

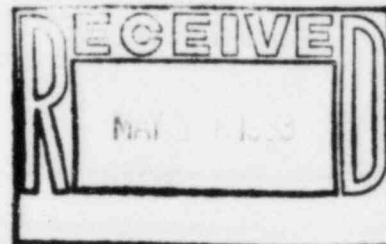


Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

May 27, 1983
Fort St. Vrain
Unit #1
P-83192

Mr. John T. Collins, Regional Administrator
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012



SUBJECT: Emergency Preparedness
Appraisal Followup

REFERENCE: G-83135, Dated 3/31/83
I&E Inspection 83-03

Dear Mr. Collins:

Attached are our responses to the findings that remained open subsequent to the Emergency Appraisal Follow-up Audit.

If you have any questions on these responses, please let me know.

Very truly yours,

Don W. Warembourg
Don. W. Warembourg
Manager, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

DWW/djc

cc: G. L. Madsen
C. A. Hackney
D. Rohrer

Attachment

H005
11

CAL Item 2:

The licensee shall determine the expected number of on-site emergency personnel who may be required to perform essential duties under conditions of significant airborne radioactive contamination and who, therefore, require self-contained breathing apparatus (SCBA) in order to perform their assigned tasks. The licensee shall make provisions for acquisition of the necessary quantities of appropriate respiratory protection equipment and for locating the equipment in areas safely and quickly accessible to all on-site emergency response personnel. The licensee shall assure the Nuclear Regulatory Commission that all emergency response personnel will maintain their capability to safely and efficiently don appropriate respiratory protective equipment.

Item Disposition: There were five Appendix A items which made up this CAL section on respiratory protection. Four of the items were closed when the licensee provided adequate respiratory protection equipment and protective clothing for the key on-site emergency response facilities.

The fifth item will remain open until the licensee installs air filtration equipment on two breathing air compressors used to fill the self-contained breathing tanks. The licensee stated that the filtration equipment had been ordered, but no delivery date could be given.

PSC Response:

See the response to Appendix A, Item 267/8201-72.

CAL Item 3:

The licensee shall describe their capabilities to perform off-site radiological monitoring to a sufficient level to demonstrate that the off-site radiological monitoring teams can find and characterize an airborne release plume and obtain the necessary information with which the licensee can perform dose calculations, consequence assessment, and provide input to the decisionmaking for recommending off-site protective actions to appropriate officials. The licensee's response shall include at a minimum: location, availability, and capability of vehicles which would be used by the off-site radiological monitoring team during an emergency; and location, availability, and capability of necessary radiological detection and measurement instrumentation and equipment (reference NUREG-0654, Revision 1, Section I.9); e.g., capability to determine in the field radioiodine concentrations of 1×10^{-7} microcuries per cubic centimeