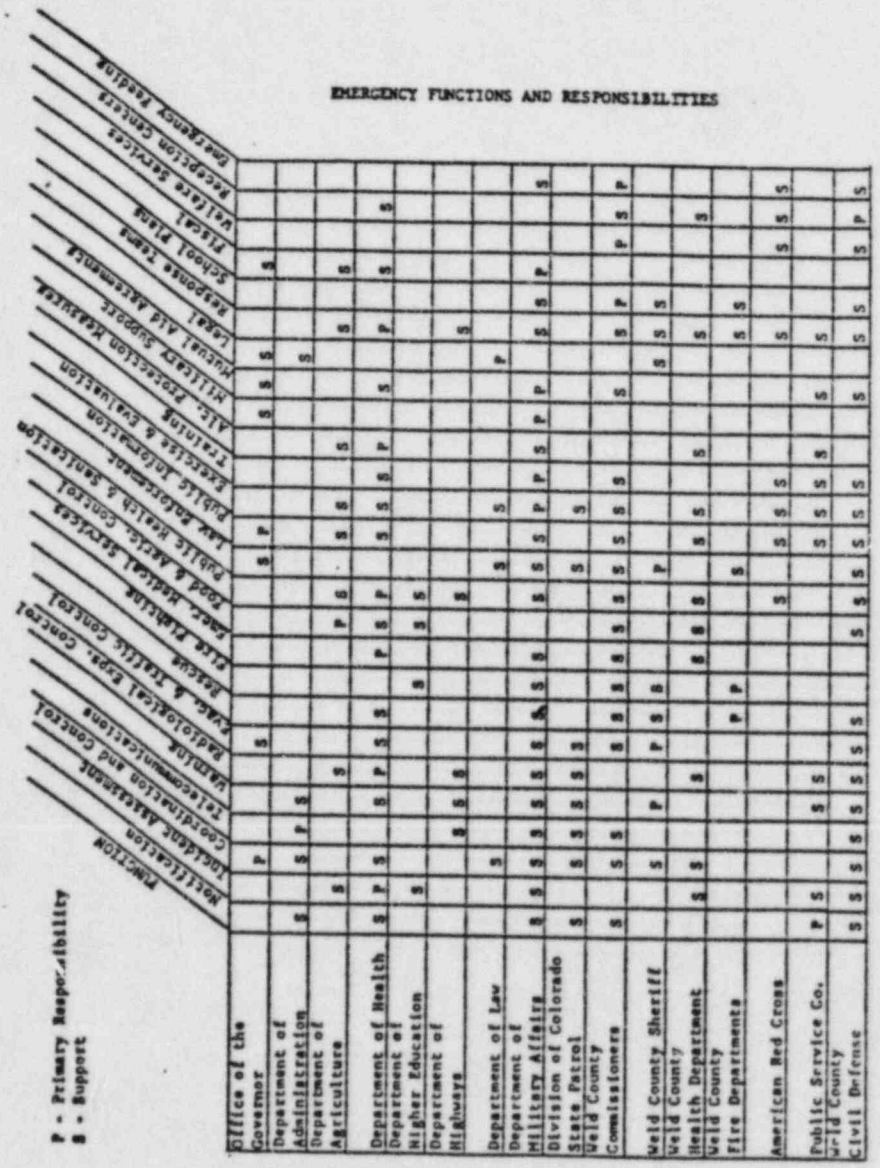

FIGURE 5.2-7
EMERGENCY FUNCTIONS
AND RESPONSIBILITIES MATRIX

Fort St. Vrain Nuclear Generating Station

TABLE 5.3-1

LOCAL AGENCY AND CONTRACT SUPPORT SERVICES

Fort St. Vrain Nuclear Generating Station

Local Agency	Support Service
Volunteer Fire Department Platteville, Colorado	Onsite Fire Protection Assistance/Ambulance Service
Volunteer Fire Departments Milliken, Johnstown, Gilcrest, Colorado	Mutual Aid Fire Protection Assistance
Facility Support	**Support Service**
Weld County Greeley, Colorado	Alternate Personnel Control Center - Johnstown, Colorado
Contract Agency	**Support Service**
General Atomic Corporation San Diego, California	NSSS, Reactor Physics, and Systems Modification Assistance
Other Support Agency	**Support Service**
Stone & Webster Engineering Corp. Denver, Colorado	Engineering/Construction/ System Modification Assistance
Nuclear Power Consultants, Inc. Rockville, Maryland	Engineering/Quality Assurance Assistance
Proto-Power Management Corp. Groton, Connecticut	Technical Assistance - Nuclear/Balance of Plant Systems

TABLE 5.3-1 (Continued)

LOCAL AGENCY AND CONTRACT SUPPORT SERVICES

Fort St. Vrain Nuclear Generating Station

Other Support Agency	Support Service
NUS Corporation Portland, Oregon	Safety-Training Assistance
Controls For Environmental Pollution, Inc. Santa Fe, New Mexico	Chemical-Radiochemical Laboratory Analysis
Colorado State University Fort Collins, Colorado	Environmental Monitoring Assistance
St. Luke's Hospital Denver, Colorado	Medical Treatment/Decontamination Assistance
Dr. Hilding G. Olson Fort Collins, Colorado	Nuclear Engineering Consultant
Donald T. Klodt Denver, Colorado	Metallurgical Consultant
R. S. Landauer, Jr. & Co. Glenwood, Illinois	Environmental Monitoring, Dosimetry Processing
Western Radiation Consultants, Inc. Fort Collins, Colorado	Radiation Protection
EBASCO Services, Inc. Golden, Colorado	Engineering, Construction, Procurement Assistance
INPO Atlanta, Georgia	Procurement, Industry Support

TABLE 5.4-1

SUMMARY OF STATE/LOCAL INVOLVEMENT

AGENCY	PRINCIPAL RESPONSIBLITIES	LOCATION
State of Colorado:		
1) Division of Disaster Emergency Services (DODES)	a) emergency planning b) command & control c) communications d) coordination of Colorado National Guard & federal assistance	State EOC (Camp George West, Golden, CO) & FCP (Ft. Lupton, CO)
2) Colorado Department of Health (CDH)	a) incident dose assessment b) recommendation of protective actions c) contamination control/ decontamination measures	FCP, CDH HQ (Denver), State EOC, & deployed personnel
3) Colorado Department of Agriculture (CDA)	ingestion pathway protective actions	State EOC, FCP, CDA HQ (Denver)
4) Colorado State Patrol (CSP)	a) traffic control b) communication and transportation assistance	State EOC, FCP, & deployed personnel
5) Office of the Governor	a) issue proclamations for emergency preparedness b) utilize the National Guard c) issue evacuation orders d) handle media relations	State EOC and Governor's office (Denver)

TABLE 5.4-1 (Continued)

SUMMARY OF STATE/LOCAL INVOLVEMENT

AGENCY	PRINCIPAL RESPONSIBLITIES	LOCATION
Weld County:		
6) Weld County Commissioners	authorize and ensure appropriate county emergency planning and response	County Bldg (Greeley, CO)
7) Weld County Civil Defense	a) handle county EOC & communications b) coordinate local agency planning c) handle emergency feeding and sheltering	County Bldg (County EOC, Greeley, CO)
8) Weld County Sheriff	a) traffic control b) public notification c) conduct and confirm evacuation d) maintain law and order	FCP and deployed personnel

TITLE: RADIOLOGICAL EMERGENCY RESPONSE PLAN, SECTION 6

ISSUANCE AUTHORIZED BY		
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE 1-15-85

6.0 Emergency Measures

Station emergency measures will be initiated upon, and according to, incident classification. This section identifies segments of the station emergency organization that will be activated by class of emergency, details methods and procedures for assessment actions, specifies actions to correct or minimize the emergency situation, describes protective actions to prevent or minimize radiological exposure, and sets forth measures to assist persons injured or exposed to radiation and radioactive material.

6.1 Activation of Emergency Organization

The four classes of emergency defined in Section 4.1 require a varying degree and scope of emergency responses. The emergency organization activated in each emergency classification is shown in Figures 5.2-1 and 5.2-2. The Shift Supervisor will immediately initiate action to limit the consequences of the event and to return the plant to a safe and stable condition. The emergency organization for a NOTIFICATION OF UNUSUAL EVENT consists of normal shift personnel (Figure 5.2-1). No augmentation is required. For ALERT events, onsite and offsite emergency centers will be manned and activated in situations where the Emergency Coordinator or Corporate Emergency Director deem it necessary. In SITE AREA EMERGENCY or GENERAL EMERGENCY level accidents, onsite and offsite emergency response facilities will, in all cases, be manned and activated. The Plant Emergency Alarms are sounded for ALERT and higher level accident classifications. The location and extent of the event is announced over the station Gaitronics system or public address system. If the emergency occurs during a back shift period, the Shift Supervisor in the role of Emergency Coordinator, establishes the plant emergency organization per Section 5.2.

Upon incident assessment and classification of an UNUSUAL EVENT, notification will be made to the State (State EOC and Governor's Office) and to the Nuclear Regulatory Commission. Updates are made to keep these agencies informed of event status, although activation of offsite response centers is not expected unless the event escalates to an ALERT or more severe category. The initial emergency message for NOTIFICATION OF UNUSUAL EVENT (Figure 6.1-2) is based upon an agreement between the Governor of Colorado and PSC.

Classification of an incident as an ALERT or higher event requires notification consisting of three telephone contacts as indicated in Figure 6.1-1. The Nuclear Regulatory Commission (Region IV) is notified via "hot line" (preferably) or commercial telephone service. The state and local emergency response organization is notified by a telephone call to the Weld County Communications Center after notification is authenticated by call-back. The PSC emergency organization is notified by a single call to the Public Service Company Operator at corporate headquarters, who notifies the appropriate fanout list set forth in emergency plan notification procedures. The initial emergency message for ALERT, SITE AREA EMERGENCY, and GENERAL EMERGENCY classes, together with followup messages for these accident levels are contained in Figures 6.1-3 and 6.1-4.

Emergency center functions remain constant for ALERT, SITE AREA EMERGENCY, and GENERAL EMERGENCY classifications. Personnel/equipment augmentation may vary according to specific circumstances. The functions, as shown on Figure 5.2-2 include:

Technical Support Center

Command (Onsite)

Plant Condition Assessment

Recommendation of Corrective Actions

Radiological Consequence (Dose Projections)

Health Physics Assessment

Notification/Communications

Onsite Protective Action

Offsite Communications

Control Room

Assessment of Plant Operating Conditions

Implementing Corrective Actions

Fire Fighting Direction

Personnel Accountability (Initial)

Personnel Control Center

Personnel Accountability (Continued)

Emergency Repair/Damage Control

Onsite/Inplant Surveys

Radiation Protection (Personnel Monitoring/Dosimetry/ Decontamination/Access/Reentry Control)

Search and Rescue/First Aid

Fire Brigade

Security

Forward Command Post (PSC functions only)

Command (PSC Overall)

Government Notification/Communications

Radiological Assessment Coordination

Logistics Support

Media Relations

6.2 Assessment Actions

The assessment of plant conditions, radiation levels, and offsite consequences is initially coordinated by the Shift Supervisor (Emergency Coordinator). Upon relief of the Shift Supervisor by the Control Room Director (Primary: Superintendent of Operations; Alternate: Shift Supervisor, Training) and activation of the Technical Support Center (TSC) and the Personnel Control Center (PCC), these duties will be assumed by the emergency organization described in Section 5.0. The different types of assessment actions

are described in Table 6.2-1. Assessment will continue throughout the emergency period. Continued assessment may result in reclassification of the incident and consequent alteration in emergency response actions.

Incidents involving potential or actual release of radioactive materials to the environment (ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY) require special methods of assessment to ensure that responses are appropriate for protection of the population-at-risk and station personnel. The Fort St. Vrain Nuclear Generating Station has installed capability for measuring radioactive Iodine concentration in the coolant. Post-accident sampling is described in appropriate Health Physics and Radiochemistry procedures. It also has an extensive system for monitoring radioactive materials released to the environment (e.g., gaseous, process liquid, reactor building ventilation exhaust, and steam jet air ejector vent). The station is equipped with process and system monitors capable of initiating appropriate alarms and/or actuating control equipment for containment of radioactive materials if pre-established limits are reached.

These systems will monitor activity releases during accident conditions. In any accident where releases are not monitorable, emergency procedures provide "theoretical worst-case release rates corresponding to the Design Base Accidents outlined in Section 14 of the Fort St. Vrain Nuclear Generating Station FSAR."

The site has a permanent meteorological installation which indicates and records wind speed and direction and temperature differentials on a continuous basis in the Control Room. Additional readout capability is provided in the TSC via plant computer links. In the event that meteorological information in both the Control Room and TSC is unavailable, arrangements and procedures have been developed to secure necessary meteorological information from the 10 meter National Oceanic and Atmospheric Administration (NOAA) tower located onsite to the North of the plant. Guidance for the acquisition of meteorological data from existing instrumentation and displays, as well as backup data from NOAA tower instrumentation, is provided in RERP implementing procedure RERP-MET, Meteorological Data Acquisition.

The methodology and technique used to predict offsite concentrations of radioactive noble gases and iodine is summarized as follows:

Upon determination that an emergency, or potential emergency, could result in offsite dose consequences, the Support Services Manager, or his designee in accordance with RERP implementing procedure RERP-DOSE, "Offsite Dose Calculations"...

- Notes present weather conditions (wind speed and direction, atmospheric stability, cloud cover, and precipitation) and calls the Stapleton Airport National Weather Service to obtain a forecast for the next 12 hours to anticipate changes in weather conditions that might affect dispersion and alter the zones affected.

- Determines radioactivity release rates by reading the Reactor Building Ventilation Exhaust Stack Monitors. If the monitors are inoperative, or if an anticipated release has not started, an estimate of the release rate is obtained from prepared tables. The basis for these tables is the actual circulating coolant activity and/or 10CFR100 accident siting criteria.

- Selects an atmospheric dispersion graph (corresponding to the downwind distance(s) of interest and the atmospheric stability class) and identifies the dispersion factor for the zone(s) of interest. The graphs consist of plots of dispersion factors (X/Q values) calculated from standard Gaussian plume equations for ground level sources as shown in Meteorology and Atomic Energy (Reference 1) and based upon USNRC Regulatory Guide 1.145 (Reference 2).

- Multiplies the iodine release rate by the dispersion factor to obtain an air concentration of radioiodines. He uses the expected plume duration in the zone(s) of interest as the exposure time and calculates the thyroid dose by multiplying the appropriate thyroid dose conversion factor for that post-shutdown time by the air concentration and then by the exposure time. He calculates doses by zone and compares the integrated doses to Protective Action Guide (Reference 3) Criteria presented in Table 6.2-2.

- Multiplies the noble gas release rate by the dispersion factor to obtain an air concentration of noble gases. He uses the expected plume duration in the zone(s) of interest as the exposure time and calculates whole body gamma dose by multiplying the appropriate whole body gamma dose conversion factor for that post-shutdown time by the air concentration and then by the exposure time. He calculates doses by zone and compares the integrated doses to Protective Action Guide Criteria presented in Table 6.2-2.

Air concentration levels are verified by field monitoring teams consisting of an HP technician and an assistant deployed in captive vehicles with portable emergency radiological instrumentation including air samplers with silver zeolite cartridges, radiation survey meters, and portable radios on the PSC frequency. These teams are deployed within 30 minutes of activation of the emergency organization, and have the capability to sample radioiodine concentrations as low as 1×10^{-7} µCi/cc under field conditions. Information so developed will assist offsite emergency response authorities to reach appropriate decisions on modification of emergency protective actions initiated as a result of previous estimates of exposure levels (see RERP implementing procedure RERP-FIELD, Field Monitoring Procedure).

Unmonitored releases will be treated as unfiltered releases for the duration of the time that they went unmonitored, and will be assessed by utilization of data provided by the on-line noble gas monitor for circulating activity and reactor pressure instrumentation. These actions are described in detail in RERP implementing procedure RERP-DOSE, Offsite Dose Calculation.

6.3 Corrective Actions

Station procedures contain steps for preventive and/or corrective actions to avoid or mitigate serious consequences of an incident. Instrumentation and control system monitors provide indications/recordings and automatically control systems necessary for the safe and orderly operation of the station. These systems provide the operator with the information and controls needed to start up, operate at power, shut down, and, if necessary, to cope with an abnormal operating condition or emergency, should it occur. Control and display of information from these systems are centralized in the Control Room. The information provided by this instrumentation forms the basis for declaration of emergency classes.

Corrective actions will also involve response by the following onsite organizations:

- Fire Fighting

  Fire Brigades will respond to station fire calls. If outside assistance is required, a call will be placed to the Platteville Volunteer Fire Department (VFD). The Platteville VFD will, upon arrival, be escorted to the firescene by security personnel.

- Damage Control, Repair, and Decontamination

  For minor emergencies, station personnel will handle cleanup, repair, and damage control. For more major site emergencies, the support of company personnel, or specialized outside contractors, may be required to assist in damage control, cleanup, and repair operations. Recovery from a GENERAL EMERGENCY will be handled with the assistance of agencies available for that purpose and the cooperative effort of industrial organizations such as AIF, EPRI, and EEI. The organization for post-emergency recovery is described in Section 9.0.

6.4 Protective Actions

Protective actions will be taken to ensure that personnel, onsite and offsite, are notified and actions initiated for their protection in the event radiation or airborne activity levels exceed predetermined values, or when other situations threaten personnel safety.

Onsite actions to protect station personnel and visitors are the responsibility of the Shift Supervisor (as Emergency Coordinator) until he is relieved. Measures for the protection of the general public are detailed in the State RERP.

6.4.1 Protective Cover, Evacuation, and Personnel Accountability

a. Onsite

Protective actions for onsite personnel will be taken whenever a radiological emergency has occurred, or may occur, which will result in concentrations of airborne activity or radiation levels in excess of normal limits for a specified area or areas, that cannot be readily controlled. In addition, protective actions will be taken for onsite personnel in other emergency situations such as fires,

floods, and tornadoes where personnel safety is threatened. Notification of onsite personnel will be by actuation of plant alarm systems, telephone calls, and Gai-tronics announcements as applicable. Notification will be accomplished as soon as assessment actions permit a determination of the emergency class and corresponding actions. Personnel will be notified of appropriate actions to be taken at their respective personnel accountability stations.

1. Personnel Accountability

FSV Visitors Center personnel will be notified within 15 minutes and advised of appropriate protective actions. Site visitors inside the owner-controlled area will be escorted by station personnel to the Security Building where they will be monitored for contamination and normally depart the site. Their escorts will then report to their predesignated personnel accountability stations. Contract personnel will exit via the security building, where they will be monitored for contamination, and report to the Visitor's Center to await further instruction. Non-essential station personnel (i.e., personnel not specifically assigned to predesignated emergency functions) are required to assemble at pre-assigned personnel accountability stations where supervisors, or their designees will make accountability checks. Accountability status is reported to the Central Alarm Station (Security Desk in Lobby) which in turn reports to the Shift Supervisor. Initial accountability should be completed within 30 minutes. Subsequently, the PCC Director has responsibility for maintaining personnel accountability. Refer to the Administrative Procedures Manual procedure G-5, "Personnel Emergency Response" for specific details of the personnel accountability process.

2. Security and Access Control

The security program at the Fort St. Vrain Nuclear Generating Station is designed to meet the access control requirements of 10 CFR 73.55. Support personnel reporting to the station during an emergency may assemble first at the Personnel Control Center, if the Center is activated. The entry of required personnel will be coordinated through normal security routine, either by the PCC Director or the Shift Supervisor.

Provisions to restrict access to areas of the site outside the fenced protected area have been made. The PCC Director will assign designated security personnel to control traffic access to the owner-controlled area. Access control will be performed with the aid and cooperation of the Weld County Sheriff's Department.

3. Evacuation

The PCC Director will assure survey of the designated PCC to determine habitability, establish a controlled area at the appropriate PCC location (either the Training Center or the Engineering/QA complex, dependening upon prevailing wind direction), and prepare to receive personnel, should plant evacuation be required.

In the event that radiation levels are greater than, or equal to, 2.5 mrem/hr outside the Reactor Building, or there is unidentified airborne contamination greater than, or equal to, 9×10^{-9} µCi/cc above background outside of the Reactor Building (i.e., in the Turbine Building), or if conditions are such that the TSC Director deems it circumspect, such as during a SITE AREA or GENERAL EMERGENCY, non-essential personnel will be evacuated from the plant.

If a plant evacuation was deemed appropriate, there are two Personnel Control Centers within the Owner Protected Area to evacuate to. These PCCs are the Training Center and the QA/Engineering Complex. Complete Emergency Kits, including radiological monitoring equipment and field radios are stored at the Training Center and at the QA/Engineering Complex.

The selection of a PCC is largely dependent upon the prevailing wind condition and the accessibility of that location. Personnel will be monitored for contamination, and accountability checks will be made by PCC staff as appropriate. Personnel onsite, but outside of the protected (fenced) area, will be notified of the emergency and directed to buildings in areas unaffected by the event. Should evacuation of the site become necessary, privately owned vehicles will be used. Tenants on PSC property are notified by telephone or personal contact of actions considered necessary to their protection (PCC procedure emergency call list).

In the event that the two onsite Personnel Control Center assembly areas are uninhabitable (i.e., radiation levels are greater than, or equal to 2.5 mrem/hr, or there is unidentified airborne activity greater than, or equal to, 9×10^{-9} µCi/cc above background), non-essential personnel will be directed to evacuate to one of three designated offsite PCC locations. The preferred offsite PCC area is the Johnstown County Shops. The alternate offsite PCCs are the PSC Longment Service Center and the Platteville Firehouse. The PCC Director is responsible for the transport of emergency equipment, including decontamination supplies, necessary to establish the offsite PCC. Personnel in the protected area will exit the security building where they will be monitored for contamination and carded out of the plant.

4. Rescue Operations

The search and rescue function is handled by trained Fire Brigade or Health Physics personnel. When station personnel are unaccounted for in the initial or subsequent emergency accountability, the Shift Supervisor assigns a search and rescue team to locate and, if necessary, rescue personnel, observing the emergency exposure limits outlined in Table 6.5-1.

b. Offsite

The Emergency Coordinator will recommend appropriate initial protective actions to offsite authorities, to include either evacuation or sheltering, as alternatives, based upon consideration of relative benefits of the alternatives. The action which affords the greatest amount of dose avoidance for accidents (where projected or measured offsite doses are expected to exceed Protective Action Guides - Table 6.2-2) will generally be preferred. However other factors such as release duration, mobilization time relative to plume arrival time, or adverse weather may be important considerations affecting the decision.

Protective actions for offsite areas are initiated by state/local emergency response organizations as detailed in the State RERP. The State of Colorado has adopted the USEPA Protective Action Guides (Reference 3) for initiating actions to protect the general public. Plans for activating state/local emergency response agencies and performing various protective actions and services are specified in the State RERP. Estimated sector evacuation times are shown in Appendix C, Figure 10.C-2. These evacuation times were formally published in detail in PSC report "Evaluation Time Study of the 10-Mile Radius Area About the Fort St. Vrain Nuclear Generating Station," as transmitted to the U.S. Nuclear Regulatory Commission April 1, 1981 (P-81110). These estimates have been modified in RERP implementing procedure RERP-PAG, Protective Action Guideline Recommendations, to account for use of the tone alert Early Warning Alert (EWA) System. Approximate initiation times for these protective actions are shown in Table 6.4-1.

The means of public notification is the use of tone alert NOAA weather radios distributed to residents living within the plume exposure EPZ (5 mile radius). A brief prepared message is broadcast over the radio issuing general instructions regarding protective actions and informing the public to tune to a local Emergency Broadcast System (EBS) radio station for further information. Additional coverage is provided, if required, by personal notification by Weld County Sheriff's Department personnel (with possible augmentation by the Platteville Volunteer Fire Department). Notification times are stated to approximate 15 minutes. Content of messages for the public and the decision to implement notification means is a State of Colorado responsibility (State RERP, Annex C).

PSC emergency procedures provide for prompt notification of state, local, and federal agencies and keeping these agencies updated on the overall status of the emergency. PSC will coordinate onsite actions with local, state, and federal agencies involved in offsite emergency response actions.

Notification of offsite businessmen, property owners and tenants, school administrators, recreation facility operators, and the general public within the emergency planning zone will be accomplished by local tone alert radio or emergency forces, as noted in the State RERP.

6.4.2 Use of Onsite Protective Equipment and Supplies

A variety of protective equipment is available onsite to minimize radiological exposures, contamination problems, and fire fighting hazards. The types of equipment, their criteria for issuance, location, and means of distribution are noted in Table 6.4-2. Radiothyroid protective drugs in sufficient quantity to administer to 100 employees is stockpiled at FSV. Criteria for issuance and location is noted in Table 6.4-2.

6.4.3 Contamination Control Measures

a. Plant Site

Measures will be taken to prevent, or minimize, direct or subsequent ingestion of radioactive materials deposited within the exclusion area. As necessary, affected areas will be isolated. Details of contamination control measures for onsite areas are contained in station procedures. The following is an outline of those procedural controls:

1. Radioactive Contamination of Personnel

- Controls have been established to insure that levels of removable contamination outside radiologically controlled areas will be maintained at less than allowable limits of 10dpm/100cm² alpha activity and 100dpm/100cm² beta-gamma activity.

- The environment of personnel working within radiological control areas are supervised by Health Physics personnel. Radiation Work Permits (RWPs) may be required for personnel in such areas. Specific instructions, precautions, and limitations are listed on RWPs.

- Protective clothing is required for individuals entering contaminated areas. Individuals leaving radiological control areas are monitored for contamination upon departure.

- Quarterly integrated accumulations of radionuclides in the body will not exceed accumulation levels which would result from exposure to the maximum permissible concentrations (MPC) of radionuclides in air or drinking water for occupational exposure as indicated in 10CFR20.103. Food for emergency personnel will be provided from offsite sources.

- Exposure to airborne concentrations higher than the MPC will be prevented or avoided. If exposures are necessary, wearing appropriate, properly fitted respiratory protective equipment will be required, as determined by Health Physics. Periodic air samples will be taken in selected operational and work areas to ensure that MPC levels are not exceeded.

2. Radioactive Contamination of Equipment

- Tools and equipment used in radiological control areas will be checked for contamination before they are taken outside the control area. If any equipment is found to be contaminated and decontamination is not practical, the item will remain controlled.

- Equipment and tools will be unconditionally released for use outside the area only if removable contamination and radiation levels are less than allowable limits previously stated.

- Removal of material from radiological control areas with radiation and contamination levels in excess of specified limits must be approved for release by Health Physics personnel. Any contaminated material approved for release will be packaged, sealed, and labeled with a properly executed radioactive material tag and handled in accordance with approved procedures.

b. Offsite

For areas beyond the site boundary, Colorado Department of Health (CDH) radiation monitoring teams will identify levels and control access. Until CDH teams arrive for dispatch, Public Service Company EPZ teams may be dispatched from the PCC to perform offsite monitoring. For areas where public access normally occurs, criteria for offsite areas will be applied. Criteria and measures for contamination control in offsite areas are detailed in the State RERP.

6.5 Aid to Affected Personnel

6.5.1 Emergency Personnel Exposure Criteria

Exposure records are maintained for station personnel at each emergency center. This information will be utilized in determining emergency team assignments. Criteria used for limiting doses to emergency workers are based on recommendations of the USEPA (Reference 3) and are shown in Table 6.5-1. Emergency workers will carry self-reading dosimeters in addition to film badges. Emergency dosimetry services will be provided through contract with R.S. Landauer Corporation.

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Emergency dosimetry service response is provided on a 24-hour basis. Every effort will be made to minimize emergency worker doses through the use of protective equipment and supplies. The PCC Director is responsible for emergency team assignments and may authorize emergency workers to receive doses in excess of 10CFR20 limits. This authorization to exceed occupational exposure limits shall be performed in accordance with existing RERP implementing procedures (see RERP-EXP), and shall be given only after consultation with the senior Health Physics representative at the TSC, and under direction of the TSC Director. The PCC Director will be notified of accidental or emergency exposure in excess of occupational limits. Those individuals will not be assigned to further emergency team operations. Decisions to accept doses in excess of occupational limits in life saving situations will be on a volunteer basis. In no case will doses be permitted to exceed 75 Rem Whole Body (per USEP, recommendation). The PCC Director is also responsible for assuring the distribution of film badges and self-reading dosimetric devices to emergency personnel and assuring the ongoing accountability of each worker's dose. At the TSC, the TSC Director is responsible for the issuance of dosimeters as needed, and ensuring the ongoing accountability of each worker's dose.

6.5.2 Decontamination and First Aid

Provisions have been made to assist personnel who are injured, or who may have received high radiation doses. There are personnel onsite who are trained in first aid and decontamination procedures. In addition, onsite decontamination areas are equipped with decontamination facilities and other specialized equipment. Personnel found to be contaminated (any detectable activity above background) will undergo decontamination under the control of Health Physics procedures. Where contamination of large or open wounds is involved, personnel will be immediately transported to designated medical facilities offsite where they will receive prompt medical attention in accordance withthe FSV Medical Emergency Plan.

Each emergency team will include members trained in first aid. First aid kits are available at onsite locations in accordance with PSC policy specified in General Instructions, as well as in the onsite first aid facility.

6.5.3 Medical Transportation

Injured/contaminated personnel who require medical attention will be transported to St. Luke's Hospital by the St. Anthony's Hospital Flight for Life, or by Weld County Ambulance Service. A personal vehicle may be utilized if the situation necessitates. Ambulance crews have been trained to handle contamination cases. PSC Health Physics personnel will accompany contaminated patients to the hospital. Communications between FSV and emergency medical vehicles will be channeled through the Weld County Communications Center.

6.5.4 Medical Treatment

Arrangements for treating contaminated patients have been made with St. Luke's Hospital in Denver. In situations where there isn't time to transport a patient to St. Luke's, North Colorado Medical Center, Greeley, may be utilized. In these cases, FSV Health Physics personnel will respond to assist in contamination control at the hospital. Hospital staff at St. Luke's are trained to treat contaminated patients (Section 10, Appendix A). Following decontamination, personnel suspected to have ingested radionuclides will undergo whole body counting at PSC or CDH facilities. Communications between FSV and fixed medical facilities are via commercial telephone and are handled in accordance with the FSV Medical Emergency Plan.

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REFERENCES

(1) Slade, D.H., ed., Meteorology and Atomic Energy - 1968, USAEC, July 1968.

(2) USNRC, Regulatory Guide 1.145, Atmospheric Dispersion Models For Potential Accident Consequence Assessments at Nuclear Power Plants, Revision 1, November 1982.

(3) USEPA, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, June, 1980.

(4) USEPA, Appendix D to the Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, Technical Bases for Dose Projection Methods, January 1979.

FIGURE 6.1-1

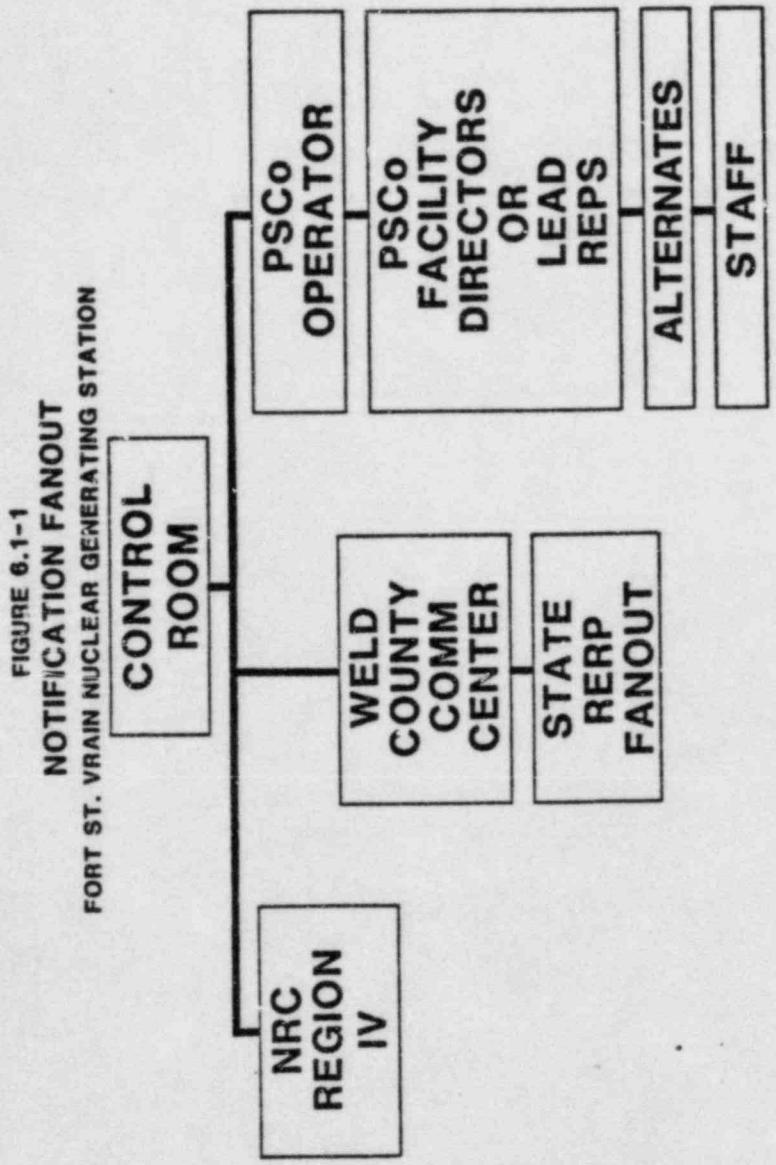
FIGURE 6.1-1
NOTIFICATION FANOUT
FORT ST. VRAIN NUCLEAR GENERATING STATION
CONTROL ROOM
PSCo OPERATOR
PSCo FACILITY DIRECTORS OR LEAD REPS
ALTERNATES
STAFF
WELD COUNTY COMM CENTER
STATE RERP FANOUT
NRC REGION IV

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Figure 6.1-2

INITIAL MESSAGE CONTENT

(NOTIFICATION OF UNUSUAL EVENT)

Fort St. Vrain Nuclear Generating Station

A. The Emergency Coordinator and first management contact will complete the following information jointly:

1. Name and identity of caller_____

2. Date of Event_____ Time of Event_____

3. General Category of Event

_____ Unplanned Radiological Release to Reactor Building

_____ Fuel Failure

_____ Fire

_____ Natural Phenomenon (circle one)

Earthquake Flood Tornado Winds

_____ Unusual Hazards (circle one)

Aircraft Explosion Toxic Material

Other (Specify)_____

_____ Spent Fuel Incident

4. Description of Event _____

_____

5. Actions Taken _____

_____

FORM (C) 372 - 22 - 3643

6. Status:

_____ Under control by onsite staff, no offsite assistance anticipated.

_____ Under control by onsite staff. Will keep State and NRC advised.

_____ Offsite assistance may be required. Will advise. (See Item 7.)

_____ Offsite assistance required. (See Item 7.)

7. If offsite assistance is anticipated or required, describe assistance that has been or may be required: _____

_____

_____

_____

_____

8. At the present time, the event does not involve offsite release or the potential for offsite releases that would affect the general health and safety of the public.

B. The Emergency Coordinator will make notifications as follows:

Contact with State EOC (279-8855) and Governor's Office (866-2471) or Mansion (837-8350)

1. READ the following statement verbatim:

"THIS IS A NOTIFICATION OF AN UNUSUAL EVENT AT THE FORT ST. VRAIN NUCLEAR GENERATING STATION. THIS NOTIFICATION DOES NOT REQUIRE ACTIVATION OF EMERGENCY RESPONSE CENTERS. THIS NOTIFICATION REQUIRES VERIFICATION OF RECEIPT BY THE STATE. VERIFY BY CALLING 571-7436 or 785-2223."

2. READ all the information recorded in Step A (Page 1 of this ATTACHMENT).

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3. RECORD the following information:

Name of State EOC contact_____Date/Time _____

Name of Governor's Office/Mansion Contact_____

Date/Time _ _____

Call back verification from State EOC, Date/Time _____

Call back verification from Governor's Office/Mansion

Date/Time _____

_____

| Contact with NRC Operations Center (Hot Line or 202-951-0550) |

(Alternate means of notification are given in Attachment 1.)

1. READ the following statement verbatim:

"THIS IS NOTIFICATION OF AN UNUSUAL EVENT AT THE FORT ST. VRAIN NUCLEAR GENERATING STATION AT PLATTEVILLE, COLORADO. THIS NOTIFICATION APPEARS TO BE REQUIRED PURSUANT TO 10CFR50.72, PARAGRAPH (a)(3). THIS NOTIFICATION DOES NOT REQUIRE ACTIVATION OF FEDERAL OR STATE EMERGENCY RESPONSE ORGANIZATIONS."

2. READ the NRC Operations Center all of the information recorded in Step A (Page 1 of this Attachement).

3. RECORD the following information:

Name of NRC Contact_____Date/Time _____

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FIGURE 6.1-3

NOTIFICATION OF EMERGENCY EVENT

(INITIAL MESSAGE CONTENT)

Fort St. Vrain Nuclear Generating Station

A. The Emergency Coordinator will complete Pages 1 and 2 of this attachment with the assistance of the first management contact.

1. This is ____(Name)____, Shift Supervisor at the Fort St. Vrain Station.

2. At ____(Time)____ we experienced an (ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY) Class incident.

3. a) There is NO, repeat NO, radioactive release taking place, and no special protective actions are recommended at this time.

OR

b) A small release IS taking place, but at this time NO protective actions are recommended and are not anticipated to be.

OR

c) A radioactive release IS, repeat IS, taking place, and we recommend that people in areas _____ remain indoors with windows and doors closed.

OR

d) A radioactive release IS, repeat IS, taking place, and we recommend that evacuation of areas _____ be considered.

4. Further information on incident conditions will be provided in followup messages.

5. Personnel Control Center to be located _____

_____

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FIGURE 6.1-4

NOTIFICATION OF EMERGENCY EVENT

Fort St. Vrain Nuclear Generating Station

SUPPLEMENTAL INFORMATION

NOTE: This information is to be supplied to the NRC and the Colorado Department of Health when requested. The radiological data can be determined as specified in RERP-DOSE.

1. Date and Time of Incident _____

2. Class of emergency (ALERT)(SITE AREA EMERGENCY)
(GENERAL EMERGENCY)

3. Type of release (airborne, waterborne, surface) _____

4. Estimated duration of release _____ (Hours)

5. Current release rate:

Noble Gas _____Ci/sec; Iodine _____Ci/sec

6. Estimated curies released:

Noble Gas _____Ci; Iodine _____Ci

7. Wind Velocity _____MPH, from _____degrees.

to _____degrees, Air Temp _____°F

8. Stability Category _____. Form of Precip. _____

9. Dose rate at EAB: WB _____rem/hr; Thyroid _____rem/hr

2 Miles: WB _____rem/hr; Thyroid _____rem/hr

5 Miles: WB _____rem/hr; Thyroid _____rem/hr

10. Projected dose at EAB: WB _____rem; Thyroid _____rem

2 Miles: WB _____rem; Thyroid _____rem

5 Miles: WB _____rem; Thyroid _____rem

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11. Estimated accumulated dose at EAB:

WB _____rem; Thyroid _____rem

12. Areas expected to be impacted by release _____

_____

_____

13. Estimate of any surface radioactive contamination _____

_____

14. On-site response actions under way _____

_____

15. Recommended Protective Action based on the projected dose at the EAB (Read appropriate Protective Actions)

Projected Dose (rem)	Recommended Protective Action
Whole Body <1 Thyroid <5	No planned protective actions. State may issue advisory to seek shelter and await instructions. Monitor radiation levels.
Whole Body 1 to 5 Thyroid 5 to 25	Take shelter and consider selective evacuation. Monitor radiation levels. Establish Controlled Area and limit access.
Whole Body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor radiation levels and adjust area for mandatory evacuation based on these levels Control Access.

16. Prognosis for worsening of event _____

17. Date and time of report _____

TABLE 6.2-1

ASSESSMENT ACTIONS

Action	Description
1. Surveillance of Control Room instrumentation	Plant radiation levels, pressures, temperatures, flows and meterological data are monitored. The control room operators can assess plant status by observing sensor readout. Most sensors have visual and audio alarms. Data will be provided to the Emergency Coordinator as necessary for his assessment. Control room operators will take corrective actions as necessary.
2. Personnel Accountability	Accountability of all personnel onsite is made at the respective personnel accountability stations. Security printouts and personnel rosters may assist in this assessment.
3. In Plant Radiological Surveys	Radiation monitoring teams will perform these surveys. The radiation levels on the station's fixed area and ventilation monitoring systems will be obtained from the control room to assist in these evaluations. Contamination surveys of equipment and personnel is done with portable equipment from the emergency kits or at routine personnel monitoring stations.
4. Site Boundary/EPZ Surveys	Handled in same fashion as in-plant surveys by radiation monitoring teams.
5. Offsite Consequence Assessment	Radiological Assessment personnel will be using effluent monitors, meteorological data,and field monitoring results to make assessments of offsite consequences.
6. Environmental Monitoring	For less immediate actions, samples of various environmental media are collected and analyzed by an oustide contract laboratory. Results will be evaluated by company personnel and the contract laboratory.
7. Assessment Reporting	In the case of actual or potential offsite consequences, the state and local authorities are immediately notified in accordance with the State RERP. Predetermined criteria are used to initiate various protective actions for the public by the local authorities as illustrated in Tables 4.1-1 through 4.1-4.

TABLE 6.2-2

Recommended protective actions to reduce whole body and thyroid dose from exposure to a gaseous plume

General Public

Projected Dose (Rem) to the Population	Recommended Actions (a)	Comments
Whole Body less than 1 Thyroid less than 5	No planned protective actions (b). State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole Body 1 to 5 Thyroid 5 to 25	Seek shelter as a minimum. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Whole body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access.	Seeking shelter would be an alternative if evacuation were not immediately possible.

(a) These actions are recommended limits for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration (refer to RERP implementing procedure RERP-PAG, "Protective Action Guideline Recommendations").

(b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable.

TABLE 6.2-2 (Continued)

Recommended protective actions to reduce whole body and thyroid dose from exposure to a gaseous plume

Emergency Workers

Projected Dose (Rem) to Emergency Team Workers	Recommended Actions (a)	Comments
Whole body 25	Control exposure of emergency teams members to these levels except for lifesaving missions. (Appropriate controls for emergency workers, include time limitations, respirators, and stable iodine.)	Although respirators and stable iodine should be used where effective to control dose to emergency team workers, thyroid dose may not be a limiting factor for lifesaving missions.
Thyroid 125		
Whole Body 75	Control exposure of emergency team members performing lifesaving missions to this level. (Control of time of exposure will be most effective.)	

(a) These actions are recommended limits for planning purposes and any exposures in excess of occupational (10CFR20) limits must be handled in accordance with RERP implementing procedure RERP-EXP, "Emergency Exposure Guidelines." Protective action decisions at the time of the incident must take existing conditions into consideration.

TABLE 6.4-1

Initiation Times for Protective Actions for the General Public

Approximate Initiation Time	Exposure Pathway	Action to be Initiated
0 - 4 Hours	Inhalation of gases or particulates	Evacuation, shelter, access control, respiratory protection, prophylaxis (thyroid protection).
	Direct radiation	Evacuation, shelter, access control.
4 - 48 Hours	Milk	Take cows off pasture, prevent cows from drinking surface water, quarantine contaminated milk, utilize stored feeds.
	Harvested fruits and vegetables	Wash all produce, or impound produce.
	Drinking water	Cut off contaminated supplies, substitute from other sources.
	Unharvested produce	Delay harvest until approved.
2 - 14 Days	Harvested produce	Substitute uncontaminated produce.
	Milk	Discard or divert to stored products, such as cheese.
	Drinking water	Filter, demineralize, test.

TABLE 6.4-2

Use of Protective Equipment and Supplies

Equipment	Criteria for Issuance	Location	Means of Distribution
1) Full Face Canister Respirator	As needed by onsite Emergency Teams in areas of high airborne radioactivity	a) Selected Emergency Monitoring Kits b) Respiratory Issue Lockers-Turbine Deck.	a) Issued at Personnel Control Center b) Picked up at nearest station as directed by Health Physics Personnel.
2) Self-Contained Breathing Apparatus	a) Inhalation hazard during fire fighting b) Airborne radioactivity in excess of administratively set levels c) Toxic gas hazard	a) Control Room b) Various Areas in Station	a) Used as needed by operators. b) Issued as needed by Heatih Physics Personnel.
3) Protective Clothing (Coveralls, Hoods, Boots, Gloves)	As needed in areas of known contamination	a) Various Areas of the station. b) Emergency Kits	a) Issued as needed by Health Physics Personnel. b) Issued at Personnel Control Center.
4) Air-Fed Respirator	Airborne radioactivity in excess of administratively set levels.	a) Control Room b) Respiratory Issue Lockers-Turbine Deck.	a) Used as required by operators. b) Issued by Health Physics Personnel.
5) THYRO-BLOCK (Potassium Iodide) tablets. (130 mg)	Airborne radioiodine concentrations elevated to the extent that an individual properly fitted with respiratory protection may be expected to receive a thyroid inhalation dose in excess of 10 rem (Refer to RERP implementing procedure RERP-THYROID, "Thyroid Blocking Agent Administration").	a) Respiratory Issue Lockers-Turbine Deck b) Emergency kits at Training Center and QA/Engineering complex facilities (PCCs).	Issued only by Health Physics Personnel under direction of the Support Services Manager with consent of the PSC Medical Department.

TABLE 6.5-1

Exposure Criteria for Emergency Workers*

Situation	Whole Body	Thyroid**
1. Emergency duties not related to protecting equipment, personnel, or the public.***	5 Rem	25 Rem
2. Prevent extensive equipment damage, further escape of effluents, or control fires.	25 Rem (planned) 12 Rem (unplanned)	125 Rem
3. Lifesaving missions, e.g., search and rescue of injured people, prevent conditions that would injure numbers of people.	75 Rem	Unlimited****

* Administered in accordance with RERP implementing procedure RERP-EXP, "Emergency Exposure Guidelines".

** Respiratory protection will be provided as necessary.

*** Includes performing accident assessment, providing first aid, performing personnel decontamination, providing ambulance service, and providing medical treatment services.

**** Although respirators and potassium iodide blocks should be used where effective to control dose to emergency team workers, thyroid dose may not be a limiting factor for a lifesaving mission.

TITLE:	RADIOLOGICAL EMERGENCY RESPONSE PLAN, SECTION 9		
ISSUANCE AUTHORIZED BY	M Fuller for T.W. Cadwell		
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE	1-15-85

9.0 Recovery

Recovery operations for the Fort St. Vrain Nuclear Generating Station will consist of two phases. Phase I efforts will include recovery measures undertaken during and immediately following the emergency. These measures are a functional responsiblity of the emergency organization discussed in preceding sections, augmented by corporate and short term contract support. Phase II recovery operations include the longer term post-emergency efforts that follow a major incident. These operations will be performed by station and other PSC personnel, contract experts and specialists, and qualified engineers-constructors under the direction of the PSC recovery organization.

During and immediately following an accident, emergency/recovery actions are designed to: (1) terminate the accident; (2) mitigate or eliminate potential hazards to the public and station personnel; and, (3) restore the plant to a safe and stable condition. After termination of the emergency, post-emergency actions are designed to: (1) identify the extent of plant damage; (2) prepare specific plans and programs for station repair and restoration; (3) implement recovery plans and programs; and, (4) return the plant to a normal operating status.

The following plant status conditions will serve as general guidelines for decisions on the initiation of Phase II post-emergency recovery efforts:

- Radiation levels are stable or decreasing with time.
- Releases of radioactive materials to the environment have ceased or are controlled within permissible license limits.
- Fire, flooding, or similar emergency conditions no longer constitute a hazard to the plant or station personnel.

- Measures have been successfully instituted to correct or compensate for malfunctioning equipment.

The recovery organization described in this section will be activated following emergency termination. Manpower and equipment resources supporting the individual functional segments of the recovery organization will vary according to the severity of damage and specific situational needs.

9.1 Post-Emergency Recovery Organization

Activation of an effective recovery operation will involve the transition of selected key technical personnel from emergency to recovery operations. In a similar manner, management personnel involved in the emergency will be assigned to direct and coordinate post-accident recovery operations.

Function managers and technical personnel who served in station, Forward Command Post, and Executive Command Post positions during the emergency will form the nucleus of the post-emergency recovery organization. The Corporate Emergency Director shall decide when to effect the transition from the emergency organization configuration to the recovery organization and notify personnel accordingly. The post-emergency recovery organization is depicted in Figure 9.1-1.

The responsibilities and functions of the post-emergency recovery managers noted in Figure 9.1-1 are summarized as follows:

- The Recovery Director - (Vice President of Production) has overall corporate responsibility for restoring the station to a normal operating configuration and is vested with the authority to commit corporate resources to accomplish the recovery.

- The Plant Operations Manager - (Manager, Nuclear Production) manages day-to-day inplant operations and, during recovery, is responsible for ensuring that repairs and modifications will optimize post-recovery plant operational effectiveness and safety.

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- The Design & Construction Support Manager - (Manager, Nuclear Engineering) focuses necessary engineering, design, and construction resources on those aspects of plant recovery requiring redesign, modification, or new construction, and directs and coordinates NSSS and balance of plant engineering and construction/repair work.

- The Radcon/Waste Manager - (Support Services Manager) develops plans and procedures to process and control liquid, gaseous, and solid wastes to minimize adverse effects on the health and safety of the public and station recovery personnel. In addition, the Radcon/Waste Manager coordinates the activities of staff health physicists and personnel engaged in waste treatment operations.

- The Technical Support Manager - (Technical/Administrative Services Manager) provides analyses, plans, and procedures in direct support of plant operations; (i.e., core physics, thermal hydraulics, licensing, and I & C support) and supplies administrative, logistic, communications, and personnel support for the recovery.

- The Quality Assurance Manager - (Manager, Quality Assurance) assures that the overall conduct of recovery operations is performed in accordance with corporate policy and rules and regulations governing activities which may affect public health and safety.

- The Scheduling/Planning Manager - (Scheduling/Stores Coordinator) prepares plans and schedules and tracks/expedites recovery operations.

- The Recovery News Director - (Manager of Corporate Communications) coordinates the flow of media information concerning recovery operations and acts as corporate spokesman concerning post-emergency activities.

9.2 Recovery Exposure Control

The Manager, Nuclear Production will designate a technical group responsible for evaluating the advisability of initiating recovery and reentry. Information on existing conditions, interviews with employees evacuated during the emergency, regulatory exposure guidelines, and counsel from recognized experts will be utilized in formulating decisions on reentry and recovery.

During recovery operations, actions will be preplanned to limit exposures. Access to affected areas will be controlled and exposure to personnel documented. Contaminated areas will be posted with radiation levels and stay times based on results of surveys.

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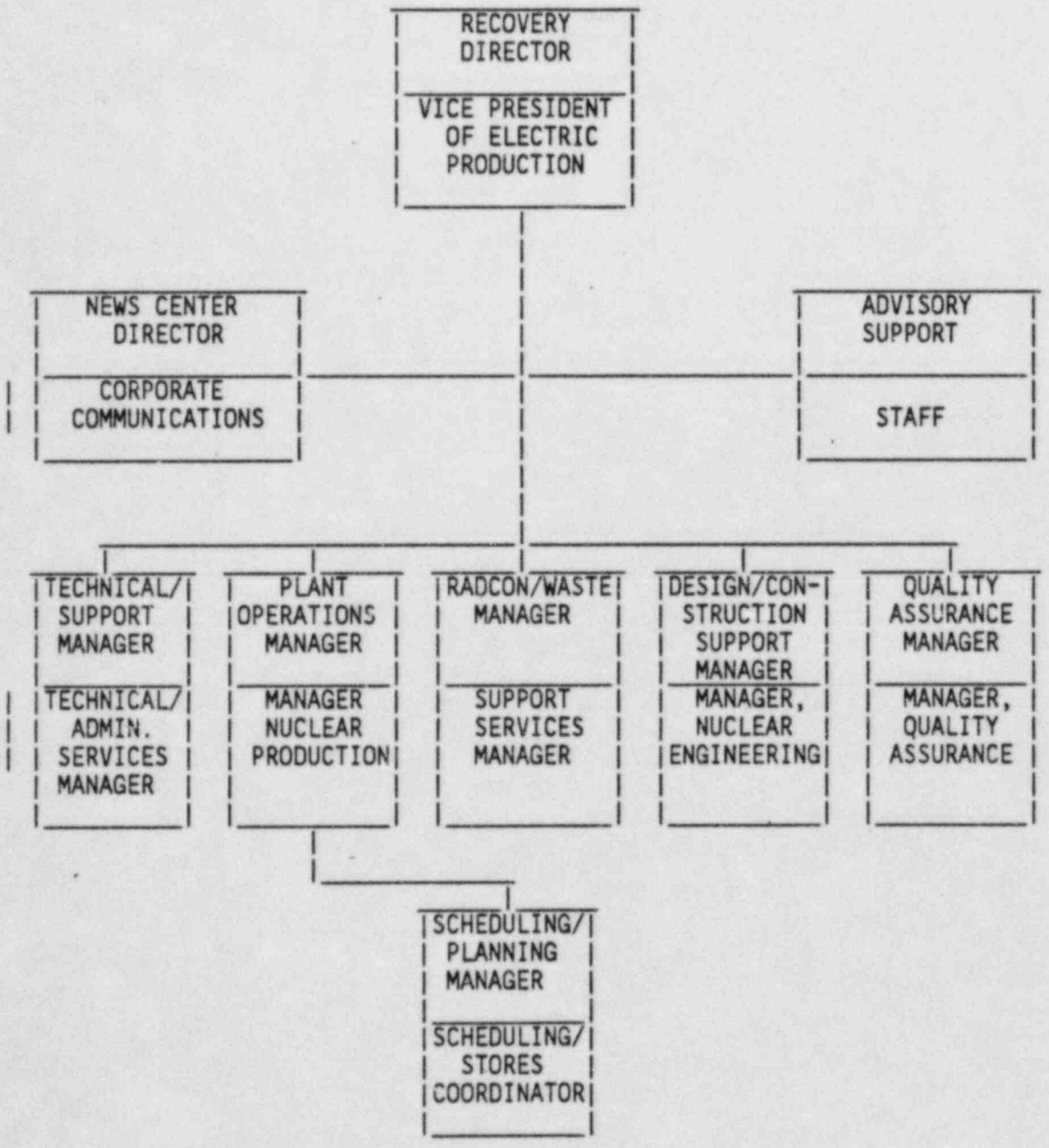
Figure 9.1-1

POST-EMERGENCY RECOVERY ORGANIZATION

Fort St. Vrain Nuclear Generating Station



RADIOLOGICAL EMERGENCY RESPONSE PLAN - STATION

NO.	SUBJECT	ISSUE NUMBER	EFFECTIVE DATE
RERP-ECP	Executive Command Post Procedure	9	10-10-84
RERP-EXP	Emergency Exposure Guidelines	2	08-06-84
RERP-FCP	Forward Command Post Procedure	11	08-06-84
RERP-FIELD	Field Monitoring Procedure	6	08-06-84
RERP-HOME	Home Packet for Off-Shift Notifications	13	01-15-85
RERP-ORG	FSV Emergency Organization and Responsibilities	7	10-10-84
RERP-PAG	Protective Action Guideline Recommendations	3	08-06-84
RERP-PCC	Personnel Control Center Procedure	14	08-06-84
RERP-SEOC	State Emergency Operations Center Procedure	9	10-10-84
RERP-SURVEY	Inplant/Onsite Radiological Monitoring	4	08-06-84
RERP-THYROID	Thyroid Blocking Agent Administration	4	10-10-84

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FORT ST. VRAIN NUCLEAR GENERATING STATION

TITLE: HOME PACKET FOR OFF-SHIFT NOTIFICATIONS

ISSUANCE AUTHORIZED BY	M. J. Fulle for T. W. Gahm	
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE 1-15-85

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General

This procedure is provided for use, at home, by plant management contacts, RERP facility directors and alternates, and by the first individual on each facility director's call list. The purpose of this procedure is: (1) To assist plant management in determining the severity of an occurrence when contacted at home by the FSV duty Shift Supervisor; (2) To provide plant management contacts with copies of notification forms to assist the the duty Shift Supervisor in their completion; (3) To provide required telephone numbers for facility activation if required; and, (4) To assure that individuals who may potentially be required to call-in individuals for off-shift emergency facility activation are clearly identified.

1.0 Criteria for Implementation

This procedure may be utilized under virtually any off-normal off-shift situation where consultation regarding reportability or activation requirements must be addressed.

2.0 Procedure

2.1 ANI Notifications

Notification to American Nuclear Insurers (ANI) is required under five (5) general categories listed below:

- Losses believed to be near, or above, the deductible ($50,000);
- Incidents where fixed fire protection systems have operated under other than test conditions;
- Incidents where prompt assistance could help prevent further loss or expense, or where assistance is otherwise desireable;
- Incidents where incendiarism or malicious mischief is suspected; or
- Emergency impairments to fire protection equipment.

Whenever the on-duty Shift Supervisor believes an occurrence matches one of these circumstances, he will contact a plant management contact for consultation (where possible). The Shift Supervisor and plant management contact will jointly complete Attachment 1 to this procedure. Additional plant management contacts may be made utilizing Table 1 for reference.

2.2 Non-Emergency Event Notifications

Notification to the NRC operations center within four (4) hours is required for events which fall under the general descriptions shown in Table 2, and within one hour for events as described in Table 3. When these events transpire, or when the on-duty Shift Supervisor believes an event may require such reporting, he may contact one of the plant management contacts listed in Table 1. Together, where possible, they will jointly complete the "Non-Emergency Event Notification Form," Attachment 2 of this procedure. Additional plant management contacts may be made at the Shift Supervisor's discretion utilizing Table 1.

2.3 Radiological Emergency Response Plan (RERP) Notification

Notification to offsite authorities within fifteen (15) minutes and to the NRC within one hour of event classification is required when a situation has arisen that meets classification criteria set forth in Tables 4-7 of this procedure. Events classified as a NOTIFICATION OF UNUSUAL EVENT are reported to the state utilizing the notification format of Attachment 3. The plant management contact shall assist the completion of this form. If the event is an ALERT, or higher, RERP event, Attachment 4 shall be completed. The Shift Supervisor may consult with plant management regarding incident classification.

2.3.1 NOTIFICATION OF UNUSUAL EVENT

For a NOTIFICATION OF UNUSUAL EVENT, where appropriate, the initial management contact shall notify other contacts per Checklist 1 and forward the completed form to the Technical Services Department.

2.3.2 ALERT or Higher RERP Event

For an ALERT or higher RERP event, the notification fanout shown in Figure 1 of this procedure shall occur to assure prompt facility activation and staffing. Under these conditions, Facility Directors will be contacted by the PSCo Telephone Operator. The Facility Director will in turn contact his alternate. The alternate, or the next person contacted, is then responsible for performing the additional notifications specified herein. Each facility's call list is reproduced as Attachments 5-9, herein. The Facility Director primary and alternates are shown on Attachment 10.

3.0 Responsibilities

3.1 Duty Shift Supervisor

Classify the situation, contacting a plant management contact for assistance in accordance with existing Operations Orders, Notification Procedures, or RERP-Implementing Procedures, where possible.

3.2 Plant Management Contacts

Assist the Shift Supervisor, as required, and perform additional notifications, as appropriate to a given situation.

4.0 References

4.1 FSV Radiological Emergency Response Plan

5.0 Referenced or Supporting Procedures

5.1 RERP-PHONE LISTS

5.2 RERP-CR, Control Room Procedure

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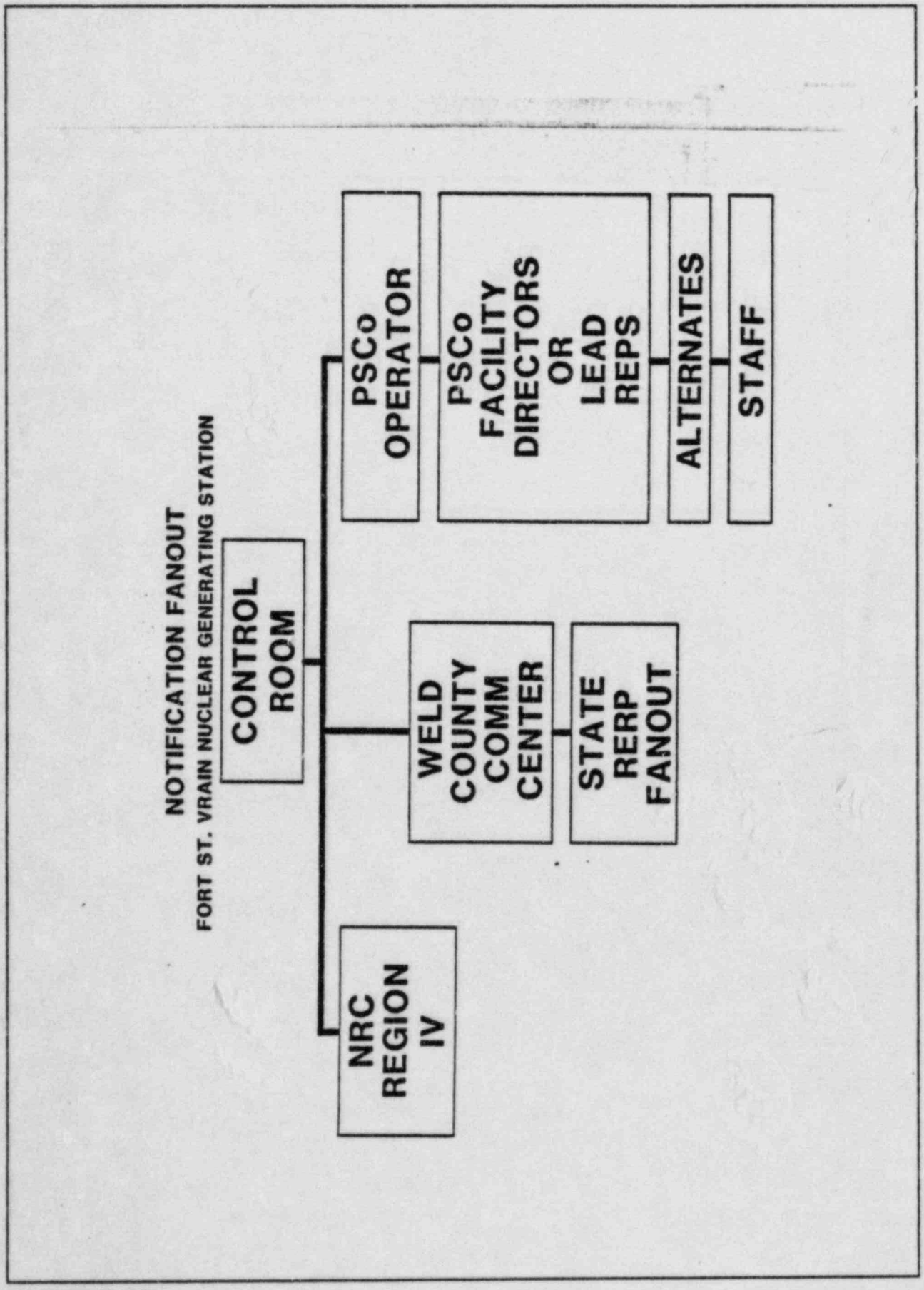

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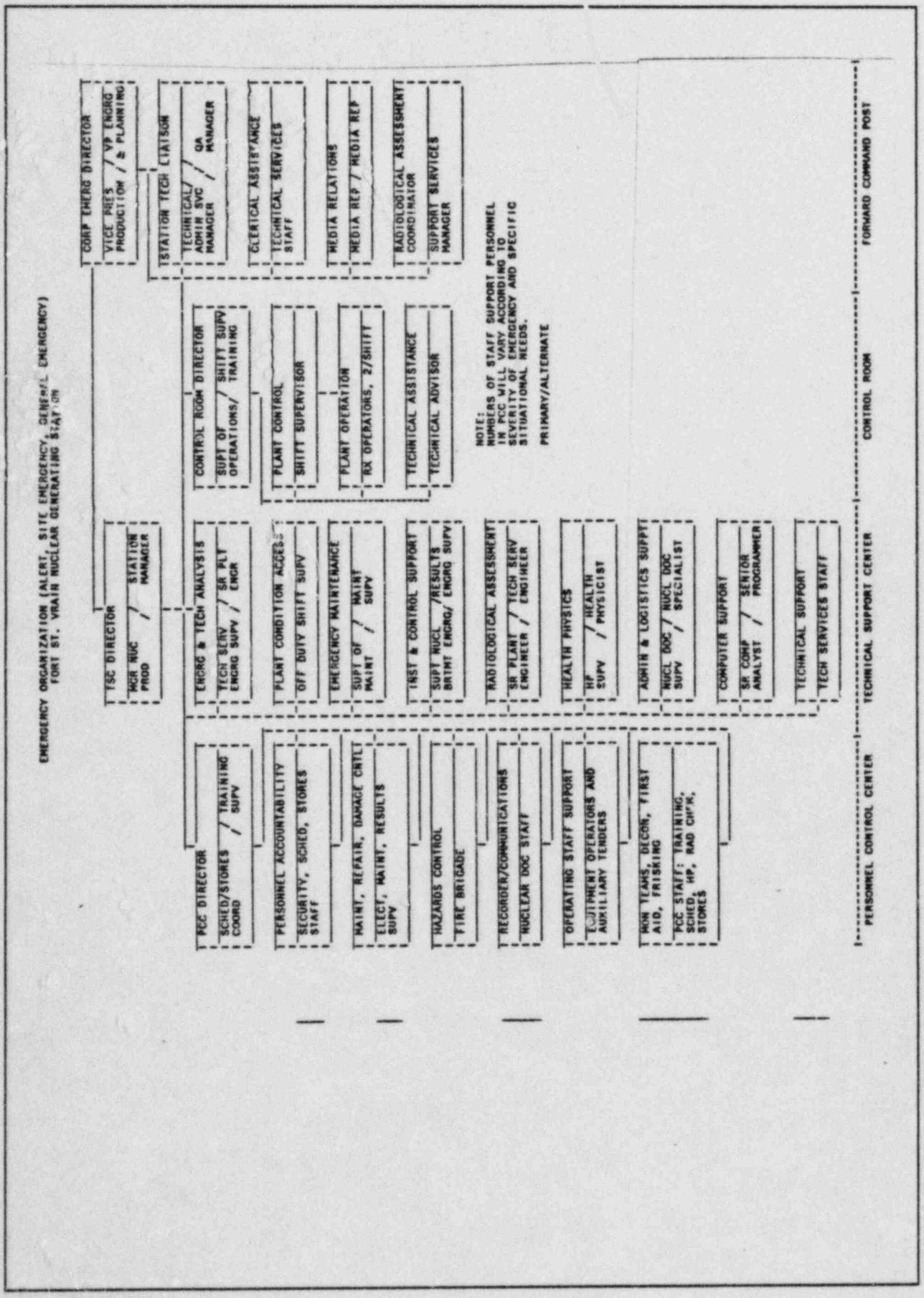

MANAGEMENT CONTACT NOTIFICATION LIST FOR AN UNUSUAL EVENT

The first management contact will make the following notifications, and forward the completed form to the Technical Services Department.

Subsequent Contacts	Date/ Time	Remarks
Plant Management (Contact 1) Supt. of Oper. 218; 532-3489		
Station Manager 202; 663-2363		
Administrative/ Tech. Serv. Mgr. 201; 457-8034		
Manager, Nuclear Production 200; 452-0507		
Support Services Manager 203; 663-1230		
Vice President, Production 571-7105 659-1180		
Media Relations Bob Burns 571-7726 759-9740		
or Gary Reeves 571-7726 424-4958		
or Marily Mora 571-8462 694-2369		
NRC G.L. Plumlee, III 490; 776-9541; Pager: 890-2225		

*Calls to PSC phones from outside of the PSC telephone system may require use of a different telephone exchange. In these cases, utilize the exchange in parentheses.

TABLE 1

PLANT MANAGEMENT CONTACTS*

	Page Phone	Plant Ext.	Home Phone
Supt. of Operations	890-0558	218	532-3489
Station Manager	890-0810	202	663-2363
Tech./Admin. Serv. Manager	890-1941	201	457-8034
Mgr. Nuclear Prod.	890-6359	200	452-0507
Support Services Manager	890-1775	203	663-1230
Vice Pres., Prod.	N/A	571-7105	659-1180

* Listed in order of preferred contact sequence.

TABLE 2

NON-EMERGENCY EVENTS: FOUR-HOUR REPORT

Event	Typical Indication Initiating Event
1. Any event, found while the reactor is shutdown, that, had it been found while the reactor was in operation, would have resulted in the plant, including its principal safety barriers, being seriously degraded or being in an unanalyzed condition that significantly compromises plant safety.	1. Determination as result of surveillance testing of Plant Protective Systems (PPS) that failure of PPS modules would have prevented a required reactor scram from occurring.
2. Any event or condition that results in manual or automatic actuation of an Engineered Safety Feature, including the Reactor Protection System.	2. Reactor scrams, loop shutdowns, and automatic starting and loading of diesel generators only. EXCEPTIONS: a) Manual scram initiated at 2% during a normal shutdown. b) Only one of three channels tripped manually or automatically, but no final protective action takes place, nor is required. c) Actuation of the aforementioned systems which result from, and are a part of, the planned sequence during surveillance testing or reactor operation.

TABLE 2

NON-EMERGENCY EVENTS: FOUR-HOUR REPORT

Event	Typical Indication Initiating Event
3. Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to: a) shut down the reactor and maintain it in a safe shutdown condition; b) remove residual heat; c) control the release of radioactive material; or d) mitigate the consequences of an accident.	3. a) During refueling operations, a .01Δρ shutdown margin is not maintained due to incorrect rod removal sequence. b) Incorrect valve lineup which results in shut off of secondary system decay heat removal sequence. c) Liquid waste monitor setpoints raised for liquid waste release completed. Reactor Building sump pumps taken out of pull-to-lock. Setpoints not reset. d) Loss of HEPA filtration.

TABLE 2

NON-EMERGENCY EVENTS: FOUR-HOUR REPORT

Event			Typical Indication Initiating Event
4.	a)	Any airborne radioactive release that exceeds 2 times the applicable concentrations of the limits specified in Appendix B, Table II of 10CFR20 in unrestricted areas when averaged over a time period of one hour.	4. As determined by analysis and evaluation.
	b)	Any liquid effluent release that exceeds 2 times the limiting combined MPC (see Note 1 of Appendix B of 10CFR20) at the point of entry into the receiving water (i.e., unrestricted area) for all radionuclides except tritium and dissolved noble gases, when averaged over a time period of one hour.	
	NOTE:	Immediate notifications made under this paragraph also satisfy the requirements of paragraphs (a)(2) and (b)(2) of 10CFR20.403.	
5.		Any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment.	5. As occurring.

TABLE 2

NON-EMERGENCY EVENTS: FOUR-HOUR REPORT

Event	Typical Indication Initiating Event
6. Any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made.	6. a) Onsite fatality for which a news release will be made. b) Inadvertent release of radioactive material not in excess of 10CFR20 limits for an unrestricted area, but requiring report to the State. c) Oil or chemical spill which could reach the South Platte River or St. Vrain Creek and which is therefore reportable to the EPA.

TABLE 3

NON-EMERGENCY EVENTS: ONE-HOUR REPORT

Event	Typical Initiating Event
1. a) The initiation of any plant shutdown required by Technical Specifications.	1. a) As occurring.
b) Any deviation from Technical Specifications authorized pursuant to 10 CFR 50.54(x).	b) Any deviation from a Technical Specification, when the action is immediately needed to protect the public health and safety, and no action consistent with Technical Specifications which can provide adequate or equivalent protection is immediately apparent. (The action should be approved, as a minimum, by a senior licensed operator.)

TABLE 3

NON-EMERGENCY EVENTS: ONE-HOUR REPORT

Event	Typical Initiating Event
2. Any event or condition during operation that results in the condition of the plant, including its principle safety barriers being seriously degraded; or results in the plant being:	
a) In an unanalyzed condition that significantly compromizes plant safety;	2. a) As determined.
b) In a condition that is outside the design basis of the plant; or	b) 1. Reactor pressure in excess of design limits with failure to trip plant. 2. Winds experienced in excess of FSAR design levels.
c) In a condition not covered by the plant's operating and emergency procedures.	c) As determined.
3. Any natural phenomenon or other external condition that poses an actual threat to the safety of the plant or significantly hampers site personnel in the performance of duties necessary for the safe operation of the plant.	3. a) Toxic gas release in immediate vicinity of plant. b) Extremely high winds or severe storm preventing plant personnel from completing requisite assignments.

TABLE 3

NON-EMERGENCY EVENTS: ONE-HOUR REPORT

Event	Typical Initiating Event
4. Any event that results in a major loss of emergency assessment capability, offsite response capability, or communications capability.	4. a) Loss of significant portion of Control Room indication. b) Loss of all offsite communication systems.
5. Any event that poses an actual threat to the safety of the plant, or significantly hampers site personnel in the performance of duties necessary for the safe operation of the plant, including fires, toxic gas releases, or radioactive releases.	5. a) Fire posing undue personnel hazard. b) Severe chlorine release from chlorine cylinders. c) Accidental gaseous radiological release resulting in onsite concentrations in excess of 10 CFR 20 Appendix B, Table I.

TABLE 4

NOTIFICATION OF UNUSUAL EVENT

Event	Indication
1. Any unplanned radiological release to the Reactor Building or its ventilation system.	1. Alarms on: RT 7312 CAM(s) RT 7324-1 RT 7324-2 RT 7325-1 RT 7325-2 RT 4801 RT 4802 RT 4803 RT 73437-1, 2
2. Any liquid waste release resulting in offsite effluent in excess of Technical Specification limits.	2. a) RT 6212 or 6213 alarm with inability to prevent discharge offsite. b) As determined by station personnel.
3. Indication of minor fuel damage detected in primary coolant.	3. a) 25% increase in circulating activity from previous equilibrium conditions at the same power level. RT 9301 (RR 93256). b) SR 5.2.11 results.
4. Serious fire at the plant lasting more than 10 minutes which could lead to substantial degradation of plant safety systems, or which could result in the release of radiologial or toxic materials.	4. a) any of various alarms on Fire Control Alarm Panel; b) Fire Pump 1A auto start; c) verbal reports.

TABLE 4

NOTIFICATION OF UNUSUAL EVENT

Event	Indication
5. Abnormal coolant temperatures or core region temperature rises to the extent requiring shutdown in accordance with Technical Specifications.	5. Violations of LCO 4.1.7 or LCO 4.1.9 for region outlet mismatch, or region ΔT, respectively, to the extent that shutdown per Station Technical Specifications is required (SOP 12-04).
6. Natural phenomenon that may be experienced or threatened that represent risks beyond normal levels: a) earthquake b) floods c) tornadoes d) extremely high winds	6. a) Seismic Recorder Operate; b)-d) as visually observed by, or reported to, station personnel.
7. Unusual Hazards Experienced: a) Aircraft crash on site or near the site that is subject to public concern because of possible detrimental effect on the plant; b) Onsite explosions or near site explosions that may be subject to public concern because of possible detrimental effect on the plant; or,	7. As visually observed by, or reported to, station personnel.

TABLE 4

NOTIFICATION OF UNUSUAL EVENT

Event	Indication
7. c) Onsite or near site plant related accidents that could result in the release of toxic material or spills of flammable materials.	
8. Any serious radiological exposure of plant personnel or the transportation to offsite facilities of contaminated personnel who may have been injured. (Probably cannot be determined within two hours- call to be made in a timely fashion.)	8. As occurring.
9. Accidents within the state that may involve plant spent fuel shipments or plant radioactive waste shipments.	9. As occurring, or reported by shipper.
10. Loss of Engineered Safety Feature or Fire Protection System to the extent requiring Shutdown in accordance with station Technical Specifications.	10. Shutdown required in accordance with applicable LCOs: a) Engineered Safeguards 1) Plant ventilation- LCO 4.5.1 2) Steam/Water Dump System - LCO 4.3.3

TABLE 4

NOTIFICATION OF UNUSUAL EVENT

Event	Indication
10. (Cont).	3) PCRV penetration flow restriction devices - LCO 4.2.7 and LCO 4.2.9 4) PCRV penetration secondary closures - LCO 4.2.7 and LCO 4.2.9 5) PCRV Safety Valves - LCO 4.2.8 SL 3.2 LSSS 3.3.2.c b) Fire Protection System - LCO 4.2.6, LCO 4.10.1- LCO 4.10.5
11. Indication or alarms on radiological effluent monitors not functional.	11. Data Logger Alarm/Alarm Summary indication of non-operational alarm or indication on: a) RT 7324-1, 2 and RT 4803; or b) RT 7325-1, 2, RT 4802, and RT 73437-1; or c) RT 73437-2 and RT 4801; or d) RT 6212 and RT 6213. NOTE: Use ELCO 8.1.1 Technical Specification Limits as basis.

TABLE 5

ALERT

Event	Indication
1. Rapid, severe fuel particle coating failure.	1. Coolant Inventory of a) >2.4 $\frac{(CI)(Mev)}{lb}$ Beta-Gamma b) circulating I-131 activity equivalent >24Ci c) plate out I-131 >$1x10^4$ Ci d) SR 5.2.6 or SR 5.2.11 results.
2. Rapid, gross failure of one steam generator reheat section with loss of offsite power.	2. Loop 1 Hot Reheat Header (HRH) activity high (5mrem/hr); or, Loop 2 HRH activity high (5mrem/hr) accompanied by 230 Kv OCB trips and RAT undervoltage/loss of power alarm.
3. Primary coolant pressure decay (to a value greater than 100 psi less than normal pressure, accompanied by area and stack radiation monitor alarms).	3. PAL 9335 PAL 9347 PAL 9359 and area monitor or stack monitor alarm
4. High radiation levels or high airborne contamination which indicates severe degradation in control of radioactive materials. (Increase by factor of 1,000 over normal.) e.g. lifting PCRV relief valve or abnormal release to cooling tower blowdown.	4. RT 7312 CAM(s) alarm RT 6212 RT 6213 RT 93252-12 Area Monitors Alarms with corresponding meter readings on area or process monitors.

TABLE 5

ALERT

Event	Indication
5. Loss of offsite power and vital onsite AC power for up to 30 minutes.	5. 230 KV OCB trips and RAT undervoltage/loss of power alarm accompanied by 4 KV bus undervoltage 480V bus undervoltage, and Diesel Trouble alarms.
6. Loss of all vital DC power for up to 30 minutes.	6. DC bus 1 < 10 volts and DC bus 2 < 10 volts
7. Loss of primary coolant forced circulation for between 2 and 5 hours.*	7. All He flow indicators read zero.
8. Loss of secondary coolant functions needed for removing residual heat.	8. All secondary coolant flow indicators read zero.
9. Loss of normal ability to place the reactor in a subcritical condition by scram of the control rods.	9. a) Indication of insufficient rods inserted; or, b) neutron count rate not decreasing.
10. Serious fire which could lead to substantial degradation of plant safety systems.	10. a) any of various alarms on Fire Control Alarm Panel b) Fire Pump 1A auto start c) verbal reports

* These times are LOFC from 100% power. Times may be correspondingly longer for lower power levels (See LCO 4.2.18).

TABLE 5

ALERT

Event	Indication
11. Radiological effluents exceed 10 times technical specifications instantenous limits.	11. a) RT 7324-1 indicating $\geq 2.5 \times 10^{-2}$ µCi/cc b) RT 7324-2 indicating $\geq 2.5 \times 10^{-2}$ µCi/cc c) RT 7325-1 indicating $\geq 7.0 \times 10^{-8}$ µCi/cc d) RT 7325-2 indicating $\geq 7.0 \times 10^{-8}$ µCi/cc e) RT 73437-1 indicating $\geq 7.0 \times 10^{-8}$ µCi/cc I-131. f) RT 4802 indicating $\geq 7.0 \times 10^{-8}$ µCi/cc I-131. g) RT 4803 indicating $\geq 2.5 \times 10^{-2}$ µCi/cc Utilize reading from above instruments and calculate dose rate per procedures
12. Ongoing security compromise.	12. As observed or reported.

TABLE 5

ALERT

Event	Indication
13. Severe natural phenomenon being experienced or or projected, such as: a) earthquake exceeding Operating Basis Earthquake levels; b) flood near design level; or, c) tornado striking facility.	13. a) Seismic recorder operate (≥.05 g) b) As Reported c) As Reported
14. Other hazards being experienced or projected such as: a) aircraft crash on facility; b) missile impact on facility; c) explosion damage affecting plant operation; or, d) entry into facility environs of toxic or flammable gas. (Some effect on facility experienced or anticipated)	14. As reported by, or to, station personnel.
15. Evacuation of control room anticipated or required, with control of shutdown systems established from local stations. (Control room integrity breached).	15. As deemed necessary by Shift Supervisor

TABLE 5

ALERT

Event	Indication
16. All alarms (annunciators) lost for more than 15 minutes and reactor is not shutdown; or, plant transient experienced while all alarms lost. (Parameter indication still functional.)	16. Control room observation.
17. Other plant conditions warranting precautionary activation of the PCC, TSC, and FCP.	17. As deemed necessary by Shift Supervisor.

TABLE 6

SITE AREA EMERGENCY

Event	Indication
1. Loss of primary coolant forced circulation for over 5 hr. from 100% power. (Lower power levels preceeding LOFC extends time available before core damage is incurred. See LCO 4.2.18.)	1. All He flow indicators read zero.
2. Non-isolable primary coolant leakage through a steam generator reheat section.	2. Loop 1 or 2 HRH activity alarm-high with Shift Supervisor determination that leakage is non-isolable.
3. PCRV relief valve remains open.	3. RT 93252-12 alarm and rapidly decreasing Reactor pressure.
4. Determination of inability to restore onsite AC power.	4. 230 KV OCB trips and RAT undervoltage/loss of power alarm accompanied by 4Kv bus undervoltage, 480v bus undervoltage, and Diesel Trouble alarms. Standby Diesel Fail to Start.
5. Loss of functions needed for plant hot shutdown.	5. Inability to insert sufficient control rods accompanied by failure of emergency reserve shutdown system - resulting in inability to maintain - .01$\Delta\rho$ at 220°F.
6. Major damage to spent fuel due to severe cask damage resulting in release of radioactivity to plant environs.	6. a) Visual observation. b) area radiation monitor alarms.

TABLE 6

SITE AREA EMERGENCY

Event	Indication
7. Fire adversely affecting safety systems.	7. a) Fire pump 1A start; b) Fire Control Alarm Panel c) Various alarms according to affected safety system. d) Shift Supervisor determines fire beyond capability of station staff.
8. a) Effluent monitors detect levels corresponding to greater than 50 mrem/hr, or greater than 500 mrem/hr whole body for two minutes at the site boundary under adverse meteorology (or levels 5 times the above for thyroid dose rate). b) These dose rates are projected based on other plant parameters or are measured in the environs.	8. Stack monitor alarm with corresponding stack concentration indications on: a) RT 73437-1, RT 4802, and RT 7325-1, 2 $\geq 6.7 \times 10^{-5}$ µCi/cc I-131; or, b) RT 7324-1, 2, and RT 4803 $> 6.6 \times 10^{-2}$ µCi/cc mixed noble gasses.
9. Imminent loss of physical control of the plant due to security breach. (Response detailed in Station Security Plan.)	9. Situation evident.

TABLE 6

SITE AREA EMERGENCY

Event	Indication
10. Severe natural phenomenon being experienced or projected (with plant not in cold shutdown), such as;	10.
a) earthquake greater than Safe Shutdown Earthquake	a) Seismic Recorder Operate alarm with indication of ground motion greater than 0.10g horizontal or greater than 0.067g vertical.
b) flood greater than design levels	b) As reported or observed.
c) winds in excess of design levels	c) average wind velocity greater than 90 mph or 10 second gusts exceeding 99 mph.
d) tornado in excess of design levels	d) horizontal wind velocity greater than 202 mph.
11. Other hazards being experienced or projected with reactor not shutdown, such as;	11. As observed by or reported to, station personnel.
a) aircraft crash affecting vital structures;	
b) severe damage to safe shutdown equipment;	
c) entry of toxic/flammable gas into vital areas.	
12. Reactor building louvers open due to building being overpressurized by primary coolant. (DBA #2)	12. a) Louvers Open Alarm (3 inches water)
	b) Reactor building radiation alarms.

TABLE 6

SITE AREA EMERGENCY

Event	Indication
13. Evacuation of control room, accompanied by inability to locally control shutdown systems within 15 minutes.	13. Remote shutdown instrumentation indications (panel I-49).
14. Other plant conditions warranting activation of FCP/EOCs, monitoring teams, and precautionary public notification.	14. As determined by Shift Supervisor.

TABLE 7

GENERAL EMERGENCY

Event	Indication
1. a) Effluent monitors detect levels corresponding to 1 rem/hr. whole body (or 5 rem/hr thyroid) at the exclusion area boundary under actual meteorological conditions.	1. Stack monitor RT-7324-1, 2 alarm, or Corresponding dose rates determined with E-500 or cutie-pie detector per procedure HPP-56 and associated graphs.
b) These dose rates are projected based on other plant para meters, or are measured in the environs.	
2. Loss of physical control of the facility. (due to security breach).	2. Situation evident.
3. Other plant conditions exist that make release of large amounts of radioactivity possible.	3. As determined by Shift Supervisor.

ATTACHMENT I
IMPAIRED FIRE PROTECTION NOTICE

Report No. _____ - _____
Year Sequence No.

NOTE: It is important that the time of all calls and names of people contacted be logged. Any futher followup calls received or made should be logged as to time and identity of persons involved and the information transmitted or received shall also be logged.

GIVE THIS INFORMATION AS SHOWN

1. Facility Name: Public Service Company of Colorado Unit No. One
2. Location: Fort St. Vrain, Platteville, Colorado

Below Is the Information Which Will Be Requested Of The Caller

3. Caller's Name: _____ Phone: _____
4. Date and time of occurrence: _____
5. Details and extent of impairment:

_____

_____

_____

_____

6. Did impairment result from a loss? |__| *Yes |__| No If yes, details: _____

*Loss would be a fire, accidental system operation, windstorm damage, etc.

7. Restoration (of system) begun? |__| Yes |__| No

Restoration work to be continuous? |__| Yes |__| No

8. Impaired area or equipment operable? |__| Yes |__| No

Estimated restoration time: _____

9. Precautions:
- [ ] Valves tagged out
- [ ] Discontinued welding, cutting, and hot work
- [ ] Discontinued smoking
- [ ] Notify Control Room (Shift) Supervisor, or other applicable management.
- [ ] Notify Fire Department/Fire Brigade
- [ ] Increased watchman service to _____ hourly
- [ ] Extra extinguishers/firehose in area

Other: _____

10. Contacts made by Shift Supervisor:

a) Name of ANI contact: _____

b) Time of ANI contact: _____

Management Contact:

a) Name of management contact: _____

b) Time of management contact: _____

11. Additional contacts made/received:

a) Per attached call sheet log.

12. RESTORED

a) Repeat Steps 1 and 2 above

b) Caller's Name: _____

c) Date and time of restoration: _____

d) Name of ANI contact: _____

e) Time of ANI contact: _____

13. The Shift Supervisor shall send the completed copies of the completed forms directly to Technical Services.

14. If Notification was a Fire/All-Risk Emergency, Technical Services will:

    a) Determine if a Reportable Occurrence is required, and prepare a facsimile copy if a 14 day report is indicated.

    b) Assign a sequential number and send a copy to the Superintendent, Operations and a copy to PORC.

CALL	TIME	DATE	CONTACT (NAME)	COMMENTS/REMARKS

Public Service™

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

Initial Notification, Non-Emergency Event

Report No. _____ - _____
Year Sequence No.

IMPORTANT:

It is important that the time of all calls and names of people contacted be logged. Any further follow-up calls received or made should be logged as to time and identity of persons involved and the information transmitted or received shall also be logged.

1. Name and Identity of Caller: _____

2. Date of Event: _____ Time of Event: _____

3. This notification appears to be required pursuant to 10CFR 50.72, paragraph ((b)(1), "One-Hour Report"; or (b)(2), "Four-Hour Report") (circle one).

4. Description of Event:

   Reactor power prior to event: _____

   Loop Shutdown? _____ Scram? _____

   Initiating signal(s): _____

   Was event result of an LCO Action Statement? _____

   Other pertinent information: _____

   _____

   _____

   _____

   _____

   _____

5. Actions Taken: _____

   _____

   _____

   _____

   _____

FORM (C) 372 - 22 - 3643

6. Status:

Reactor power at time of report: _____

_____ Under control by on-site staff, no off-site assistance anticipated. Final report.

_____ Under control by on-site staff. Will keep NRC advised.

_____ Off-site assistance may be required. Will advise. (See Item #7)

_____ Off-site assistance required. (See Item #7)

7. If off-site assistance is anticipated or required, describe assistance that has been or may be requested:

_____

_____

_____

_____

_____

8. Does the event involve off-site releases of the potential for off-site release that would affeact the general health and safety of the public as the result of Fort St. Vrain conditions?

_____ Yes _____ No

9. If yes, provide a good description: _____

_____

_____

_____

_____

_____

10. Contacts made by Shift Supervisor:

a) Name of NRC contact: _____

b) Time of NRC contact: _____

Management Contact

a) Name of management contact: _____

b) Time of management contact: _____

11. Contacts made by management:

a) Per attached call sheet log.

12. The Shift Supervisor and Management Contact shall send their copies of the completed forms directly to Technical Services who will:

a) Determine if a Licensee Event Report is required and prepare a facsimile copy if a 30 day report is indicated.

b) Send a copy to the Superintendent, Operations.

c) Send a copy to PORC.

Public Service™

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

CALL	TIME	DATE	CONTACT (NAME)	COMMENTS/REMARKS

FORM (C) 372 - 22 - 3643

Public Service™

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

NOTIFICATION OF UNUSUAL EVENT

A. The Emergency Coordinator and first management contact will complete the following information jointly:

1. Name and identity of caller_____

2. Date of Event_____ Time of Event_____

3. General Category of Event

_____ Unplanned Radiological Release to Reactor Building

_____ Fuel Failure

_____ Fire

_____ Natural Phenomenon (circle one)

Earthquake Flood Tornado Winds

_____ Unusual Hazards (circle one)

Aircraft Explosion Toxic Material

Other (Specify)_____

_____ Spent Fuel Incident

4. Description of Event _____

_____

5. Actions Taken _____

_____

6. Status:

_____ Under control by onsite staff, no offsite assistance anticipated.

_____ Under control by onsite staff. Will keep State and NRC advised.

_____ Offsite assistance may be required. Will advise. (See Item 7.)

_____ Offsite assistance required. (See Item 7.)

7. If offsite assistance is anticipated or required, describe assistance that has been or may be required: _____

_____

_____

_____

_____

8. At the present time, the event does not involve offsite release or the potential for offsite releases that would affect the general health and safety of the public.

B. The Emergency Coordinator will make notifications as follows:

Contact with State EOC (279-8855) and Governor's Office (866-2471) or Mansion (837-8350)

1. READ the following statement verbatim:

   "THIS IS A NOTIFICATION OF AN UNUSUAL EVENT AT THE FORT ST. VRAIN NUCLEAR GENERATING STATION. THIS NOTIFICATION DOES NOT REQUIRE ACTIVATION OF EMERGENCY RESPONSE CENTERS. THIS NOTIFICATION REQUIRES VERIFICATION OF RECEIPT BY THE STATE. VERIFY BY CALLING 571-7436 or 785-2223."

2. READ all the information recorded in Step A (Page 1 of this ATTACHMENT).

3. RECORD the following information:

Name of State EOC contact_____Date/Time _____

Name of Governor's Office/Mansion Contact_____

Date/Time _____

Call back verification from State EOC, Date/Time _____

Call back verification from Governor's Office/Mansion

Date/Time _____

_____

Contact with NRC Operations Center (Hot Line or 202-951-0550)

(Alternate means of notification are described in Attachment 1 of RERP-CR.)

1. READ the following statement verbatim:

"THIS IS NOTIFICATION OF AN UNUSUAL EVENT AT THE FORT ST. VRAIN NUCLEAR GENERATING STATION AT PLATTEVILLE, COLORADO. THIS NOTIFICATION APPEARS TO BE REQUIRED PURSUANT TO 10CFR50.72, PARAGRAPH (a)(3). THIS NOTIFICATION DOES NOT REQUIRE ACTIVATION OF FEDERAL OR STATE EMERGENCY RESPONSE ORGANIZATIONS."

2. READ the NRC Operations Center all of the information recorded in Step A (Page 1 of this Attachement).

3. RECORD the following information:

Name of NRC Contact_____Date/Time _____

NOTIFICATION OF EMERGENCY EVENT

A. The Emergency Coordinator will complete Pages 1 and 2 of this attachment with the assistance of the first management contact.

Required Information

1. This is (Name), Shift Supervisor at the Fort St. Vrain Station.

2. At (Time) we experienced an (ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY) Class incident.

3. a) There is NO, repeat NO, radioactive release taking place, and no special protective actions are recommended at this time.

   OR

   b) A small radioactive release IS taking place, but NO protective actions are recommended at this time and are not anticipated to be.

   OR

   c) A radioactive release IS, repeat IS, taking place, and we recommend that people in areas _____ remain indoors with windows and doors closed.

   OR

   d) A radioactive release IS, repeat IS, taking place, and we recommend that evacuation of areas _____ be considered.

4. Personnel Control Center to be located _____

   _____

5. Further information on incident conditions will be provided in followup messages.

SUPPLEMENTAL INFORMATION

NOTE: This information is to be supplied to the NRC and the Colorado Department of Health when requested. The radiological data can be determined as specified in RERP-DOSE.

1. Date and Time of Incident _____

2. Class of emergency (ALERT)(SITE AREA EMERGENCY)
(GENERAL EMERGENCY)

3. Type of release (airborne, waterborne, surface) _____

4. Estimated duration of release _____ (Hours)

5. Current release rate:

Noble Gas _____Ci/sec; Iodine _____Ci/sec

6. Estimated curies released:

Noble Gas _____Ci; Iodine _____Ci

7. Wind Velocity _____MPH, from _____degrees.

to _____degrees, Air Temp _____°F

8. Stability Category _____. Form of Precip. ___ _____

9. Dose rate at EAB: WB _____rem/hr; Thyroid _____ ___rem/hr

2 Miles: WB _____rem/hr; Thyroid _____rem/hr

5 Miles: WB _____rem/hr; Thyroid _____rem/hr

10. Projected dose at EAB: WB _____rem; Thyroid _____rem

2 Miles: WB _____rem; Thyroid _____rem

5 Miles: WB _____rem; Thyroid _____rem

11. Estimated accumulated dose at EAB:

WB _____rem; Thyroid _____rem

12. Areas expected to be impacted by release _____

_____

_____

13. Estimate of any surface radioactive contamination _____

_____

14. On-site response actions under way _____

_____

15. Recommended Protective Action based on the projected dose at the EAB (Read appropriate Protective Actions)

Projected Dose (rem)	Recommended Protective Action
Whole Body <1 Thyroid <5	No planned protective actions. State may issue advisory to seek shelter and await instructions. Monitor radiation levels.
Whole Body 1 to 5 Thyroid 5 to 25	Take shelter and consider selective evacuation. Monitor radiation levels. Establish Controlled Area and limit access.
Whole Body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor radiation levels and adjust area for mandatory evacuation based on these levels Control Access.

16. Prognosis for worsening of event _____

17. Date and time of report _____

18. Name of person providing report _____

19. Telephone number for call back _____

20. Description of any requested off-site assistance _____

_____

_____

_____

_____

_____

_____

B. The Emergency Coordinator will make notifications in sequence as follows:

PSC Company Operator 8-571-4591 or 8-571-0111

1. INSTRUCT the Operator to initiate the "Fort St. Vrain Radiological Emergency Call List."

2. READ verbatim the information recorded in Part A (Page 1 of this attachment).

3. RECORD the following information:

   Time PSC Operator Notified _____

   Time Operator Callback Received _____

Weld County (911 Using Greeley Line)

1. READ verbatim the information recorded in Part A (Page 1 of this attachment).

2. RECORD the following information:

   Time Weld County Notified _____

   Time Weld County Callback Received _____

NRC OPERATIONS CENTER (HOT LINE OR (202) 951-0550)

(Alternate means of notification are described in Attachment 1 of RERP-CR.)

1. READ Items 1) through 4) from Part A.

2. READ the following sentences verbatim. "THIS EVENT IS BEING REPORTED PURSUANT TO 10CFR50.72, PARAGRAPH (a)(3). WE ARE PRESENTLY ACTIVATING STATE AND LOCAL EMERGENCY RESPONSE CENTERS."

3. READ the supplemental information (Page 2 of this attachment).

4. RECORD the following information:

   NAME of NRC Contact _____

   TIME of NRC Contact _____

ECP DIRECTOR'S CALL LIST INTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (the alternate will complete the calls on the attached list).

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Complete the attached call list.

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list.

ECP DIRECTOR'S CALL LIST

First call all primaries, then call all alternates.

	PSC Extension	Home	Time
Manager - Technical Support			
Primary - M. E. Niehoff	785-1403	690-3879	_____
Alternate - J. R. Reesy	571-8406	755-1720	_____
Manager - Media Relations			
Primary - R. T. Person, Jr.	571-7323	753-9292	_____
Alt. - W. D. Fitzmaurice	571-7713	424-8053	_____
Manager - Resources			
Primary - D. D. Hock	571-7211	394-3063	_____
Alternate - J. Bumpus	571-7821	388-7645	_____
Manager - Security			
Primary - E. O'Neal	571-7709	757-0038	_____
Alternate - E. Lane	571-8533	321-4016	_____

CORPORATE EMERGENCY DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director.

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the PSC Operator or the center/post Director:

   a. Call the first person on the attached list and inform him to complete the call list.

3. If you are the first person on the attached list and are contacted by the Alternate Director or the Director:

   a. Complete the attached list.

CORPORATE EMERGENCY DIRECTOR'S CALL LIST (FCP)

First contact all primaries, then call all alternates.

	Extension	Home	Time
Station Technical Liaison			
(One of the Station Technical Liaisons is also contacted by the PSC Operator.)			
Primary - F. J. Novachek	785-1201	457-8034	_____
Alternate - D. W. Warembourg	571-8419	833-4092	_____
Alternate - L. W. Singleton	785-1350	772-1018	_____
Radiological Assessment			
Primary - T. Borst	785-1203	663-1230	_____
	(Pager)	890-1775	_____
Clerical Assistance			
Primary - D. Merritt	785-1271	737-2339	_____
Primary - D. Reichardt	785-1272	776-7435	_____
Alternate - S. Katcher	785-1212	356-0351	_____
Media Relations			
Primary - M. Mora	571-8462	694-2369	_____
Alternate - S. Volsted	571-7242	750-1785	_____

PCC DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (the alternate will complete the calls on the attached list).

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Contact persons to set up the facility by calling those individuals with asterisks (*) after their names and by notifying four (4) Health Physics Technicians listed. Inform all persons of the location of the PCC. Call the remainder of personnel upon arrival at the PCC. (This responsibility may be delegated.)

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list as specified in 2.a. above.

PCC DIRECTOR'S CALL LIST

NOTE: The following are preferred assignments only; actual personnel assignments at the PCC may differ.

	Plant Extension	Home	Time
Personnel Assignment Controller			
R. Rivera*	453	8-303-667-1906	_____
Recorder/Communications			
S. Lehr	451	8-303-422-1280	_____
T. Shafer	457	8-303-663-4862	_____
D. Horihan*	250	78-776-7976	_____
D. Belgard*	204	78-678-0355	_____
Personnel Accountability			
M. Blossom*	261	9-785-6302	_____
G. Powers	252	8-303-426-1623	_____
Decontamination			
R. Hooper*	458	8-303-452-3614	_____
M. Murphy	454	8-303-279-6762	_____
Drivers			
P. Bearly*	455	8-303-669-6636	_____
R. Hamblin*	254	8-303-667-1703	_____
H. Wiedrich	452	8-303-732-4494	_____
First Aid			
C. Harding	311	9-785-2398	_____
J. Switzer*	452	9-587-4134	_____
D. Reed	314	9-785-2159	_____
Friskers			
R. Moler*	456	78-772-9357	_____
K. Hays	319	8-303-778-7702	_____
W. Holcomb*	312	9-330-2068	_____

Access Control			
R. Erwin*	315	9-330-7178	_____
R. Teel*	261	8-303-288-1959	_____
R. Widows	314	8-303-663-1080	_____

Maintenance, Repair, and Damage Control

R. Webb*	229	78-776-8219	_____
	(Pager)	855-7257	_____
R. Lamb*	336	78-772-0757	_____
C. Schmidt*	286	8-303-666-6955	_____

Monitoring Teams - Health Physics (Notify four of the following initially.)

P. Glahn	245	8-303-450-5292	_____
L. Hutchins	245	9-330-7187	_____
G. Madison	245	8-303-833-2278	_____
K. Morse	245	9-353-6163	_____
K. Nasveschuk	245	78-651-6254	_____
E. J. O'Donoghue	245	8-303-452-3514	_____
S. Sherrow	245	9-353-1338	_____
S. Sieg	245	8-303-663-3468	_____
G. Valentine	245	8-303-223-7674	_____

Radiochemistry

V. McGaffic (P)*	278	9-587-2752	_____
D. Miller(A)*	279	8-303-663-3595	_____
S. Poet(A)	279	78-652-2297	_____
M. Prochownik (A)	279	9-785-6010	_____
S. Rima (A)	279	78-772-4068	_____

STATE EOC CALL LIST INSTRUCTIONS
(For Contacts by PSC)

In the event you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the PSC primary contact:

   a. Call the PSC alternate contact and instruct him to complete the call list.

   b. If you cannot reach the PSC alternate contact, call the first person on the attached list and inform him to complete the call list.

2. If you are the PSC alternate contact and are notified by the PSC primary contact:

   a. Complete the attached call list.

3. If you are the PSC alternate contact and are notified by the PSC operator:

   a. Call the first person on the attached list and inform him to complete the call list.

STATE EOC CALL LIST
(For Contacts by PSC)

	Extension	Home	Time
Technical Assistance			
H. L. Brey (Primary)	571-8404	469-4238	_____
M. H. Holmes (Alt.)	571-8409	988-4522	_____
Radiological Consultant			
Janet Johnson	491-5930	482-3029	_____
Media Relations			
R. A. Burns (Primary)	571-7726	759-9740	_____
G. Reeves (Alt.)	571-7726	424-4958	_____

TSC DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (the alternate will complete the calls on the attached list).

   b. If you cannot contact you Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Complete the attached call list.

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list.

TSC DIRECTOR'S CALL LIST

First call all primaries, then call all alternates.

Engineering and Technical Analysis	Plant Extension	Home	Time
Primary - J. Eggebroten	270	651-1523	_____
	(Pager)	890-2220	_____
Alternate - R. Heller	284	772-1093	_____
Radiological Assessment			
Primary - J. Sills	265	221-5059	_____
	(Pager)	890-2223	_____
Alternate - S. Johnson	285	663-1431	_____
Technical Support			
Contact three persons listed below in order of preference:			
A. Reed*	325	772-5312	_____
	(Pager)	890-1942	_____
M. Joseph*	275	465-1248	_____
O. Clayton	277	663-3939	_____
D. Stuart	274	651-1927	_____
R. Gappa	283	484-2306	_____
Plant Condition Assessment			
Call two off-duty Shift Supervisors			
M. Deniston	219	776-3776	_____
D. Evans	219	776-9672	_____
J. Hak	219	776-1904	_____
D. Hood**	219 or 347	776-1843	_____
J. Hunter	219	330-1411	_____
H. O'Hagan	219	776-8232	_____
G. Reigel	219	330-4235	_____
J. VanDyke	219 or 346	772-2476	_____

* Reed or Joseph may not be available if either is the on-duty Technical Advisor.

** Also contacted as alternate to Control Room Director by PSC operator.

Emergency Maintenance

Primary - W. Craine	222	667-5427	_____
Alternate - J. Petera	233	427-6273	_____

Instrument and Control

Primary - B. Burchfield	249	351-0373	_____
Alternate - J. McCauley	248	667-0635	_____

Health Physics/Health Physicist

Primary - T. Schleiger	242	785-6314	_____
Alternate - B. Woodard	244	678-0818	_____

Administration/Logistics

Primary - A. Kitzman	206	737-2578	_____
Primary - P. Collins	207	587-2172	_____
Primary - P. Bollig	204	339-3972	_____
Alternate - D. Connelly	210	353-4575	_____

Telephone Console Operators

Primary - D. Edwards	217	669-1680	_____
Alternate - D. Libel	205	651-1404	_____

Computer Support

*Primary - D. Klaus	437	466-5046	_____
*Alternate - D. Haloin	376	353-1993	_____

*Computer Services Page Number: 855-3234

ATTACHMENT 10

Facility Directors/Alternates

	Extension	City	Home	Time
Technical Support Center				
a. Primary: J. W. Gahm	5-785-1200	Northglenn	5-303-452-0507	_____
Alternate: C. H. Fuller	5-785-1202	Loveland	5-303-663-2363	_____
Control Room Director				
b. Primary: W. J. Franek	5-785-1218	Berthoud	5-303-532-3489	_____
Alternate: D. P. Hood	5-785-1347	Longmont	5-303-776-1843	_____
Personnel Control Center				
c. Primary: J. Glass	5-785-1253	Brighton	5-303-659-4118	_____
Alternate: S. R. Williford	5-785-1327	Brighton	5-303-659-5258	_____
Forward Command Post				
d. Primary: F. J. Novachek	5-785-1201	Thornton	5-303-457-8034	_____
Alternate: D. W. Warembourg	5-571-8419	Frederick	5-303-833-4092	_____
Alternate: L. W. Singleton	5-785-1350	Longmont	5-303-772-1018	_____
Corporate Emergency Director (at Forward Command Post)				
e. Primary: O. R. Lee	571-7105, 571-7305	Brighton	9-659-1180	_____
Alternate: J. K. Fuller	329-1104	Denver	9-779-1109	_____
Executive Command Post				
f. Primary: R. F. Walker	571-7333	Denver	9-234-9298	_____
Alternate: B. O'Donnell	571-7381	Denver	9-388-0211	_____
State Emergency Operations Center				
g. Primary: D. McNellis	571-7254	Denver	9-321-3142	_____
Alternate: H. L. Brey	571-8404	Broomfield	9-469-4238	_____

NRC Regional Administrator

Public Service™

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

BOOK 3

1/15/85

RADIOLOGICAL EMERGENCY RESPONSE PLAN - STATION

NO.	SUBJECT	ISSUE NUMBER	EFFECTIVE DATE
RERP-TSC	Technical Support Center Procedure	14	01-15-85
RERP CR-UE	DELETED		04-25-84
RERP-VC	Visitors Center Procedure	3	01-03-84
RERP-PHONE LISTS		25	01-15-85

FORM (C) 372 - 22 - 3643

TITLE: TECHNICAL SUPPORT CENTER PROCEDURE

ISSUANCE AUTHORIZED BY	for T. W. Colburn	
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE 1-15-85

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Public Service™ FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

* ANYTIME A WORKSHEET, DATASHEET, OR CHECKLIST HAS BEEN WRITTEN ON, COMPLETE THE REPORTING SHEET ATTACHED IN THE TABBED WORKSHEET SECTION AND FORWARD IT TO THE NUCLEAR DOCUMENTS SPECIALIST, FORT ST. VRAIN. DO NOT WRITE ON ANY WORKSHEETS, DATASHEETS, CHECKLISTS, OR REPORTING SHEETS IN THE PROCEDURE ITSELF. ALL WORKSHEETS/DATASHEETS/CHECKLISTS ARE TO BE TAKEN FROM THE TABBED SECTION FOLLOWING EACH PROCEDURE.

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1.0 Criteria for Implementation

When the FSV Radiological Emergency Response Plan (RERP) requires augmentation of resources, generally for an ALERT or higher emergency classification, the Technical Support Center (TSC) Director shall activate the TSC.

2.0 Procedure

The TSC serves as the center for site emergency command activities and provides a central location for technical appraisal of plant conditions. The TSC operates under the direction of the Technical Support Center Director, and also serves as the focal point for onsite-offsite communications.

2.1 Center Activation

During non-working hours, those PSC personnel required to man the TSC are notified by telephone (see RERP-HOME). It is the responsiblity of the TSC Alternate Director, or the first individual contacted by the center director, to insure those notifications are made. Refer to the RERP PHONE LIST for instructions and personnel names and numbers.

The first person to arrive at the TSC is responsible to verify habitability of the center.

The first technical or management individual to arrive at the TSC is responsible to verify that habitability has been checked, set up phones, and establish communication with other emergency centers. Checklist 1 is provided as guidance for both initial steps and required action throughout the activation of the TSC.

2.2 Communications

Establish communication with the Control Room and verify primary and secondary communication links are available.

Await communications to be established by the Personnel Control Center (PCC) and by the Forward Command Post (FCP).

2.3 Accountability

Initial site accountability is established per Administrative Procedure G-5, Personnel Emergency Response. Personnel arriving at the TSC shall sign in to establish initial center accountability. If personnel are required to leave the site after initial site accountability is complete, they should report to the Personnel Control Center for continued site accountability. Personnel leaving the TSC shall sign out and in upon return to maintain center accountability.

2.4 Personnel Responses

2.4.1 TSC Director

The TSC Director assumes overall responsibility for the coordination and direction of onsite emergency response centers.

The TSC Director announces center activation and informs his staff of his assumption of duties as Director. He briefs his staff to inform them of general plant conditions and informs personnel of any particular assignments of responsibility.

Based upon the assessments by the TSC Staff, the TSC Director is provided the "Assessment Fact Sheet" (Datasheet 1).

The TSC Director communicates with the Corporate Emergency Director (CED) via an open line to the Forward Command Post (FCP).

As Emergency Coordinator, the TSC Director is in command of onsite emergency operations and provides direction and coordination to the Control Room Director via the individual in contact with the Control Room.

As soon as the Personnel Control Center has been activated and communications established, the TSC Director will, via the person in contact with the PCC:

a) Direct the PCC Director to organize repair and damage control teams, radiological survey teams, or search and rescue teams (as required)

b) Direct the PCC Director to assemble additional Operations personnel to assist in operating plant equipment (as required).

c) If plant conditions warrant, direct PCC Director to evacuate non-essential personnel from the plant.

2.4.2 Plant Condition Assessment (Off-Duty Shift Supervisor)

The off-duty Shift Supervisor will be prepared to make a preliminary assessment of the plant status, focusing on significant plant problems and trends.

If requested, he will also make a preliminary assessment of the sequence of events that led to the emergency, and report his findings to the TSC Director.

2.4.3 Engineering and Technical Analysis (Technical Services Engineering Supervisor/Senior Plant Engineer)

The Technical Services Engineering Supervisor/Senior Plant Engineer performs a preliminary assessment of the plant/core status by completing "Assessment of Plant/Core Status" (Datasheet 2), and provides additional information as needed to update the status board (Datasheet 3).

He remains in contact with Technical Liaison personnel at the Forward Command Post, and transmits information to the FCP with the assistance of Technical Support individuals.

He shall assign personnel to update the status boards as required.

He verifies the data logger information and receives a briefing on the assessment form that the Technical Advisor in the Control Room has completed.

With the concurrence of the CR Director, he obtains the "Alarm Typer" printout, if required. An alternative to the Alarm Typer printout is to utilize the "EVENTS LOG" on the 2 on 1 console.

As soon as the Forward Command Post (FCP) is activated and communications established, the Engineering/Technical Analysis or Technical Support individual will:

a) Inform FCP Technical Liaison personnel of the status of the emergency using the Status Board Update sheets (Datasheet 3). These datasheets summarize the data and calculations performed at the TSC.

b) Maintain a continuous open line to the FCP to provide prompt updating of the status of the emergency.

2.4.4 Technical Support (Technical Services Engineers/Technicians)

Technical Support individuals remain in contact with the Control Room, Personnel Control Center, Forward Command Post, and NRC as required.

They assist the Engineering/Technical Analysis individual with event assessment as requested, and transmit data to the other emergency response centers as it becomes available.

2.4.5 Emergency Maintenance (Superintendent of Maintenance/Maintenance Supervisor - Electrical)

The Superintendent of Maintenance/Maintenance Supervisor - Electrical advises for the necessity of performing repair work on damaged mechanical and electrical equipment, estimates time and manpower requirements for emergency repairs, and develops emergency repair work procedures as required.

2.4.6 Instrument and Control (Superintendent of Nuclear Betterment Engineering/Results Engineering Supervisor)

The Superintendent of Nuclear Betterment Engineering/Results Engineering Supervisor advises for the necessity for repair/installation/ modification of instrument and control equipment.

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2.4.7 TSC Radiological Assessment (Senior Plant Engineer/Technical Services Engineer)

The Radiological Assessment Individual performs offsite dose projection calculations on an as needed basis (approximately every 30 minutes) and provides the results of these calculations to the TSC Director and the Radiological Assessment Coordinator (at the FCP). Results are also prepared for use in updating the Radiological Status boards at the TSC and the FCP (see RERP-DOSE).

He will also confer with the Radiological Assessment Coordinator with regard to protective action recommendations.

In addition, he will relay offsite dose projections, meteorological data, and release status to the senior Health Physics representative at the TSC for use in directing field monitoring teams.

2.4.8 Senior Health Physics Representative (Health Physics Supervisor/Health Physicist)

a) Directs Health Physics/Radiochemistry to remove charcoal cartridges and analyze for the I-131 release, if necessary.

b) Obtains airborne contamination and radiation surveys in the Control Room, and informs the TSC Director of the results.

c) Ensures personnel dosimetry is distributed and emergency worker exposure criteria is followed (see RERP-EXP).

d) Ensures that one dosimeter is used in the TSC to keep track of the exposure of TSC personnel.

e) Evaluates doses of personnel from inhalation of radioiodines (projected or received) and confers with the Radiological Assessment Coordinator with regard to the need for administration of Thyroid Blocking Agent (see RERP-THYROID). Directs any such administration authorization through the PCC Director and station Health Physics staff.

f) Ensure that monitoring teams obtain in-plant radiological surveys.

g) Depending upon the duration of the event and the exposure rate, the senior Health Physics representative will make recommendations to the TSC Director for personnel relief or stay times (see RERP-EXP).

h) Maintain continued contact with the Radiological Assessment Coordinator and Personnel Control Center Director regarding any needs for Thyroid Blocking (see RERP-THYROID).

i) Continue to evaluate the incoming field monitoring data (see RERP-FIELD) and prepare data sheets allowing comparison of actual data with dose projections being made by the TSC Radiological Assessment individual. An adequate supply of data sheets is provided in RERP-FIELD for this task.

In addition, the senior Health Physics representative will maintain ongoing communications with, and control over, the field monitoring teams dispatched from the PCC. He will utilize dose projection data as a basis for determining stay times and thyroid blocking need.

2.4.9 Administration/Logistics (Nuclear Documents Supervisor/Nuclear Documents Specialist)

The Nuclear Documents Supervisor/Nuclear Documents Specialist provides technical documents, as required, assures that TSC personnel have obtained necessary documents and supplies for performance of their emergency assignments, and assists the TSC Director in transmission of information to other emergency response centers. This individual also assists in keeping logs of events and actions taken, as required.

2.4.10 Computer Support (Senior Computer Analyst/Senior Programmer)

a) The Senior Computer Analyst/Senior Programmer will assist in software/hardware problems as directed by the TSC Director, and arrange for offsite advice/assistance as directed by the TSC Director in the area of software/hardware problems.

b) The Senior Computer Analyst/Senior Programmer will also provide assistance on an as-needed, as available basis to the TSC Radiological Assessment individual in the tasks of data collection and/or data entry to the offsite dose calculation programs (RERP-DOSE).

2.4.11 Overall TSC Staff

a) Collect data for evaluation of the emergency.

b) Assess trends and operating status for the purpose of providing advice to Operations personnel acting through the Control Room Director.

c) Analyze the effects of equipment failures, temporary modifications and changes in operating status and procedures.

d) Assess the accident potential, and the effect of such potential on the health and safety of the public.

e) Request technical assistance (either in-house or contract) on an as-needed basis to cope with various situations that develop or may develop.

f) Assist in providing periodic updates to the personnel in contact with emergency center. Updates to the FCP are of the greatest importance, and should be of sufficient detail and frequency so that the FCP can effectively communicate and coordinate with the state/local/federal emergency response forces.

2.5 Recovery

The decision to recommend de-escalation or initiation of post-emergency recovery efforts rests with the TSC Director.

The TSC Director will base his decision on the following guidelines:

- Radiation levels are stable or decreasing with time.
- Releases of radioactive materials to the environment have ceased or are controlled within permissible license limits.
- Fire, flooding, or similar emergency conditions no longer constitute a hazard to the plant or station personnel.
- Measures have been successfully instituted to correct or compensate for malfunctioning equipment.
- The recommendation of the CR Director.

When the TSC Director deems it advisable, he will recommend de-escalation or termination of the emergency to the Corporate Emergency Director at the FCP. The authority and responsibility to declare de-escalation to a lower emergency class or termination of the emergency response activities and conversion to a recovery phase rests solely with the Corporate Emergency Director at the FCP (see RERP-FCP).

3.0 Responsibilities

Site emergency command activities are centered in the Technical Support Center, located immediately adjacent to the Reactor Building and within short walking distance of the Control Room. The TSC also serves as the primary point for onsite-offsite communications.

3.1 TSC Director

The TSC Director is in command of onsite emergency operations. The TSC Director is authorized to initiate emergency actions, including declaration of a particular emergency class and providing protective action recommendations to offsite authorities.

The TSC Director's responsibilities are:

- Assumes overall responsibility for the coordination and direction of onsite emergency response centers;
- Transmits preliminary assessment information to the FCP;
- Directs the Personnel Control Center (PCC) actions;

- Confers, on an on-going basis, with the Corporate Emergency Director (CED) after activation of the FCP; and

- Notifies the CED of the need for additional support or assistance.

- Recommends de-escalation or initiation of post emergency recovery efforts.

3.2 Engineering and Technical Analysis

Engineering and Technical Analysis personnel are responsible for direction of core physics analysis, electrical and mechanical engineering activities, liscensing related activities, procedures development, and system analysis as required. They are responsible for the preparation of data sheets for use in updating the plant status board, and for ensuring that information is transmitted to other emergency response centers as required. Technical Support personnel may be utilized to assist in these areas.

3.3 Technical Support

Technical Support personnel are responsible to assist Engineering and Technical Analysis individuals in the collection and transmission of data. They may be utilized to communicate with personnel at the Forward Command Post, Control Room, Personnel Control Center, and to the NRC.

3.4 Plant Condition Assessment

Plant Condition Assessment personnel are responsible for the assessment of plant status, focusing on significant plant problems and trends, and for providing recommended corrective actions to the TSC Director.

3.5 Emergency Maintenance

Emergency Maintenance personnel are responsible to recommend repair/damage control and corrective actions for plant mechanical and electrical systems. This individual estimates time and manpower requirements for emergency repairs, and develops emergency repair work procedures, as required.

3.6 Instrumentation and Control Support

The Instrumentation and Control (I&C) individual determines alternative I&C capabilities or configurations, and advises for the repair/installation/modification of I&C equipment.

3.7 TSC Radiological Assessment

The TSC Radiological Assessment individual is responsible to assess offsite radiological doses and consequences, determine affected offsite areas, and confer with both the TSC Director and the Radiological Assessment Coordinator (FCP) regarding calculation results and recommended offsite protective actions. In addition, the TSC Radiological Assessment individual should confer with the Health Physics representative at the TSC regarding offsite dose projections in areas where field monitoring teams are to be deployed. The TSC Radiological Assessment individual is responsible for verification of any calculation prior to transmission to the Radiological Assessment Coordinator at the FCP.

3.8 Health Physics

The senior Health Physics representative at the TSC is responsible for the assessment of onsite radiological doses, direction of all Health Physics/Radiochemistry survey personnel or teams, ensuring that adequate personnel dosimetry measures are taken, and evaluation of doses of field and emergency team personnel (particularly with regard to a need for thyroid blocking).

3.9 Administrative and Logistics Support

The Administrative and Logistics Support individual provides technical documents, provides assistance with communications and analytical equipment, arranges required clerical support beyond the personnel directly assigned to the TSC, and makes any arrangements necessary for food/transportation/housing support as required.

3.10 Computer Support

Computer support personnel provide technical support in the areas of computer hardware and software modifications/development/or repair, as required. In addition, this individual is responsible to arrange for timely offsite advice or assistance as directed by the TSC Director.

Computer support personnel also have received training in offsite Dose Calculation methodology. This training is provided for the purpose of assisting the TSC Radiological Assessment individual in gathering data and, where requested, assist in data entry at the TSC plant computer console.

4.0 References

4.1 FSV Radiological Emergency Response Plan

5.0 Referenced or Supporting Procedures

5.1 RERP-CR, Control Room Procedure

5.2 RERP-FCP, Forward Command Post Procedure

5.3 RERP-PCC, Personnel Control Center Procedure

5.4 RERP-VC, Visitor's Center Procedure

5.5 RERP-HOME, Home Packet for Off-shift Notifications

5.6 RERP-DOSE, Offsite Dose Calculations

5.7 RERP-PAG, Protective Action Guideline Recommendations

5.8 RERP-EXP, Emergency Exposure Guidelines

5.9 RERP-THYROID, Thyroid Blocking Agent Administration

5.10 RERP-FIELD, Field Monitoring Procedure

5.11 RERP-ORG, FSV Emergency Organization and Resposibilities

5.12 RERP PHONE LISTS

5.13 RERP-SUPORG, Use and Coordination of Non-PSC Support Organizations

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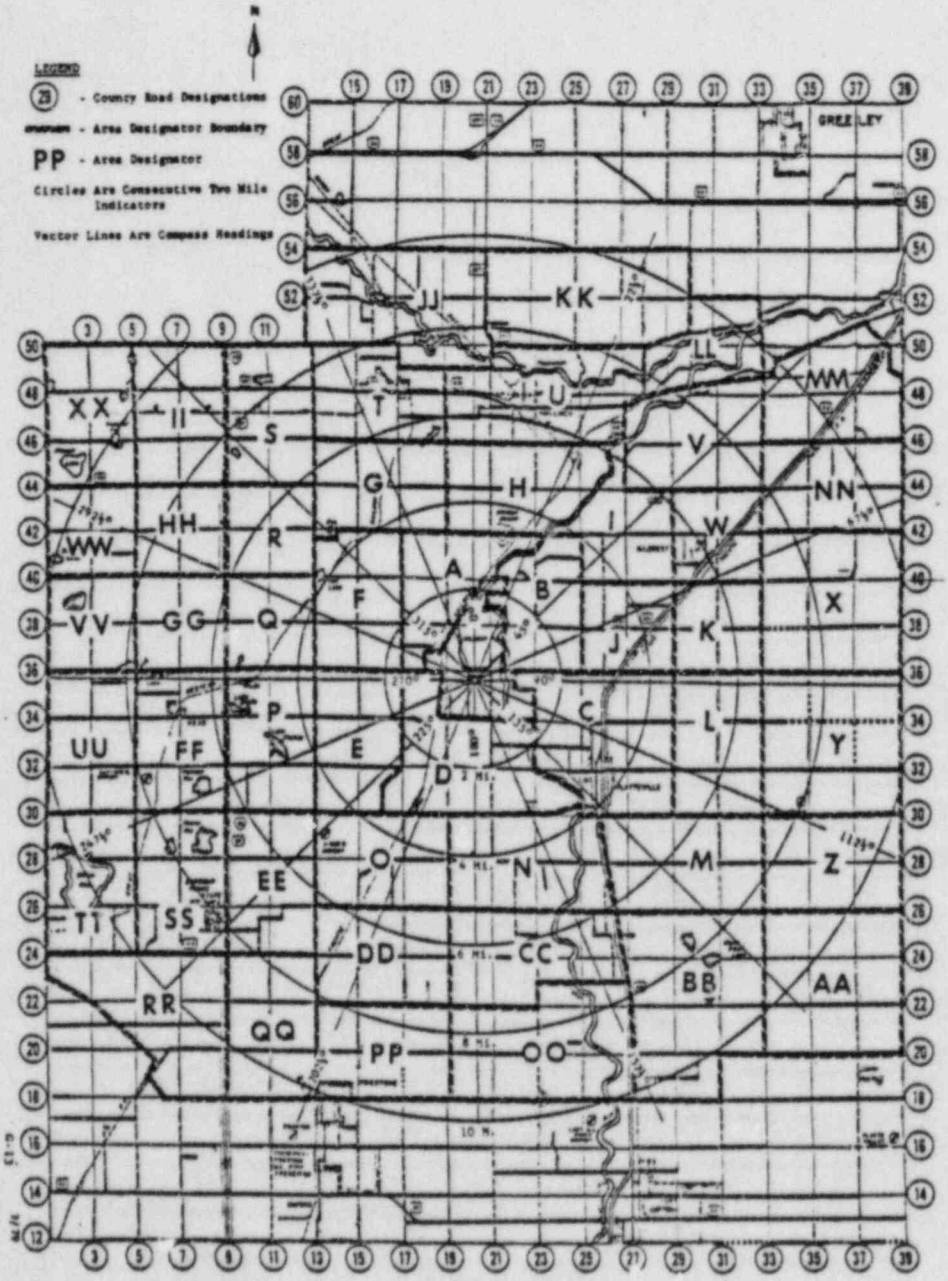
PUBLIC SERVICE COMPANY OF COLORADO

FIGURE 1

GEOGRAPHICAL AREA IDENTIFICATION DESIGNATIONS



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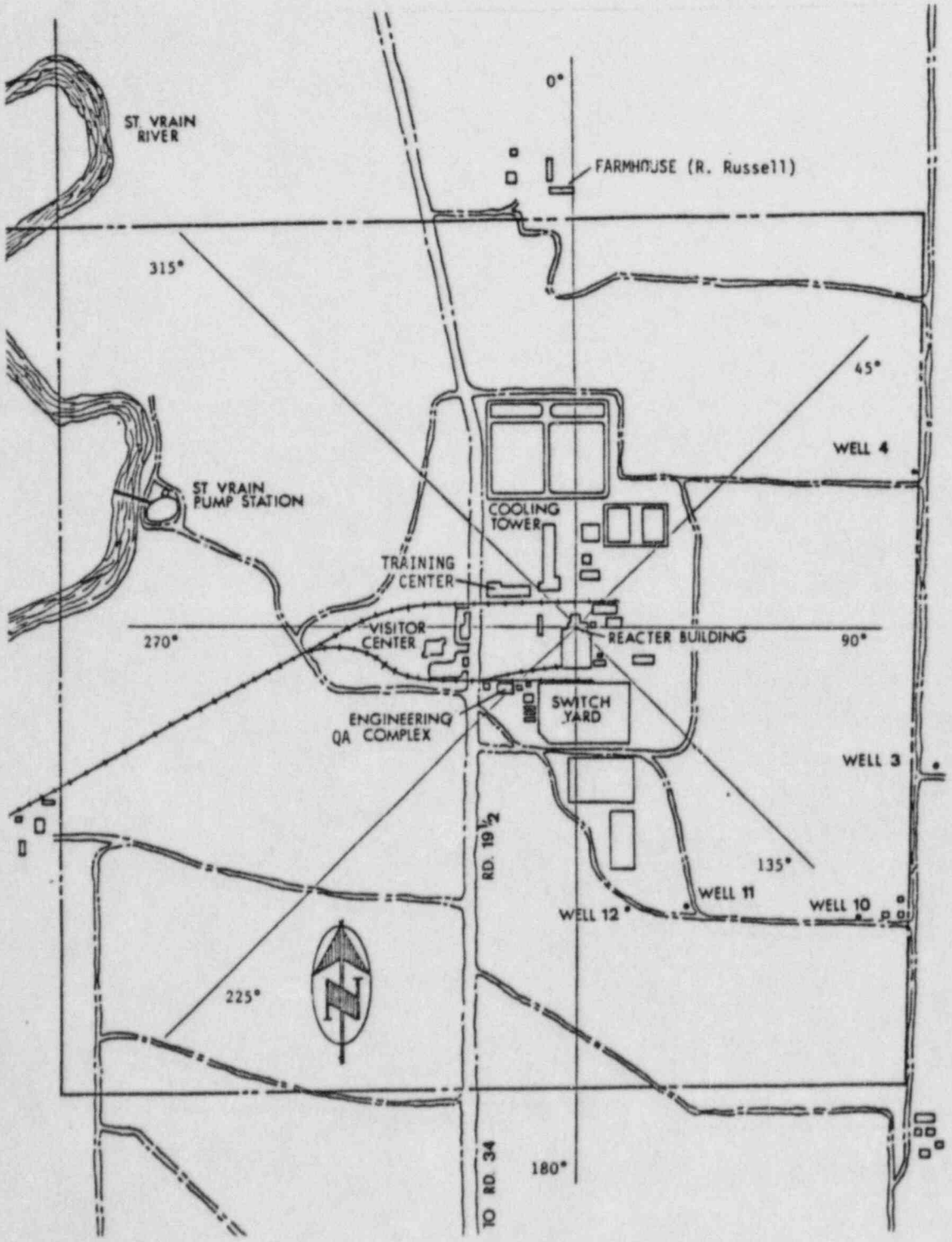
PUBLIC SERVICE COMPANY OF COLORADO

FIGURE 2

EXCLUSION AREA MAP



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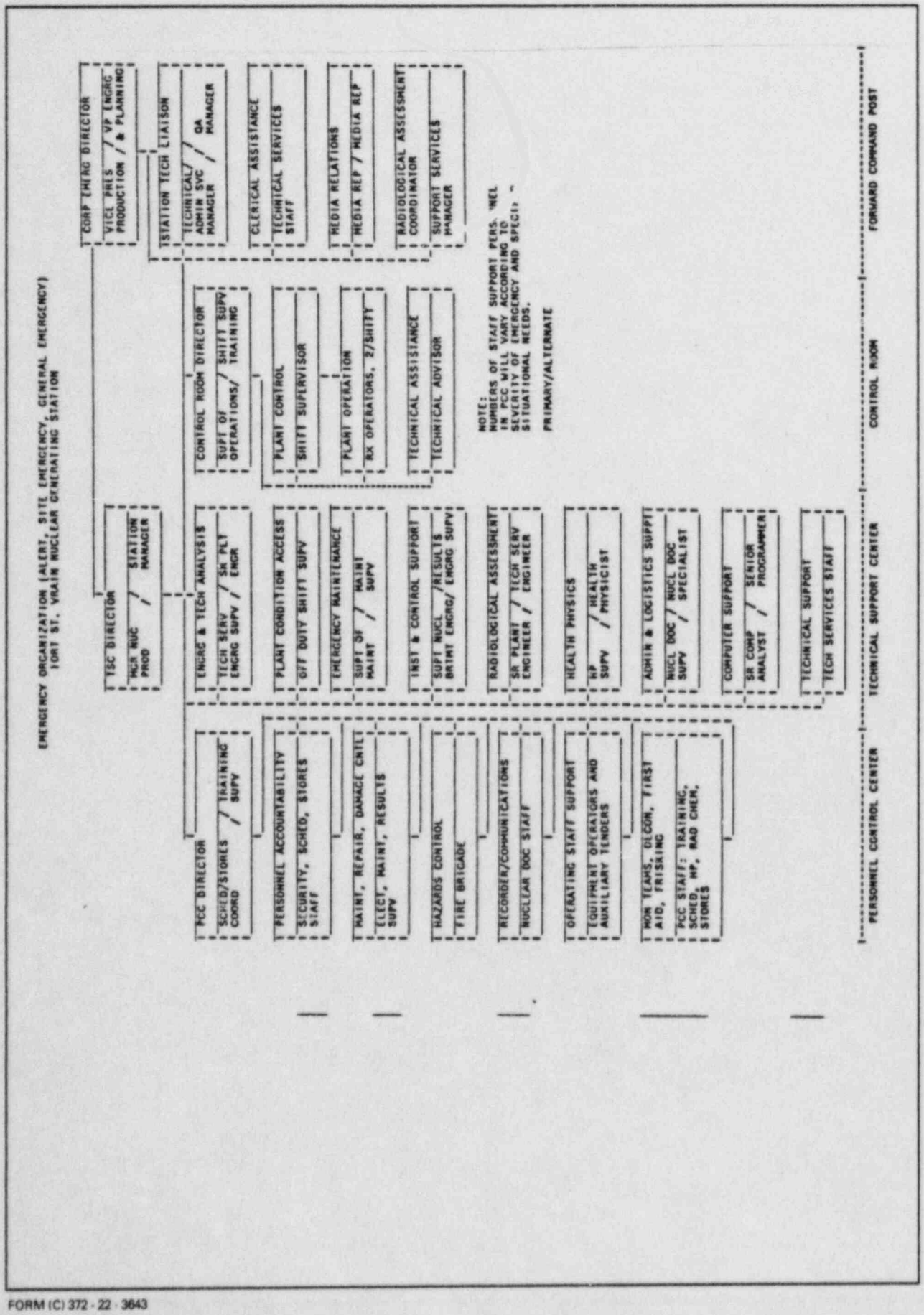
EMERGENCY ORGANIZATION (ALERT, SITE EMERGENCY, GENERAL EMERGENCY)
FORT ST. VRAIN NUCLEAR GENERATING STATION



SUPPORT EQUIPMENT/MATERIAL

1. Communications equipment
2. P & I's (one-half size set)
3. FSAR, Reference Design Manuals, EP's, SOPs, OPOPs, RERP
4. Office supplies
   a) pen/pencils
   b) chalk
   c) graph paper
   d) calculator
5. Sector/regional maps
6. Health Physics survey maps (of FSV buildings-see HPP-1 as required)
7. Site maps
8. Dosimetry for TSC staff
9. Personnel Accountability Records
10. Scott-Air Paks
11. RM-14/15

PRELIMINARY ASSESSMENT FACT SHEET

(To be given to TSC Director)

NOTE: Attach copies of notification forms completed by the Control Room during initial notifications.)

1. Date of Event _____ Time of Event _____

2. "Based upon the current release and the potential for further release this emergency is classified as":

   ALERT SITE AREA EMERGENCY GENERAL EMERGENCY

3. Description of Event

   _____

   _____

   _____

4. Radiological Assessment (Attach screen printout from Radiological Assessment if desired.)

   Wind speed at 10 meters_____. Stability Category_____.

   Location of Hazard: From ___degrees to ____degrees for ____miles.

   Sectors Affected:_____.

   Release Rates (Ci/Sec): Noble Gas _____.

   Radioiodine _____.

   Total Curies Released: Noble Gas _____.

   Radioiodine _____.

   Dose Rates At EAB (Rem/hr): Whole Body Dose Rate _____.

   Thyroid Dose Rate _____.

"Based upon the projected dose to the population the Recommended Protective Action per Table 6.2-2 of the RERP is": (Reference RERP-PAG per Radiological Assessment recommendation)

_____

_____

_____

5. Current Plant and Core Status (refer to completed Datasheet 2, supplied by Senior Plant Engineer/Reactor Engineer).

6. Emergency Repairs required (per discussion with Maintenance/Results).

_____

7. Personnel Accountability completed (Y/N) _____.

8. Personnel Injuries

   a) Number of injured persons _____.

   b) Description of Injuries _____

   _____

   _____

   c) How many of injured persons are also contaminated? ____

   d) How many have been sent to hospital? _____

   Which Hospitals? _____

   e) Relatives of all injured persons notified? (Y/N) _____

   If not, who has not been notified? _____

9. Plant Evacuation

   Non-essential plant personnel evacuated from _____

   (location) at _____ (time).

ASSESSMENT OF PLANT/CORE STATUS*
TECHNICAL SERVICES ENGINEERING SUPERVISOR/SENIOR PLANT ENGINEER

*NOTE: Completion of all lines not required. The Datasheet is provided for guidance only, and should be utilized to the extent necessary.

	Primary System	Date/Time
1.	Date/Time of Event	_____
2.	Current Reactor Power	_____%
3.	Primary Coolant Pressure	_____psia
4.	Primary Coolant Flow	_____%
5.	Operating Circulators A B C D.	
	Motive Power: Steam _____ Water _____	
	If water, which header? Emer. F.W._____ Emer. Cond._____	
6.	Purification train in use A B: Storage, PCRV, or Ventilation	
7.	Indication of fuel damage (Y/N)	_____
	RT-9301 reading (RR 93256, pt 10)	_____cpm
	RT-9301 trend _____	
8.	Is heat removal capability adequate (Y/N)	_____
9.	Can cold-shutdown conditions be met (Y/N) (Refer to SOP 12-02 or SR 5.1.4-W-P)	_____
10.	Obtain Technical Advisor assessment sheet data, as required (✓)	_____

Secondary System

1. Loops Operating I II
2. Feed pumps operating A B C
3. Feed to S/G's Norm F.W. _____ Emer. F.W. _____
   Emer. Cond. _____
4. Secondary flow I _____ Klb/hr. II _____ klb/hr.

5. Status of aux. boilers.

_____ _____

_____

_____

_____

_____

_____

ASSESSMENT OF PLANT/CORE STATUS
TECHNICAL SERVICES ENGINEERING SUPERVISOR/SENIOR PLANT ENGINEER

Remarks

Time	Description

FORM (C) 372 - 22 - 3643

FORT ST. VRAIN
TECHNICAL SUPPORT CENTER STATUS BOARD

DATE: _____
TIME: _____

EMERGENCY CLASSIFICATION: _____

Description of Event: _____

_____

_____

PLANT STATUS DATA:

- Plant Status/Reactor Power: _____
- Reactor Shutdown Time: _____
- Reactor Coolant Pressure: _____ psia
- Primary Coolant Flow: _____ %
- Average Region Outlet Temp: _____ deg. F
- Circulator Inlet Temp: _____ deg. F
- Operating Circulators: A B C D
- Motive Power: Steam EFW ECH FW
- Primary Coolant Moisture Dewpoint _____ deg. F
- Reserve Shutdown System Status: _____

_____

- Shutdown margin adequate? Y N
- Indication of failed fuel? Y N

SECONDARY SYSTEM STATUS:

- Loops operating: I II
- Flow: I _____ II _____ klb/hr
- Feed Pumps operating: A B C
- S/G Feed: FW EFW ECH
- Aux Boiler Status: _____

_____

Essential and Emergency Power Status: _____

_____

_____

Plant Security Status: _____

_____

Site Evacuation Status: _____

_____

Personnel Injury Status: _____

_____

Communications Status: _____

_____

Miscellaneous Information: _____

_____

_____

_____

_____

TSC activated? Y N

FCP activated? Y N

PCC activated? Y N

TSC Staff Members:	Title:
_____	Director
_____	Engrg./Tech. Analysis
_____	Plant Cond. Assess.
_____	Rad. Assessment
_____	Sr. HP Representative
_____	Emergency Maint.
_____	I & C
_____	Admin./Logistics
_____	Computer Support
_____	Technical Support
_____	Technical Support

TSC CHECKLIST

To be completed by Administration/Logistics support personnel.

	TIME
1. Habitability verified.	_____
2. Sign-in sheet (Attachment 2) set up by door.	_____
3. Dosimeter assigned to TSC general area to monitor overall personnel exposure.	_____
4. Control Room television set up.	_____
5. Copy of completed notification form obtained from Control Room.	_____
6. Preliminary Assessment Fact Sheet (Datasheet 1) completed and submitted to TSC Director.	_____
7. Center accountability complete:	
TSC Director	_____
Technical and Engineering Analysis	_____
Radiological Assessment	_____
Plant Condition Assessment	_____
Sr. H. P. Representative	_____
Emergency Maintenance	_____
I & C	_____
Administration/Logistics	_____
Computer Support	_____
Technical Support	_____
8. TSC activated; initial staff briefing conducted.	_____
9. Communications established	
Control Room	_____
Personnel Control Center	_____
Forward Command Post	_____
10. Plant Status Board updated.	_____
11. Radiological Status Board updated.	_____

| 12. Personnel Accountability Status obtained

Verify that Visitor's Center notified _____

Initial (from Shift Supervisor - may pass through the CR Director) _____

Continuing (from PCC Director) _____

| 13. Injury Reports transmitted to FCP. _____

| 14. PCC evacuation recommended. _____

| 15. Requests for Additional Personnel Made

Site Personnel _____

Other PSC _____

Contract _____

| 16. In-Plant Survey Teams Status

Dispatched _____

Report Received _____

| 17. Site Survey Teams Status

Dispatched _____

Report Received _____

| 18. Exposure criteria for emergency workers being followed (see RERP-EXP) _____

Work/Datasheet Checklist Control List

Worksheet No.	Title	Number Copies
None	N/A	N/A

Datasheet No.

1	Assessment Fact Sheet - TSC Director	10
2	Assessment of Plant/Core Status	5
3	Plant Status Board Update	10

Checklist No.

1	TSC Checklist	2

FORMS USE REPORTING SHEET

Nuclear Documents Specialist:

This sheet is being transmitted to report use of forms from a controlled copy of the Radiological Emergency Response Plan Implementing Procedures, BOOK NO._____, located at _____. The following forms have been utilized from this copy:

Worksheet Numbers	Copies Used

Datasheet Numbers	Copies Used

Checklist Numbers	Copies Used

The procedure affected by this sheet is shown in the header to this page, unless otherwise noted below in the comments to this reporting form. When this form is received, it will be necessary to replace the noted number of forms, as well as this "Forms Use Reporting Sheet" for the affected procedure in the affected book.

FORMS USE REPORTING SHEET(Continued)

COMMENTS

Reported By:_____

Date: _____

Nuclear Documents Specialist_____ *

Date Received_____

Date Replaced_____

* Nuclear Documents Specialist will transmit this form to the originating individual/department upon completion of this form to notify users that the procedure has been updated and that all worksheets, checklists, and datasheets are present in the required number of copies.

TITLE: RADIOLOGICAL EMERGENCY RESPONSE PLAN (RERP) PHONE LISTS

ISSUANCE AUTHORIZED BY	J. W. Gahan 1/4/85		
PORC REVIEW	PORC 603 JAN 8-, 1985	EFFECTIVE DATE	1-15-85

TABLE OF CONTENTS

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN PHONE SYSTEM

DIMENSION SYSTEM DIALING INSTRUCTIONS

From Fort St. Vrain:

Area to be Called	Proper Dialing Prefix
Denver Exchange	
PSCo number	8 + Number
Outside PSCo	8 + 303 + Number
Longmont Exchange	78 + Number
Greeley Exchange	9 + Number
All other areas in Colorado	8 + 303 + Number
Outside the State of Colorado (unless a toll free number)	8 + Area Code + Number

Paging Using Phone System:

To Page: Dial 60-@ (all areas) or 62-@ (in plant only)
@ = (1, 2, 3, 4, 5, 6, or 7)
whichever "@" is used, announce "CODE @" after page is complete, depress switch once, wait for answer.

To Answer: Dial #7-@ @ = (1,2,3,4,5,6, or 7)
in place of "@", use whichever code number was announced.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

RERP PHONE LIST INDEX

* These call lists are found in <u>both</u> RERP-PHONE LISTS and RERP-HOME.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

V - Home Packet For Off-Shift Notifications (RERP-HOME), Table #1

W - Home Packet For Off-Shift Notifications (RERP-HOME) Attachment #3

X - Home Packet For Off-Shift Notifications (RERP-HOME), Attachment #4

Y - Home Packet For Off-Shift Notifications (RERP-HOME), Attachment #10

Z - Home Packet for Off-Shift Notifications (RERP-HOME), Checklist #1

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

RADIOLOGICAL EMERGENCY RESPONSE PLAN

PSC COMPANY OPERATOR CALL LIST

A. Obtain the following information from your contact at Fort St. Vrain.

a. Name and identity of caller: _____

b. Date/Time of event: _____

c. Classification of event (circle one):

Radiological Alert

Site Emergency

General Emergency

d. At the present time, a radiological release (circle one) IS/IS NOT occurring.

e. Location of the Personnel Control Center _____

B. Your Name: _____

Date/Time call was received: _____

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

PSC COMPANY OPERATOR CALL LIST (continued)

C. Fill in the blanks of the following statement which will be read verbatim to the individuals on your call list using the above information.

_____

_____

READ SLOWLY

At approximately (b)_____ this date at the Fort St. Vrain Nuclear Generating Station near Platteville, Colorado, an event believed to involve a potential radiological hazard occurred. This event has been classified as a (c)_____. At the present time, a radiological release (circle one) IS/IS NOT occurring. The Personnel Control Center is to be established at (e)_____.

_____

_____

D. IMMEDIATELY, (day or night) contact the following individuals and read them your prepared statement verbatim. Log the time each is reached.

1. Call Fort St. Vrain and verify the report:

   a. Call 5-785-1220. Read your prepared statement VERBATIM.

   _____

2. Colorado State Health Department:

   a. Duty Hours: 320-8333, Ext. 6246. _____

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

b. After duty hours: 320-1465 (this is an answering service and they will contact the on-duty person at the State Health Department).

PSC COMPANY OPERATOR CALL LIST (Continued)

D. (Continued)

3. Contact one of each of the following groups of primaries/alternates.

		Extension	City	Home	Time
a.	Primary: J. W. Gahm	5-785-1200	Northglenn	5-303-452-0507	
	Alternate: C. H. Fuller	5-785-1202	Loveland	5-303-663-2363	
b.	Primary: W. J. Franek	5-785-1218	Berthoud	5-303-532-3489	
	Alternate: D. P. Hood	5-785-1347	Longmont	5-303-776-1843	
c.	Primary: J. Glass	5-785-1253	Brighton	5-303-659-4118	
	Alternate: S. R. Willford	5-785-1450	Brighton	5-303-659-5258	
d.	Primary: F. J. Novachek	5-785-1201	Thornton	5-303-457-8034	
	Alternate: D. W. Warembourg	571-8419	Federick	5-303-833-4092	
	Alternate: L. W. Singleton	5-785-1350	Longmont	78-772-1018	
e.	Primary: O. R. Lee	571-7105	Brighton	9-659-1180	
	Alternate: J. K. Fuller	329-1104	Denver	9-779-1109	
f.	Primary: R. F. Walker	571-7333	Denver	9-234-9298	
	Alternate: B. O'Donnell	571-7381	Denver	9-388-0211	
g.	Primary: D. McNellis	571-7254	Denver	9-321-3142	
	Alternate: D. W. Warembourg	571-8419	Frederick	5-303-833-4092	

4. Contact American Nuclear Insurers 1-800-243-3172, (203) 677-7305, or (203) 677-7315 (Day or Night)

5. Contact General Atomic Technologies, Inc. (619) 455-2010

6. Contact one of the following at the Colorado State University Radiation Biology Department.

	Work	City	Home	Time
a. Dr. James E. Johnson	5-303-491-5380	Ft. Collins	5-303-482-3029	
b. Marion McDonald	5-303-491-5094	Ft. Collins	5-303-484-0084	
c. Department Office	5-303-491-5222	Ft. Collins		

7. Contact American Nuclear Society 1-800-323-3044, (312) 352-6611, or (312) 352-6814 (24-hour emergency)

8. NRC Resident Inspector - Office 5-785-1490 or 5-303-785-2282
G. L. Plumlee, III - 5-303-776-9541 or 890-2225 (Page Number) _____

9. Contact Institute of Nuclear Power Operations (INPO) (404) 953-0904, 953-0922, or Rapicon (404) 953-9208 or 952-6728. _____

10. Contact PSC Fort St. Vrain Shift Supervisor at 5-785-1219 to report results of telephone contacts above. _____

NRC Regional Administrator

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

ECP DIRECTOR'S CALL LIST INTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (and the alternate will complete the calls on the attached list).

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Complete the attached call list.

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

ECP DIRECTOR'S CALL LIST

First call all primaries, then call all alternates.

	PSC Extension	Home	Time
Manager - Technical Support			
Primary - M. E. Niehoff	785-1403	690-3879	_____
Alternate - J. R. Reesy	571-8406	755-1720	_____
Manager - Media Relations			
Primary - R. T. Person, Jr.	571-7323	753-9292	_____
Alt. - W. D. Fitzmaurice	571-7713	424-8053	_____
Manager - Resources			
Primary - D. D. Hock	571-7211	394-3063	_____
Alternate - J. Bumpus	571-7821	388-7645	_____
Manager - Security			
Primary - E. O'Neal	571-7709	757-0038	_____
Alternate - E. Lane	571-8533	321-4016	_____

Note: Any change to this call list requires a change be made to RERP-HOME, Attachment #5.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

CORPORATE EMERGENCY DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director.

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the PSC Operator or the center/post Director:

   a. Call the first person on the attached list and inform him to complete the call list.

3. If you are the first person on the attached list and are contacted by the Alternate Director or the Director:

   a. Complete the attached list.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

CORPORATE EMERGENCY DIRECTOR'S CALL LIST (FCP)

First contact all primaries, then call all alternates.

	Extension	Home	Time
Station Technical Liaison			
(One of the Station Technical Liaisons is also contacted by the PSC Operator.)			
Primary - F. Novachek	785-1201	457-8034	_____
Alternate - D. Warembourg	571-8419	833-4092	_____
Alternate - L. Singleton	785-1350	772-1018	_____
Radiological Assessment			
Primary - T. Borst	785-1203	663-1230	_____
	(Pager)	890-1775	_____
Clerical Assistance			
Primary - D. Merritt	785-1271	737-2339	_____
Primary - D. Reichardt	785-1272	776-7435	_____
Alternate - S. Katcher	785-1212	356-0351	_____
Media Relations			
Primary - M. Mora	571-8462	694-2369	_____
Alternate - S. Volsted	571-7242	750-1785	_____

Note: Any change to this call list requires a change be made to RERP-HOME, Attachment #6.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

PCC DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (the alternate will complete the calls on the attached list).

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Contact persons to set up the facility by calling those individuals denoted by asterisks (*) after their names and four (4) Health Physics Technicians listed. Inform all persons of the location of the PCC. Notify the remainder of personnel upon your arrival at the PCC. (This responsibility may be delegated.)

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list as specified in 2.a. above.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

PCC DIRECTOR'S CALL LIST

NOTE: The following are preferred assignments only; actual personnel assignments at the PCC may differ.

	Plant Extension	Home	Time
Personnel Assignment Controller			
R. Rivera*	453	8-303-667-1906	_____
Recorder/Communications			
S. Lehr	451	8-303-422-1280	_____
T. Shafer	457	8-303-663-4862	_____
D. Horihan*	250	78-776-7976	_____
D. Belgard*	204	78-678-0355	_____
Personnel Accountability			
M. Blossom*	261	9-785-6302	_____
G. Powers	252	8-303-426-1623	
Decontamination			
R. Hooper*	458	8-303-452-3614	_____
M. Murphy	454	8-303-279-6726	_____
Drivers			
P. Bearly*	455	8-303-669-6636	_____
R. Hamblin*	254	8-303-667-1703	_____
H. Wiedrich	452	8-303-732-4407	_____
First Aid			
C. Harding	311	9-785-2398	_____
J. Switzer*	452	9-587-4134	_____
D. Reed	314	9-785-2159	_____
Friskers			
R. Moler*	456	78-772-9354	_____
K. Hays	319	8-303-778-7702	_____
W. Holcomb*	312	9-330-2068	_____

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

Access Control			
R. Erwin*	315	9-330-7178	_____
R. Teel*	261	8-303-288-1959	_____
R. Widows	314	8-303-663-1080	_____

Maintenance, Repair, and Damage Control			
R. Webb*	299	78-667-8219	_____
	(Pager)	855-7257	_____
R. Lamb*	336	78-772-0757	_____
C. Schmidt*	286	8-303-666-6955	_____

Monitoring Teams - Health Physics (Notify four of the following initially.)			
J. Brown	245	9-339-3972	_____
P. Glahn	245	8-303-450-5292	_____
L. Hutchins	245	9-330-7187	_____
G. Madison	245	8-303-833-2278	_____
K. Morse	245	9-353-6163	_____
K. Nasveschuk	245	78-651-6254	_____
E. J. O'Donoghue	245	8-303-452-3514	_____
S. Sherrow	245	9-353-1338	_____
S. Sieg	245	8-303-663-3468	_____
G. Valentine	245	8-303-223-7674	_____

Radiochemistry			
V. McGaffic (P)*	278	9-587-2752	_____
D. Miller (A)*	279	8-303-663-3595	_____
S. Poet (A)	279	78-652-2297	_____
M. Prochownik (A)	279	9-785-6010	_____
S. Rima (A)	279	78-772-4068	_____

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

STATE EOC CALL LIST INSTRUCTIONS
(For Contacts by PSC)

In the event you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the PSC primary contact:

   a. Call the PSC alternate contact and instruct him to complete the call list.

   b. If you cannot reach the PSC alternate contact, call the first person on the attached list and inform him to complete the call list.

2. If you are the PSC alternate contact and are notified by the PSC primary contact:

   a. Complete the attached call list.

3. If you are the PSC alternate contact and are notified by the PSC operator:

   a. Call the first person on the attached list and inform him to complete the call list.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

STATE EOC CALL LIST
(For Contacts by PSC)

	Extension	Home	Time
Technical Assistance			
H. L. Brey (Primary)	571-8404	469-4238	_____
M. H. Holmes (Alt.)	571-8409	988-4522	_____
Radiological Consultant			
Janet Johnson	491-5930	482-3029	_____
Media Relations			
R. A. Burns (Primary)	571-7726	759-9740	_____
G. Reeves (Alt.)	571-7726	424-4958	_____

Note: Any change to this call list requires a change be made to RERP-HOME, Attachment #8.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

TSC DIRECTOR'S CALL LIST INSTRUCTIONS

In the event that you are notified by the PSC operator that a Radiological ALERT or higher classification event has occurred at Fort St. Vrain, complete the following telephone calls:

1. If you are the response center/post Director:

   a. Call your response center/post Alternate Director (the alternate will complete the calls on the attached list).

   b. If you cannot contact your Alternate Director, call the first person on the attached list and inform him to complete the call list.

2. If you are the response center/post Alternate Director and are contacted by the Director:

   a. Complete the attached call list.

3. If you are the response center/post Alternate Director and are contacted by the PSC Operator:

   a. Call the first person on the attached list and inform him to complete the call list.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

TSC DIRECTOR'S CALL LIST

First call all primaries, then call all alternates.

Engineering and Technical Analysis	Plant Extension	Home	Time
Primary - J. Eggebroten	270	651-1253	_____
	(Pager)	890-2220	_____
Alternate - R. Heller	264	772-1093	_____
Radiological Assessment			
Primary - J. Sills	265	221-5059	_____
	(Pager)	890-2223	_____
Alternate - S. Johnson	285	663-1431	_____
Technical Support			
Contact three persons listed below in order of preference:			
A. Reed*	325	772-5312	_____
	(Pager)	890-1942	_____
M. Joseph*	275	465-1248	_____
O. Clayton	277	663-3939	_____
D. Stuart	274	651-1927	_____
R. Gappa	283	484-2306	_____
Plant Condition Assessment			
Call two off-duty Shift Supervisors			
M. Deniston	219	776-3776	_____
D. Evans	219	776-9672	_____
J. Hak	219	776-1904	_____
D. Hood**	219 or 347	776-1843	_____
J. Hunter	219	330-1411	_____
H. O'Hagan	219	776-8232	_____
G. Reigel	219	330-4235	_____
J. VanDyke	219 or 346	772-2476	_____

* Reed or Joseph may not be available if either is the on-duty Technical Advisor.

** Also contacted as alternate to Control Room Director by PSC operator.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

Emergency Maintenance

Primary - W. Craine	222	667-5427	_____
Alternate - J. Petera	233	427-6273	_____

Instrument and Control

Primary - B. Burchfield	249	351-0373	_____
Alternate - J. McCauley	248	667-0635	_____

| Senior Health Physics Representative

Primary - T. Schleiger	242	785-6314	_____
Alternate - B. Woodard	244	678-0818	_____

Administration/Logistics

Primary - A. Kitzman	206	737-2578	_____
| Primary - P. Collins	207	587-2172	_____
| Primary - P. Bollig	204	339-3972	_____
Alternate - D. Connelly	210	353-4575	_____

Telephone Console Operators

Primary - D. Edwards	214	669-1680	_____
| Alternate - D. Libal	205	651-1404	_____

Computer Support

*Primary - D. Klaus	437	466-5046	_____
| *Alternate - D. Haloin	376	353-1993	_____

*Computer Services Page Number: 855-3234

Note: Any changes made to this call list requires a change be made to RERP-HOME, Attachment #9.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

CENTERS/POSTS PHONE NUMBERS *

			Phone Lists Affected
Control Room (CR)			
Denver Line	571-7436		P
Greeley Line	785-2223		P
Longmont Line	776-6710		P
Site Extension	220		P
Site Extension	221		P
Executive Command Post (ECP)			
Headquarters Building - Room 620			
Denver Line	571-8459		P
Denver Line	571-8460		P
Denver Line	571-8461**		P
Lookout Center - Golden			
Denver Line	278-2222		P
Denver Line	278-0287		P
Emergency Operations Center - State (SEOC)			
Camp George West			
Denver Line	279-2511		P
Denver Line	279-8855		D,P,U,W
Forward Command Post (FCP)			
Fort Lupton			
Denver Line	571-7053	571-7070	
	571-7096	571-7061	P
	571-7062		
Ft. Lupton Line	857-6238	857-6246	
	857-6239	857-6022	P
	857-6247	857-6248	
	857-6249	857-6001	
	857-6230		

* For any call into FSV from another PSC dimension phone, dial 8-785-1xxx, where xxx is the three digit FSV extension.

** This line reserved for conferencing between the FCP AND ECP.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

Governor

Office	866-2471	F,P,W
Mansion	837-8350	F,P,U,W

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

CENTERS/POSTS PHONE NUMBERS

Personnel Control Centers			Phone Lists Affected
Onsite			
Training Center			
Site Extension	450		P
Engineering/QA Complex			
Site Extension	362		P
Offsite			
Johnstown County Shop			
Greeley Line		587-4508	P
County Engineer, Drew Scheltinga		356-4000 Ext. 4750	P
Maintenance Supervisor, Bud Schmuhl		587-2431 (Home)	P
Production Manager, Dave Becker		356-0177 (Home)	P
Maintenance Support Supervisor, Jack Slife		284-5451 (Home)	P
Longmont PSC Service Center			
Denver Line (Louisville)		665-5511	P
Longmont Line		776-0933	P
Platteville Fire Department			
Greeley Line		785-2232	P,Q
Contact Cliff Wright, Greeley Line		785-2835	P,Q
Weld County, Maintenance		356-4000 ext. 777	P

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

CENTERS/POSTS PHONE NUMBERS

		Phone Lists Affected
Technical Support Center		
Site Extension	290	P
Site Extension	291	E,P
Site Extension	292	P
Site Extension	293	D,E,H,P
Site Extension	294	E,P
Site Extension	295	P
Visitor Center		
Site Extension	475	A,P
Lunchroom		
Site Extension	264	A,P

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

OUTSIDE ASSISTANCE PHONE NUMBERS

		Phone Lists Affected
Ambulance Services		
Platteville Fire Department (Platteville)	785-2232	Q
(Greeley Line)	911	Q
Professional Ambulance Service (Longmont)	776-1211	Q
Weld County Ambulance Service (Greeley)	353-5700	Q
St. Lukes Helicopter (ask for Admitting)	869-2012	Q
	869-2013	Q
	or 869-2014	
	Emergency: 869-2111	Q
Fire Departments		
Fort Lupton	857-6619	P,Q
Johnstown	587-4477	Q
Platteville	785-2232	P,Q
Medical Facilities		
St. Luke's Hospital (Denver)	839-1000	Q,S
	869-2111	Q,S
	869-2112	Q,S
North Colorado Medical Center (Greeley)	352-4121	Q,S
Memorial Hospital (Greeley)	352-3123	Q,S
Longmont United Hospital (Longmont)	651-5111	Q,S
	Emergency: 651-5000	Q,S
National Weather Service		
Ask for LEAD Forecaster	837-4207	Q
	or 837-3611	Q
Institute of Nuclear Power Operations (INPO)		
	(404) 953-0904	Q,J
	(404) 953-0922	Q,J
	Rapicon: (404) 953-9208	Q,J
	(404) 952-6728	Q,J
NRC Operations Center		
	(202) 951-0550	E,F,G, Q,U,W,X
	(301) 427-4055	E,Q
	(301) 427-4259	E,Q
	(301) 492-8893	E,Q
	(301) 492-7000	E,Q

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

OUTSIDE ASSISTANCE PHONE NUMBERS

		Phone Lists Affected
Backup Meteorological Tower Data (NOAA)		
Bob Clark	497-6987	Q
Dick Garrelts	497-6972	Q
Audrene Brown	497-6159	Q
Silent 700-300 Baud Modem *	447-0992	Q
Laboratory	497-6792	Q
Administrative Office	497-6116	Q
County Sheriff	356-4000	Q
City Police		
Johnstown	587-4664	Q
Platteville	785-2215	Q
State Patrol	353-1151	Q
	or 9-911	Q
Coast Guard	1-800-424-8802	Q,T
Colorado State Health Department	320-8333	J,Q,T
Environmental Protection Agency	234-2259	Q,T
	or 234-6069	Q,T
American Nuclear Insurers (ANI)	1-800-243-3172	C,J,Q,U
	(203) 677-7305, ext. 245	C,J,Q,U
	(203) 677-7315	C,J,Q
	(203) 677-6989	C,Q
	(203) 677-7715	C,Q
American Nuclear Society	(312) 352-6611	J,Q
	1-800-323-3044	J,Q
24 hour emergency only:	(312) 352-6814	J,Q

* To have line cleared when busy, call Mr. Val Swarcz (SERI) at 231-1816.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

VISITOR CENTER PHONE NUMBERS

			Phone Lists Affected
Site Extension	475		R
	476	785-1475	R

Persons Living Within Property Boundary*

1.	Ben Houston	785-2408	R,I
2.	Randy Russell	785-6326	R,I
3.	Bill Pitt	785-6274	R,I
4.	Raymond Marin	785-2862	R,I
5.	Vacant	No Phone	
6.	Scott Houston	785-2358	R,I
7.	Keith Russell	785-2589	R,I
8.	Dave LaChance	785-6303	R,I

* When these telephone numbers are verified, updates must be reflected in the PCC Procedure, Attachment 2.

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

ADMINISTRATIVE

	Phone Lists Affected
BORST, F.J. Loveland 663-1230 (Home) 203 (Work) 890-1775 (Page Number) Assigned To: FCP	C,E,L, S,U,V,Z
BREY, H.L. Broomfield 469-4238 (Home) 571-8404 (Work) Assigned To: SEOC	J,Y
BUMPUS, J.N. Denver 388-7645 (Home) 571-7821 (Work) Assigned To: ECP	K
BURNS, R.A. Denver 759-9740 (Home) 571-7726 (Work) Assigned To: SEOC	N,S,Z
FITZMAURICE, W. Denver 424-8053 (Home) 571-7713 (Work) Assigned To: ECP	K,S
FULLER, C. H. Loveland 663-2363 (Home) 202 (Work) 890-0810 (Page Number) Assigned To: TSC	C,E,J, S,T,U, V,Y,Z

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

ADMINISTRATIVE

	Phone Lists Affected
FULLER, J.K. Denver 779-1109 (Home) 329-1104 (Work) Assigned To: FCP	J,Y
HOCK, D.D. Denver 394-3063 (Home) 571-7211 (Work) Assigned To: ECP	K
HOLMES, M.H. Lakewood 988-4522 (Home) 571-8409 (Work) Assigned to: SEOC	N
GAHM, J. W. Northglenn 452-0507 (Home) 200 (Work) 890-6359 (Page Number) Assigned To: TSC	C,E,J, S,T,U, V,Y,Z
LANE, E. Denver 321-4016 (Home) 571-8533 (Work) Assigned To: ECP	K,S
LEE, O.R. Brighton 659-1180 (Home) 571-7105 (Work) Assigned To: FCP	C,E,J, S,T,V, Y,Z

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

ADMINISTRATIVE

	Phone Lists Affected
NOVACHEK, F. Thornton 457-8034 (Home) 201 (Work) 890-1941 (Page Number) Assigned To: FCP	C,E,J, L,S,U, V,Y,Z
McNELLIS, D. Denver 321-3142 (Home) 571-7254 (Work) Assigned To: SEOC	J,Y
MORA, MARILY Denver 694-2369 (Home) 571-8462 (Work) Assigned To: FCP	L,S,Z
NIEHOFF, M. E. Aurora 690-3879 (Home) 403 (Work) Assigned to: ECP	K
O'DONNELL, B. Denver 388-0211 (Home) 571-7381 (Work) Assigned To: ECP	J,Y
O'NEAL, E. E. Denver 757-0038 (Home) 571-7709 (Work) Assigned To: ECP	K,S

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

ADMINISTRATIVE

	Phone Lists Affected
PERSON, R.T., JR. Englewood 753-9292 (Home) 571-7323 (Work) Assigned To: ECP	K
REESY, JACK R. Denver 755-1720 (Home) 571-8406 (Work) Assigned To: ECP	K
REEVES, G.D. Arvada 424-4958 (Home) 571-7726 (Work) Assigned To: SEOC	N,S,Z
SINGLETON, L.W. Longmont 772-1018 (Home) 350 (Work) Assigned To: FCP	J,L,Y
VOLSTAD, STEPHEN A. Denver 750-1785 (Home) 571-7242 (Work) Assigned To: FCP	L
WALKER, R.F. Denver 234-9298 (Home) 571-7333 (Work) Assigned To: ECP	J,Y
WAREMBOURG, D.W. Frederick 833-4092 (Home) 571-8419 (Work) Assigned To: FCP	J,L,Y

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

CHEMISTRY

Phone
Lists Affected

ADAMSKI, HANK
Boulder
444-3533 (Home)
226 (Work)
Assigned To: NONE

BRUNGARDT, JESSE
Fort Collins
493-9272 (Home)
226 (Work)
Assigned To: NONE

FETTEROLF, DAVE L.
Greeley
330-6073 (Home)
226 (Work)
Assigned To: NONE

LUCERO, VICTOR A.
Greeley
352-0705 (Home)
225 (Work)
855-5504 (Page Number)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

COMPUTER SERVICES

	Phone Lists Affected
BILSTEIN, DON Berthoud 532-2546 (Home) 333 (Work) Assigned To: NONE	
HALOIN, DON Greeley 353-1993 (Home) 376 (Work) Assigned To: TSC	0
KLAUS, DON L. Broomfield 466-5046 (Home) 437 (Work) Assigned To: TSC	0
METCALFE, DOUG Westminster 425-1695 (Home) 344 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

ELECTRIC

	Phone Lists Affected
BRUXVOORT, MARVIN J. Loveland 669-7175 (Home) 233 (Work) Assigned To: NONE	
CRUZ, DAN Westminster 428-0157 (Home) 233 (Work) Assigned To: NONE	
HARTSOUGH, PATRICK J. Fort Lupton 785-2463 (Home) 233 (Work) Assigned to: NONE	
JARRETT, MICHAEL S. Thornton 451-7145 (Home) 233 (Work) Assigned to: NONE	
LAMB, ROBERT E. Longmont 772-0757 (Home) 336 (Work) Assigned To: PCC	M
PETERA, JAMES Westminster 427-6273 (Home) 233 (Work) 890-0832 (Page Number) Assigned To: TSC	O,U

FORM (B) 372 - 22 - 3643

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

ELECTRIC

Phone
Lists Affected

QUINTANA, MARK R.
Northglenn
452-4818 (Home)
233 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

Phone
Lists Affected

ADAMS, DENNIS R.
Longmont
772-7759 (Home)
232 (Work)
Assigned To: NONE

AMEN, TOM
Greeley
330-9868 (Home)
232 (Work)
Assigned To: NONE

BASS, ROY J., JR.
Northglenn
452-2716 (Home)
232 (Work)
Assigned To: NONE

BATES, G. DEXTER
Greeley
356-1894 (Home)
244 (Work)
Assigned To: NONE

BISHARD, LEVI V.
Brighton
452-7245 (Home)
343 (Work)
855-7257 (Page Number)
Assigned To: NONE

BURNETT, RANDALL
Brighton
659-0787 (Home)
228 (Work)
Assigned To: NONE

| CAMP, MICHAEL
| Fort Lupton
| 857-4770 (Home)
| 228 (Work)
| Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

	Phone Lists Affected
CLARK, ARTHUR L. Berthoud 532-4081 (Home) 228 (Work) Assigned To: NONE	
CLAYTON, DWIGHT Johnstown 587-4700 (Home) 232 (Work) Assigned To: NONE	
COGDILL, LARRY Johnstown 587-4825 (Home) 232 (Work) Assigned To: NONE	
CRAINE, WARD A. Loveland 667-5427 (Home) 222 (Work) 890-0804 (Page Number) Assigned To: TSC	O,U
DAVIS, JENNIFER Evans 330-7076 (Home) 231 (Work) Assigned To: NONE	
DESANTI, ROCKY Brighton 659-3942 (Home) 232 (Work) Assigned to: NONE	
DIXON, GEORGE D. Longmont 776-2634 (Home) 228 (Work) 855-7257 (Page Number) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

Phone
Lists Affected

GUILLEN, ANTHONY
Longmont
772-3191 (Home)
232 (Work)
Assigned To: NONE

HALVORSON, JOHN
Johnstown
587-2226 (Home)
232 (Work)
Assigned To: NONE

HOOD, GREG
Longmont
776-9804 (Home)
232 (Work)
Assigned To: NONE

HORIHAN, DEVIN P.
Longmont
776-5308 (Home)
232 (Work)
Assigned To: NONE

JUDSON, RICK
Johnstown
587-4120 (Home)
232 (Work)
Assigned To: NONE

KARICH, JACK
Platteville
785-2959 (Home)
232 (Work)
Assigned To: NONE

KRUSE, QUENTIN L.
Brighton
451-1901 (Home)
232 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

Phone Lists Affected

LEWIS, ORVAL A.
Commerce City
288-4370 (Home)
232 (Work)
Assigned To: NONE

LLANAS, FRANK
Fort Lupton
857-2583 (Home)
232 (Work)
Assigned To: NONE

MANENTI, THOMAS
Greeley
330-0978 (Home)
228 (Work)
Assigned To: NONE

MEDBERY, GERALD D.
Greeley
330-6119 (Home)
232 (Work)
Assigned To: NONE

MEIER, EDWARD J.
Denver
355-2988 (Home)
230 (Work)
Assigned To: NONE

MONTOYA, JOHN P.
Platteville
785-2961 (Home)
228 (Work)
Assigned To: NONE

MORGAN, GREGORY R.
Greeley
353-2693 (Home)
389 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

Phone
Lists Affected

OWEN, JON E.
Johnstown
587-2385 (Home)
340 (Work)
855-7257 (Page Number)
Assigned To: NONE

RHOTON, MICHAEL A.
Longmont
833-4074 (Home)
232 (Work)
Assigned To: NONE

ROWELL, ROBERT L.
Platteville
785-6268 (Home)
232 (Work)
Assigned to: NONE

SCHUYLER, TIMOTHY LEE
Brighton
659-1183 (Home)
235 or 232 (Work)
Assigned To: NONE

SKAGGS, EDWARD ROY
Greeley
352-6334 (Home)
232 (Work)
Assigned To: NONE

SKELLY, GREGORY J.
Arvada
426-5661 (Home)
232 (Work)
Assigned To: NONE

SLABY, RICKY H.
Denver
287-0675 (Home)
232 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

	Phone Lists Affected
SMOOT, GREGORY ALAN Longmont 776-0338 (Home) 232 (Work) Assigned To: NONE	
SNYDER, JERRY Greeley 352-3032 (Home) 232 (Work) Assigned To: NONE	
STEPHENS, DEAN Denver 296-4073 (Home) 232 (Work) Assigned To: NONE	
TREGONING, WILLIAM E. Johnstown 587-2133 (Home) 232 (Work) Assigned To: NONE	
WEBB, RONALD W. Longmont 776-8219 (Home) 229 (Work) 855-7257 (Page Number) Assigned To: PCC	U,M
WEILNAU, LARRY L. Platteville 785-6050 (Home) 232 (Work) Assigned To: NONE	
WERNESS, STEPHEN J. Berthoud 532-2577 (Home) 232 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

MAINTENANCE

Phone
Lists Affected

WINDHORST, WILLIAM
Platteville
785-6420 (Home)
232 (Work)
Assigned To: NONE

YODER, FRED
Johnstown
587-4107 (Home)
232 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

MISCELLANEOUS

	Phone Lists Affected
JOHNSON, JAMES E. Ft. Collins 482-3029 (Home) 491-5380 (Work) Assigned To: NONE	J
JOHNSON, JANET Ft. Collins 482-3029 (Home) 491-5930 (Work) Assigned To: SEOC	N
OLSON, HILDING G. Fort Collins 493-8797 (Home) 491-6558 (Work) 491-5450 (Work) Assigned To: NONE	
McDONALD, MARION Ft. Collins 484-0084 (Home) 491-5094 (Work) Assigned To: NONE	J
PLUMLEE, G.L., III Longmont 776-9541 (Home) 490 (Work) 890-2225 (Page Number) Assigned To: NONE	E,J,Z

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

NUCLEAR DOCUMENTS

	Phone Lists Affected
BELGARD, DIANNE Longmont 678-0355 (Home) 204 (Work) Assigned To: PCC	M
BOLLIG, PATRICIA L. Evans 339-3972 (Home) 204 (Work) Assigned To: TSC	O
CONNELLY, DANA Evans 353-4575 (Home) 210 (Work) Assigned To: TSC	O
COLLINS, MARGARET O. Johnstown 587-2172 (Home) 207 (Work) Assigned to: TSC	O
EDWARDS, DONNA Loveland 669-1680 (Home) 214 (Work) Assigned To: TSC	O
FLORES, ABBY Greeley 356-0038 (Home) 208 (Work) Assigned To: NONE	
FOSTER, BARB Longmont 772-5552 (Home) 209 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

NUCLEAR DOCUMENTS

	Phone Lists Affected
KATCHER, SUE M. Greeley 356-0351 (Home) 212 (Work) Assigned To: FCP	L
KITZMAN, AUDREY L. Platteville 737-2578 (Home) 206 (Work) Assigned To: TSC	O
LEHR, SUSAN Westminster 422-1280 (Home) 451 (Work) Assigned To: PCC	M
LIBAL, DEBBIE Longmont 651-1404 (Home) 205 (Work) Assigned To: TSC	O
MAROSTICA, CHRIS Greeley 352-2517 (Home) 217 (Work) Assigned To: NONE	
RENVILLE, SCOTT Thornton 427-2432 (Home) 216 (Work) Assigned To: NONE	
SHAFER, TERRI Loveland 663-4862 (Home) 457 (Work) Assigned To: PCC	M

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

NUCLEAR DOCUMENTS

Phone
Lists Affected

STROH, CARLENE
Johnstown
587-2150 (Home)
338 (Work)
Assigned To: SAS

TAYLOR, MICHELLE
Fort Collins
484-6705 (Home)
337 (Work)
Assigned To: CAS

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
ASHMORE, WILLARD J. Platteville 785-6344 (Home) 221 (Work) Assigned To: NONE	
DAHLSTROM, JOHN Greeley 353-6586 (Home) 221 (Work) Assigned To: NONE	
DECATOIRE, DAVID A. Johnstown 587-4038 (Home) 221 (Work) Assigned To: NONE	
DENISTON, MARTIN E. Longmont 776-3776 (Home) 219 (Work) Assigned To: TSC	O,U
DICE, THOMAS J. Loveland 669-6950 (Home) 327 (Work) Assigned To: NONE	
EINIG, KENNETH J. Longmont 651-1279 (Home) 221 (Work) Assigned To: NONE	
EVANS, CHRISTOPHER J. Milliken 587-2418 (Home) 221 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
EVANS, DENNIS W. Longmont 776-9672 (Home) 219 (Work) Assigned To: TSC	O,U
FIELDS, M.D. Greeley 352-6976 (Home) 221 (Work) Assigned To: NONE	
FISHER, JEFFREY Greeley 330-6130 (Home) 221 (Work) Assigned To: NONE	
FOSTER, KENT E. Longmont 772-5552 (Home) 221 (Work) Assigned To: NONE	
FRANEK, WILLIAM J. Berthoud 532-3489 (Home) 218 (Work) 890-0558 (Page Number) Assigned To: CR	C,E,J, T,U,V, Y,Z
FRAZIER, MICHAEL S. Northglenn 457-3719 (Home) 221 (Work) Assigned To: NONE	
FROST, BRIAN C. Greeley 351-7430 (Home) 221 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
HACKETT, LANE L., JR. Greeley 330-1063 (Home) 221 (Work) Assigned To: NONE	
HAK, JOHN P. Longmont 776-1904 (Home) 219 (Work) Assigned To: TSC	O,U
HANLON, JOSEPH E. Windsor 686-9169 (Home) 221 (Work) Assigned To: NONE	
HANSEN, ERIC Greeley 356-3539 (Home) 220 (Work) Assigned To: NONE	
HOLMES, DAVID B. Greeley 330-0757 (Home) 327 (Work) Assigned To: NONE	
HOOD, DONALD P. Longmont 776-1843 (Home) 219 or 347 (Work) Assigned To: TSC	E,J, O,Y
HOOVER, JAMES A. Loveland 663-1835 (Home) 221 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
HUNTER, JOE J. Greeley 330-1411 (Home) 219 (Work) Assigned To: TSC	O,U
JOHNSON, DARRELL E. Platteville 785-6089 (Home) 221 (Work) Assigned To: NONE	
KASTEN, MICHAEL D. Platteville 785-2377 (Home) 221 (Work) Assigned To: NONE	
KEVAN, ROBERT L. Longmont 772-3922 (Home) 221 (Work) Assigned To: NONE	
KOLESKI, STANLEY V. Northglenn 457-3572 (Home) 221 (Work) Assigned To: NONE	
LAWLOR, BRUCE Evans 330-3312 (Home) 221 (Work) Assigned To: NONE	
LOPKOFF, WILLIAM W. Greeley 330-0230 (Home) 221 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
MAGNINIE, WAYNE H. Frederick 833-4224 (Home) 221 (Work) Assigned To: NONE	
MAYNARD, JOHN H. Longmont 772-3634 (Home) 221 (Work) Assigned To: NONE	
MOORE, GAROLD E. Greeley 356-5378 (Home) 220 (Work) Assigned To: NONE	
MORGAN, PHILIP C. Greeley 330-5269 (Home) 221 (Work) Assigned To: NONE	
MURPHY, SHAWN Evans 330-0431 (Home) 221 (Work) Assigned To: NONE	
NETZEL, KEN Longmont 772-4618 (Home) 220 (Work) Assigned To: NONE	
O'HAGAN, HUGH J. Longmont 776-8232 (Home) 219 (Work) Assigned To: TSC	O,U

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

	Phone Lists Affected
REIGEL, GLEN V. Greeley 330-4235 (Home) 219 (Work) Assigned To: TSC	O,U
SHAFER, STEVEN Platteville 785-5042 (Home) 220 (Work) Assigned To: NONE	
TRUMBLEE, DENNIS Platteville 785-2593 (Home) 221 (Work) Assigned To: NONE	
VANDENBOOGAARD, W. J. Longmont 651-3732 (Home) 221 (Work) Assigned To: NONE	
VAN DYKE, JEROME G. Longmont 772-2476 (Home) 219 or 346 (Work) Assigned To: TSC or CR	O,U
VIGIL, ANTHONY L. Gilcrest 737-2753 (Home) 221 (Work) Assigned To: NONE	
WEIDERSPON, GARY L. Greeley 356-7038 (Home) 221 (Work) Assigned to: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

OPERATIONS

Phone
Lists Affected

WELLER, JACK R.
Johnstown
587-2984 (Home)
221 (Work)
Assigned To: NONE

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

RADIATION PROTECTION

	Phone Lists Affected
GLAHN, PAUL R. Northglenn 450-5292 (Home) 245 (Work) Assigned To: PCC	M
HUTCHINS, LESTER C. Greeley 330-7187 (Home) 245 (Work) Assigned To: PCC	M
MADISON, GORDON S. Firestone 833-2278 (Home) 245 (Work) Assigned to PCC	M
McGAFFIC, VERNON J. Johnstown 587-2752 (Home) 278 (Work) Assigned To: TSC	M
MILLER, DONALD Loveland 663-3595 (Home) 279 (Work) Assigned To: TSC	M
MORSE, KEITH Greeley 353-6163 (Home) 245 (Work) Assigned To: PCC	M
NASVESCHUK, KENT L. Longmont 651-6254 (Home) 245 (Work) Assigned To: PCC	M

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

RADIATION PROTECTION

	Phone Lists Affected
O'DONOGHUE, E. JOHN Northglenn 452-3514 (Home) 245 (Work) Assigned To: PCC	M
POET, STEWART Longmont 652-2297 (Home) 279 (Work) Assigned To: TSC	M
PROCHOWNIK, MICHAEL R. Platteville 785-6010 (Home) 279 (Work) Assigned To: TSC	M
RIMA, STEVEN D. Longmont 772-4068 (Home) 279 (Work) Assigned To: TSC	M
SCHLEIGER, TIMOTHY E. Platteville 785-6314 (Home) 242 (Work) Assigned To: TSC	O,S
SHERROW, STEVEN S. Greeley 353-1338 (Home) 245 (Work) Assigned To: PCC	M
SIEG, STEVEN E. Loveland 663-3468 (Home) 245 (Work) Assigned To: PCC	M

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

RADIATION PROTECTION

	Phone Lists Affected
VALENTINE, GRANT D. Fort Collins 223-7676 (Home) 245 (Work) Assigned To: PCC	M
WOODARD, WILLIAM E. Longmont 678-0818 (Home) 244 (Work) Assigned To: TSC	O

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION

PUBLIC SERVICE COMPANY OF COLORADO

RESULTS

	Phone Lists Affected
ANDERSON, BARNEY J. Greeley 351-0722 (Home) 286 (Work) Assigned To: NONE	
BALL, JOSEPH W. Denver 477-6013 (Home) 286 (Work) Assigned To: NONE	
BARTA, BRADLEY G. Denver 426-1832 (Home) 256 (Work) Assigned To: NONE	
BROWN, DANIEL J. Lyons 823-6127 (Home) 286 (Work) Assigned To: NONE	
BURCHFIELD, ROBERT S. Greeley 351-0373 (Home) 249 (Work) Assigned To: TSC	O
BURGESS, CHARLES R. Platteville 785-2154 (Home) 286 (Work) Assigned To: NONE	
COLE, JAMES W. Johnstown 587-2989 (Home) 286 (Work) Assigned To: NONE	

Public Service

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

RESULTS

	Phone Lists Affected
CROWE, CURTIS W. Lafayette 665-7997 (Home) 247 (Work) Assigned To: NONE	
DUNHAM, DARYL Keensburg 732-4342 (Home) 288 (Work) Assigned To: NONE	
GALE, MIKE Gilcrest 737-2521 (Home) 286 (Work) Assigned To: NONE	
GOFF, ALAN Westminster 428-4421 (Home) 255 (Work) Assigned To: NONE	
JOHNSON, THOMAS Lafayette 665-9507 (Home) 258 (Work) Assigned To: NONE	
JOHNSON, TINA Denver 452-5436 (Home) 257 (Work) Assigned To: NONE	
McCAULEY, JERRY Loveland 667-0635 (Home) 248 (Work) Assigned To: TSC	0

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RESULTS

	Phone Lists Affected
NELSON, DON M. Johnstown 587-4189 (Home) 246 (Work) Assigned To: NONE	
O'CONNOR, JAMES P. Denver 457-4882 (Home) 259 (Work) Assigned To: NONE	
ODENBAUGH, KATHY Platteville 737-2306 (Home) 286 (Work) Assigned To: NONE	
PETTINGER, ALBERT J. Brighton 536-4333 (Home) 288 (Work) Assigned To: NONE	
PINNER, R.S. JOE Greeley 330-9075 (Home) 286 (Work) Assigned To: NONE	
SCHMIDT, A.C. Louisville 666-6955 (Home) 286 (Work) Assigned To: PCC	M
SHIBATA, BRAD Denver 388-2160 (Home) 286 (Work) Assigned To: NONE	

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RESULTS

Phone
Lists Affected

TELAROLI, JOHN
Loveland
669-0267 (Home)
282 (Work)
Assigned To: NONE

WEBER, DAVID LEE
Johnstown
587-4186 (Home)
286 (Work)
Assigned To: NONE

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SCHEDULING/STORES

	Phone Lists Affected
WIDOWS, RICHARD Loveland 663-1080 (Home) 314 (Work) Assigned To: PCC	M
BLOSSOM, MIKE Platteville 785-6302 (Home) 297 (Work) Assigned To: PCC	M
ERWIN, RICHARD W. Greeley 330-7178 (Home) 321 (Work) Assigned To: PCC	M
GLASS, GERALD L. Brighton 659-4118 (Home) 253 (Work) Assigned To: PCC	J,Y
HAMBLIN, RICHARD D. Loveland 667-1703 (Home) 254 (Work) Assigned To: PCC	M
HARDING, CLIFF Platteville 785-2398 (Home) 311 (Work) Assigned To: PCC	M
HAYS, KAREN Denver 778-7702 (Home) 319 (Work) Assigned To: PCC	M

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PUBLIC SERVICE COMPANY OF COLORADO

SCHEDULING/STORES

	Phone Lists Affected
HOLCOMB, WALTER E. Greeley 330-2068 (Home) 312 (Work) Assigned To: PCC	M
HORIHAN, DARLENE Longmont 776-7976 (Home) 250 (Work) Assigned To: PCC	M
POWERS, G. Westminster 426-1623 (Home) 252 (Work) Assigned To: PCC	M
REED, DALE L. Platteville 785-2159 (Home) 314 (Work) Assigned To: PCC	M
TEEL, RICHARD Henderson 288-1959 (Home) 261 (Work) Assigned To: PCC	M

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SECURITY

Phone
Lists Affected

| ALPS, DONALD R.
Longmont
772-9075 (Home)
298 (Work)
Assigned To: NONE

BATES, WILLIAM S.
Ft. Collins
484-2966 (Home)
299 (Work)
Assigned To: NONE

BENNETT, MICHAEL B.
Longmont
776-8311 (Home)
299 (Work)
Assigned To: NONE

HART, W. DARRIEL
| Loveland
| 663-4799 (Home)
299 (Work)
Assigned To: NONE

HOLLAND, CHARLES C.
Aurora
344-1327 (Home)
299 (Work)
Assigned To: NONE

| VANHOOSER, DENNIS A.
| Littleton
| 973-1890 (Home)
| 299 (Work)
| Assigned To: NONE

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PUBLIC SERVICE COMPANY OF COLORADO

TECHNICAL SERVICES

	Phone Lists Affected
BANAGAS, LAURIE Boulder 442-2898 (Home) 273 (Work) Assigned To: NONE	
BURROWS, RICHARD Fort Collins 493-4258 (Home) 265 (Work) Assigned To: NONE	
CLAYTON, OWEN J. Loveland 663-3939 (Home) 277 (Work) Assigned To: TSC	O
DAUM, MICHAEL J. Aurora 690-9652 (Home) 269 (Work) Assigned To: NONE	
DICKERSON, ROBERT A. Thornton 287-6089 (Home) 273 (Work) Assigned To: NONE	
EGGEBROTEN, JAMES Longmont 651-1523 (Home) 270 (Work) 890-2220 (Page Number) Assigned To: TSC	E,O,U
GAPPA, ROBERT Fort Collins 482-2306 (Home) 283 (Work) Assigned To: TSC	O

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FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

TECHNICAL SERVICES

	Phone Lists Affected
HELLER, ROGER A. Longmont 772-1093 (Home) 284 (Work) Assigned To: TSC	O
HILL, JIM F. Johnstown 587-2553 (Home) 276 (Work) Assigned To: NONE	
JOHNSON, SHARILYN Loveland 663-1431 (Home) 285 (Work) Assigned To: TSC	O
JOSEPH, MARK Westminster 465-1248 (Home) 275 (Work) Assigned To: TSC	O
MERRITT, DARLA Gilcrest 737-2339 (Home) 271 (Work) Assigned To: FCP	L
REED, ASA B. Longmont 772-5312 (Home) 325 (Work) 890-1942 (Page Number) Assigned To: TSC	E,O,U
REICHARDT, DIANA Longmont 776-7435 (Home) 272 (Work) Assigned To: FCP	L

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PUBLIC SERVICE COMPANY OF COLORADO

TECHNICAL SERVICES

	Phone Lists Affected
SILLS, JUDD M. Fort Collins 221-5059 (Home) 265 (Work) 890-2223 (Page Number) Assigned To: TSC	E,O,U
STUART, DAVE Longmont 651-1927 (Home) 274 (Work) Assigned To: TSC	O

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PUBLIC SERVICE COMPANY OF COLORADO

TRAINING

	Phone Lists Affected
BEARLY, PHILIP B. Loveland 669-6636 (Home) 455 (Work) Assigned To: PCC	M
HOOPER, RON O. Northglenn 452-3614 (Home) 458 (Work) Assigned To: PCC	M
MOLER, ROBERT Longmont 772-9357 (Home) 456 (Work) Assigned To: PCC	M
MURPHY, MIKE Golden 279-6762 (Home) 454 (Work) Assigned To: PCC	M
RIVERA, RICHARD Loveland 667-1906 (Home) 453 (Work) Assigned To: PCC	M
SWITZER, JOSEPH R. Johnstown 587-4134 (Home) 452 (Work) Assigned To: PCC	M
WILLFORD, STEVE R. Brighton 659-5258 (Home) 450 (Work) Assigned To: PCC	J,Y

Public Service

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PUBLIC SERVICE COMPANY OF COLORADO

TRAINING

	Phone Lists Affected
WIEDRICH, HENRY	M
Kingsburg	
732-4494 (Home)	
452 (Work)	
Assigned To: PCC	

NRC Regional Administrator

BOOK 4

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FORT ST. VRAIN NUCLEAR GENERATING STATION

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1/15/85

RADIOLOGICAL EMERGENCY RESPONSE PLAN - STATION

NO.	SUBJECT	ISSUE NUMBER	EFFECTIVE DATE
RERP-MET	Meteorological Data Acquisition	5	01-15-85
RERP-TEAMS	Emergency Team Formation and Direction	3	08-06-84
RERP-SUPORG	Use and Coordination of Non-PSC Support Organizations	2	08-06-84
RERP-CORE	Core Damage Evaluation	1	06-01-84

TITLE: METEOROLOGICAL DATA ACQUISITION

ISSUANCE AUTHORIZED BY		
PORC REVIEW	PORC 608 JAN 8-, 1985	EFFECTIVE DATE 1-15-85

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* ANY TIME A WORKSHEET,DATASHEET, OR CHECKLIST HAS BEEN WRITTEN ON, COMPLETE THE REPORTING SHEET ATTACHED AND FORWARD IT TO THE NUCLEAR DOCUMENTS SPECIALIST, FORT ST. VRAIN.

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General

This procedure provides guidance for the acquisition of meteorological data from the existing meteorological instrumentation and displays at FSV, as well as from the backup 10 meter tower operated by the National Oceanic and Atmospheric Administration (NOAA). Display of parameters from these systems is available at several locations: chart recorders in the Control Room, chart recorders in the meteorological equipment shack adjacent to the 60 meter tower directly north of the plant, on the data logger computer displays in the TSC and CR, and for the 10 meter tower NOAA instrumentation, by telephone dial-up utilizing the Silent 700 in Radiochemistry. This procedure will discuss, in general, the means for obtaining meteorological data from displays and various alternative sources of back-up data.

1.0 Criteria

This procedure is valid for use under any conditions and is not solely provided for use during a radiological emergency. The main purpose for placing this procedure in the RERP implementing procedures is to assure the rapid access to meteorological data during an emergency, should that information be needed.

2.0 Procedure

2.1 Primary Meteorological System Data Acquisition (60 meter tower)

Data from the primary meteorological system is available from four (4) locations: chart recorders in the control room on I-09; chart recorders in the meteorological equipment shack adjacent to the sixty meter tower, directly north of the plant; from the data logger displays in the control room; and from the data logger display in the Technical Support Center.

2.1.1 Chart Recorders

(1) The following parameters are displayed on the chart recorders on I-09 in the Control Room:

- Wind Speed and Direction at the fifty-eight (58) meter elevation on the 60 meter tower;
- Wind Speed and Direction at the ten (10) meter elevation on the 60 meter tower;
- Differential Temperature between 58 meters and 10 meters on the sixty meter tower (°C);

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- Ambient Temperature at 10 meters;
- Dew point temperature; and
- Rain guage level (inches).

(2) The following parameters are displayed on the chart recorders in the meteorological equipment shack:

- Wind Speed and Direction at the fifty-eight (58) meter elevation on the 60 meter tower;
- Wind Speed and Direction at the ten (10) meter elevation on the 60 meter tower;
- Differential Temperature between 58 meters and 10 meters on the sixty meter tower (°C);
- Ambient Temperature at 10 meters;
- Dew point temperature; and
- Rain guage level (inches).

2.1.2 Data Logger Display

The following data is telemetered into, or calculated by, the plant data logger system, and is available for use in both the TSC and the Control Room.

- Differential Temperature (58m-10m) (°F);
- Dew Point Temperature (°F);
- Rain Guage depth (inches);
- Fifteen (15) minute average wind direction at both 10 meters and 58 meters;
- 15 minute average wind speed at both 10 meters and 58 meters;
- Standard deviation of the wind direction (15 minutes worth of data at five second intervals) at both 10 meters and 58 meters ($\sigma\theta$);
- Ambient temperature at 10 meters (°F);

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- Calculated Pasquill category by (ΔT);
- Calculated Pasquill category by sigma theta ($\sigma\theta$);
- Wind Speed and Wind Direction at both the 58 meter and 10 meter elevation.

The data from the primary meteorological system (60 meter tower) is available on several data logger displays. The knowledge of how to obtain displays by number is implicit in obtaining data from the data logger (Press "HOME", type the given four digit display number, press "DISPLAY", and the requested display will be shown on the selected CRT). The data discussed in this procedure may be displayed on the following data logger displays: 8029, 0666, and 0667.

2.2 Back-up Meteorological Data (10 meter tower)

2.2.1 Data Logger Display

Certain key parameters from the back-up (10 meter tower) are telemetered into the plant data logger. Of the back-up meteorological parameters available from the data logger (display 8029), wind speed and wind direction are the essential parameters for performing offsite dose computations. Parameters available are:

- Wind Speed (PSC Instrument);
- Wind Direction (PSC Instrument);
- Ambient Temperature (NOAA Instrument);
- Dew Point Temperature (NOAA Instrument);
- Rain Guage Depth (NOAA Instrument-OOS);
- Standard Deviation of Wind Direction-$\sigma\theta$ (Calculated)
- Stability Classification by $\sigma\theta$ from 10 meter tower (see display 0667)

2.2.2 Modem Data Acquisition (Personal Computer)

The entire spectrum of data from the back-up meteorological tower is available via the use of any Personal Computer with a modem attached. The parameters available, and their identifiers on the

MESONET output, are shown on Table 1. The Fort St. Vrain back-up tower is represented by the identifier "PTL" on the printout (see Figure 1 for a sample printout). Representation of the locations of the stations participating in the MESONET system is shown on Figure 2. Instructions for the use of a Personal Computer for data acquisition follow:

1) Ensure computer is turned off.

2) Insert 'METDATA' disc into disc drive.

3) Turn on the computer and follow the instructions given.

4) After following the instructions on METDATA disc, dial 8-303-447-9179. When the carrier tone is heard turn the voice/data switch to the data position and replace the handset in its cradle.

   8-303-447-9179 is provided by NOAA to provide a listing of the last three available 5 minute updates of the MESONET system, and then drop the user automatically off the telephone line at the end of the transmission.

   8-303-447-0992 is generally used by the Solar Energy Research Institute (SERI), and provides an update every 5 minutes. If possible, use of this line should be limited to the hours 0000 to 0800 to avoid conflicts with SERI. In an emergency, 8-303-447-0992 could be made available on a continual basis, by contacting Mr. Val Swarcz (Office, 8-303-231-1816; Home, 8-303-494-1578)

   NOTE: The PROFS MESONET network issues weather updates every five (5) minutes on the 8-303-447-0992 line. Since the network is likely to be either between updates or in the process of transmitting an update, it may be necessary to wait for up to 5 minutes for the first complete printout to begin to be received (see Figure 1 for sample PROFS MESONET printout and Table 1 for an explanation and legend of symbols).

5) When prompted to enter a password press the F1 key.

6) Turn off unit and printer when all data is received.

Record the data, as appropriate to needs, on Datasheet 1, and perform stability classification calculations (see Table 2).

2.2.3 Remote Data Readout at Back-up Tower

Remote determination of key back-up meteorological parameters is possible via two (2) methods. Wind speed, wind direction, ambient temperature, and dewpoint temperature may be readily determined from read-out of post-conditioner voltages utilizing a permanently installed switching box and performing linear conversion calculations. In addition, should read-out of data from the back-up tower become necessary for a prolonged time, NOAA has available for PSC use, data conversion and display units that will continuously display the current back-up meteorological parameters.

2.2.3.1 Use of Post-Conditioner Voltages

Utilizing the installed switching box at the meteorological equipment shack, enter on Datasheet 2 the displayed voltages for channels 1, 3, 5, and 8. Datasheet 2 provides for recording the wind speed, wind direction, ambient temperature, and dewpoint temperature, as well as for performing data conversion calculations and stability classification calculations.

2.2.3.2 NOAA Conversion/Display Unit

Install the NOAA scanning conversion/display unit in accordance with NOAA instructions. Record data, as appropriate, and perform stability classification calculations as shown on Datasheet 1.

2.2.4 Telephone Voice Transfer

Data from any of the MESONET system towers is generally available direct from NOAA personnel weekdays between 0800 hours and 2400 hours by calling any of the following telephone numbers, identifying yourself (PSC/FSV), and requesting data for station "PTL":

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- Call the U.S. Department of Commerce in Boulder, Colorado by dialing 8-303-497-6987* (0800-2400 hours, Monday through Friday).

*Backup phone numbers are 8-303-497-6895, 8-303-497-6964, 8-303-497-6116.

Record data received on Datasheet 1 and determine stability classification as shown.

3.0 Responsibilities

Data collection, calculations, and meteorological parameter determinations utilizing this procedure under emergency conditions shall be performed by the following RERP assigned individuals, or their designees:

- Radiological Assessment Coordinator
- Radiological Assesment Individual at the TSC
- Shift Supervisor

Use of this procedure under non-RERP conditions is at the discretion of the user.

4.0 References

4.1 Surface MESONET Manual, U. S. Department of Commerce (Internal Document)

5.0 Referenced Procedures

5.1 SR-TE-3-M, Back-up Meteorological Data Collection

5.2 RERP-DOSE, Offsite Dose Calculations

5.3 RERP-CR, Control Room Procedure

FIGURE 1

Sample PROFS Mesonet Output

ENTER PASSWORD -

PROFS EXPERIMENTAL MESONET 26-JUL-84 16:05Z 5 MINUTE AVERAGES

STATION	T	TD	S	AZ	PK-GUST		PCP	SR ZEN	SR 40DEG	PRES
ARV	71	61	6	34	10	22	0.00	692	640	844.7
RB3	74	56	7	62	10	68	0.00	686	647	847.6
BRI	70	59	4	35	7	27	0.00	522	443	646.2
LGM	74	55	7	60	12	71	0.00	663	672	854.7
KNB	70	60	6	41	10	71	0.00	540	502	856.4
ROL	50	49	6	254	8	254	0.00	209	0	805.3
EPK	64	48	3	101	6	91	0.00	748	674	773.3
LAK	67	39	7	15	10	30	0.00	393	351	825.7
LTN	68	57	4	1	7	356	0.00	389	340	834.3
ISG	43	42	8	15	11	23	0.00	194	167	677.8
PTL	72	57	5	9	9	351	0.00	510	464	860.4
LVE	73	56	6	347	8	345	0.00	339	353	857.7
BYE	74	59	5	352	10	13	0.00	636	586	852.1
FOR	72	54	2	342	3	336	0.00	572	566	848.6
AUR	71	59	6	339	9	355	0.00	0	0	847.2
NUN	72	52	6	57	8	58	0.00	824	791	846.2
GLY	74	57	5	38	8	35	0.00	710	698	867.3
FTM	67	59	14	52	17	51	0.00	525	458	871.6
ELB	58	53	11	324	14	319	0.00	31	74	797.4
WRD	50	47	2	46	5	34	0.00	141	121	717.4
BGD	72	35	8	22	11	22	0.00	653	611	861.0
ERI	70	59	6	18	10	8	0.00	0	0	850.8

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FIGURE 2

PROFS MESONET System Station Locations and Identifiers

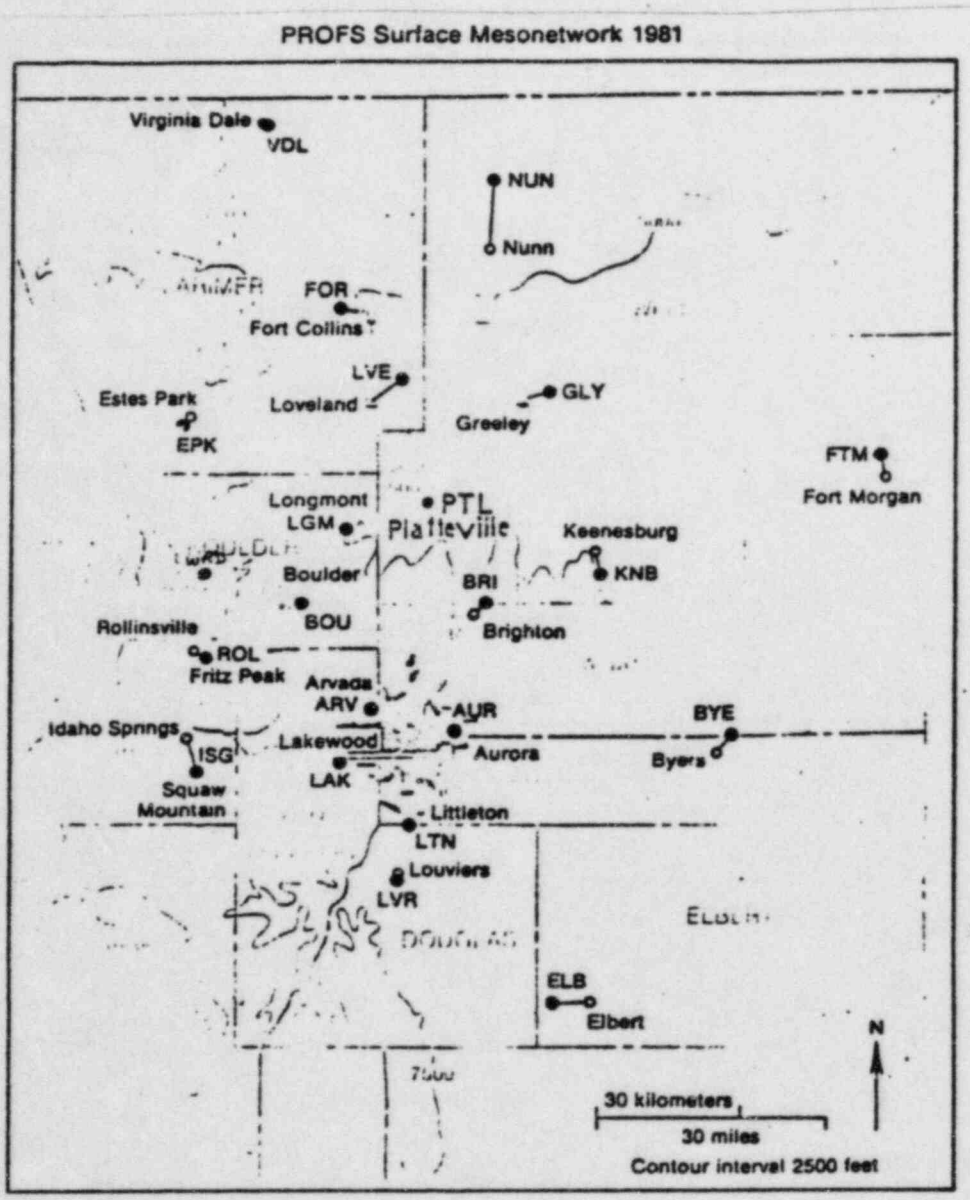

FIGURE 3

Conversion Plots for Temperature and Dewpoint Temperature

SURFACE MESONET MANUAL
PROFS-SURFNET-80-001

PAGE 4-5

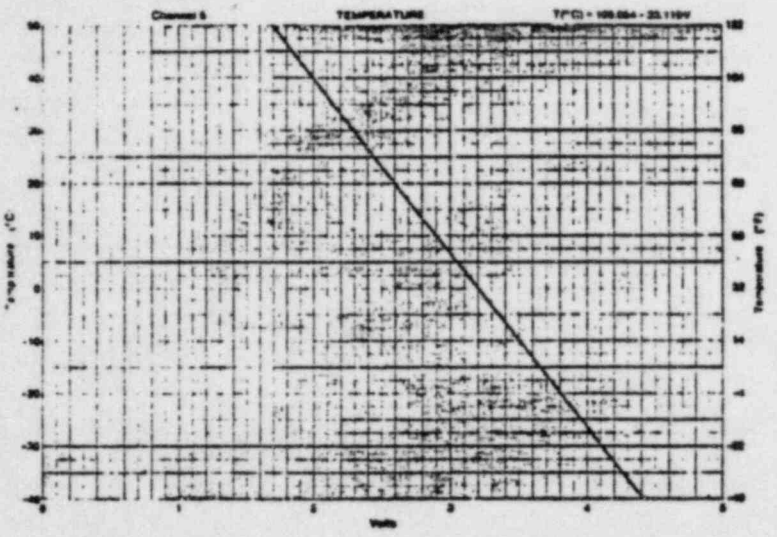

Fig. 19c. Calibration conversion graph for temperature

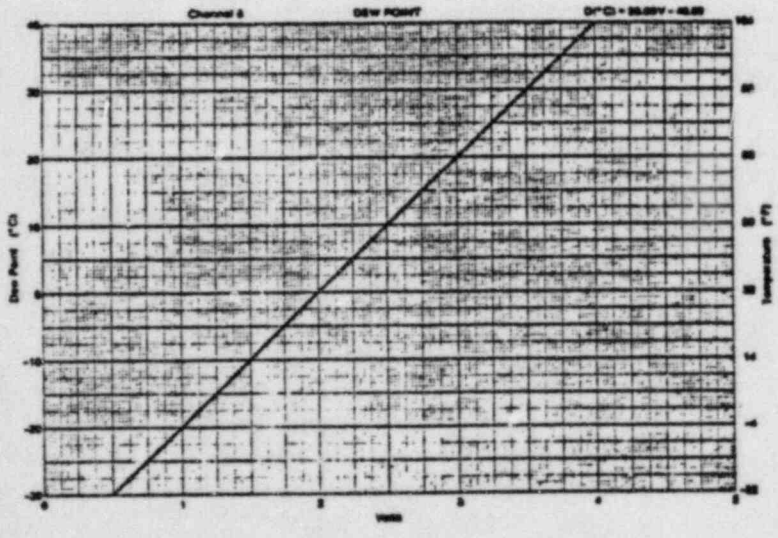

Fig. 19d. Calibration conversion graph for dew point

TABLE 1

Legend of Symbols for Figure 1

SYMBOL	MEANING
T	Temperature (°F) @ 10m Elevation
TD	Dew Point (°F)
S	Windspeed - Average (knots)
AZ	Wind direction - Average (degrees)
PK-GUST	Windspeed - Peak (knots) and Peak Wind Direction (degrees)
PCP	Precipitation (inches)
VIS	Visibility (miles)
SR ZEN	Solar Radiation - Zenith (watts/m²)
SR 40 DEG	Solar Radiation - 40° above horizon (watts/m²)
P	Atmospheric Pressure

Explanation of Printout:

The backup meteorological tower is identified as station "PTL" on the printout. A sample output is shown on Figure 1, and a legend defining the symbols on the printout is listed above. It must be noted that the time shown on the PROFS output is in Coordinated Universal Time (UTC) which is seven (7) hours later than Mountain Standard Time (MST) or six (6) hours later than Mountain Daylight Time (MDT).

TABLE 2

Stability Classification Criteria*

ΔT (°F) from 60m Tower	Pasquill Categories	Stability Classification	σθ** (Degrees)
≤-1.7	A	Extremely Unstable	≥22.5
>-1.7 to ≤ -1.5	B	Moderately Unstable	<22.5 to ≥17.5
>-1.5 to ≤ -1.3	C	Slightly Unstable	<17.5 to ≥12.5
>-1.3 to ≤ -0.4	D	Neutral	<12.5 to ≥ 7.5
>-0.4 to ≤1.3	E	Slightly Stable	< 7.5 to ≥ 3.8
>+1.3 to ≤3.5	F	Moderately Stable	< 3.8 to ≥ 2.1
>+3.5	G	Extremely Stable	<2.1

* Per proposed Revision 1 to Regulatory Guide 1.23, September 1980.

** Standard Deviation of horizontal wind direction fluctuation (plume meander) over a period of 15 minutes to 1 hour.

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DATASHEET 1
Backup Meteorological Data

PROFS Network data via
- [ ] Personal Computer
- [ ] "NOAA Staff"
- [ ] "Locally at 10 meter tower"

		TIME/DATE ____/____	TIME/DATE ____/____	TIME/DATE ____/____
[AZ]	Wind Direction*- Average (degrees)			
[S]	Wind Speed- Average (knots)			
[-GUST]	Wind Direction- Peak (degrees)			
[PK-]	Wind Speed- Peak (knots)			
[T]	Temperature (°F)			
[TD]	Dew Point (°F)			
[VIS]	Visibility (Miles)			
[PCP]	Precipitation- (inches)			
[SR ZEN]	Solar Radiation- Zenith (watts/m²)			
[SR 40 DEG]	Solar Radiation-40° above Horizon (watts/m²)			
[P]	Atmospheric Pressure			

* $\sigma\theta$ = Square root of maximum difference in wind direction noted over the three 5 minute updates.

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DATA SHEET 2

Collection of Data Utilizing Raw Voltages

	TIME/DATE ____/____	TIME/DATE ____/____	TIME/DATE ____/____
Wind Direction Position No. 1	_____(V)	_____(V)	_____(V)
Wind Direction, degrees (°) = (1) 1.25volts-5.0volts : 450.0 - [72.0 x output voltage] (2) 0.00volts-1.25volts : 90.0 - [72.0 x output voltage] Wind Direction Degrees	_____	_____	_____
Wind Speed Position No. 3	_____(V)	_____(V)	_____(V)
Wind Speed = Output voltage/0.05			
Wind Speed (mph)	_____	_____	_____
Ambient Temperature, Position No. 5	_____(V)	_____(V)	_____(V)
Ambient Temperature (see Figure 3 for data conversion)			
Ambient Temperature	_____	_____	_____°F
Dewpoint Temperature Position No. 8	_____(V)	_____(V)	_____(V)
Dewpoint Temperature (see Figure 3 for data conversion)			
Dewpoint Temperature	_____	_____	_____°F

Stability Classification: $\sigma\theta$ =
Square root(maximum difference in wind direction over three 5 minute updates)

* The preferred sampling frequency for these purposes is to collect three sets of data five (5) minutes apart.

Refer to RERP-DOSE for use of this data for dose calculations

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Worksheet/Datasheet/Checklist Control Sheet

Datasheet No.	Title	Copies
1	Back-up Meteorological Data	2
2	Collection of Data Utilizing Raw Voltages	2

FORMS USE REPORTING SHEET

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FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

DATASHEET 1
Backup Meteorological Data

PROFS Network data via
- [ ] Personal Computer
- [ ] "NOAA Staff"
- [ ] "Locally at 10 meter tower"

		TIME/DATE ____/____	TIME/DATE ____/____	TIME/DATE ____/____
[AZ]	Wind Direction*- Average (degrees)			
[S]	Wind Speed- Average (knots)			
[-GUST]	Wind Direction- Peak (degrees)			
[PK-]	Wind Speed- Peak (knots)			
[T]	Temperature (°F)			
[TD]	Dew Point (°F)			
[VIS]	Visibility (Miles)			
[PCP]	Precipitation- (inches)			
[SR ZEN]	Solar Radiation- Zenith (watts/m²)			
[SR 40 DEG]	Solar Radiation-40° above Horizon (watts/m²)			
[P]	Atmospheric Pressure			

* $\sigma\theta$ = Square root of maximum difference in wind direction noted over the three 5 minute updates.

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DATA SHEET 2

Collection of Data Utilizing Raw Voltages

	TIME/DATE ____/____	TIME/DATE ____/____	TIME/DATE ____/____
Wind Direction Position No. 1	_____(V)	_____(V)	_____(V)
Wind Direction, degrees (°) = (1) 1.25volts-5.0volts : 450.0 - [72.0 x output voltage] (2) 0.00volts-1.25volts : 90.0 - [72.0 x output voltage] Wind Direction Degrees	_____	_____	_____
Wind Speed Position No. 3	_____(V)	_____(V)	_____(V)
Wind Speed = Output voltage/0.05			
Wind Speed (mph)	_____	_____	_____
Ambient Temperature, Position No. 5	_____(V)	_____(V)	_____(V)
Ambient Temperature (see Figure 3 for data conversion)			
Ambient Temperature	_____	_____	_____°F
Dewpoint Temperature Position No. 8	_____(V)	_____(V)	_____(V)
Dewpoint Temperature (see Figure 3 for data conversion)			
Dewpoint Temperature	_____	_____	_____°F

Stability Classification: $\sigma\theta$ =
Square root(maximum difference in wind direction over three 5 minute updates)

* The preferred sampling frequency for these purposes is to collect three sets of data five (5) minutes apart.

Refer to RERP-DOSE for use of this data for dose calculations

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DATA SHEET 2

Collection of Data Utilizing Raw Voltages

	TIME/DATE ____/____	TIME/DATE ____/____	TIME/DATE ____/____
Wind Direction Position No. 1	_____(V)	_____(V)	_____(V)
Wind Direction, degrees (°) = (1) 1.25volts-5.0volts : 450.0 - [72.0 x output voltage] (2) 0.00volts-1.25volts : 90.0 - [72.0 x output voltage] Wind Direction Degrees	_____	_____	_____
Wind Speed Position No. 3	_____(V)	_____(V)	_____(V)
Wind Speed = Output voltage/0.05			
Wind Speed (mph)	_____	_____	_____
Ambient Temperature, Position No. 5	_____(V)	_____(V)	_____(V)
Ambient Temperature (see Figure 3 for data conversion)			
Ambient Temperature	_____	_____	_____°F
Dewpoint Temperature Position No. 8	_____(V)	_____(V)	_____(V)
Dewpoint Temperature (see Figure 3 for data conversion)			
Dewpoint Temperature	_____	_____	_____°F

Stability Classification: $\sigma\theta$ =
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Worksheet/Datasheet/Checklist Control Sheet

Datasheet No.	Title	Copies
1	Back-up Meteorological Data	2
2	Collection of Data Utilizing Raw Voltages	2

FORMS USE REPORTING SHEET

Nuclear Documents Specialist:

This sheet is being transmitted to report use of forms from a controlled copy of the Emergency Plan Implementing Procedures, BOOK NO._____, located at _____. The following forms have been utilized from this copy:

Worksheet Numbers	Copies Used

Datasheet Numbers	Copies Used

Checklist Numbers	Copies Used

The procedure affected by this sheet is shown in the header to this page, unless otherwise noted below in the comments to this reporting form. When this form is received, it will be necessary to replace the noted number of forms, as well as this "Forms Use Reporting Sheet" for the affected procedure in the affected book.

FORMS USE REPORTING SHEET(Continued)

COMMENTS

Reported By:_____

Date: _____

Nuclear Documents Specialist_____ *

Date Received_____

Date Replaced_____

* Nuclear Documents Specialist will transmit this form to the originating individual/department upon completion of this form to notify users that the procedure has been updated and that all worksheets, checklists, and datasheets are present in the required number of copies.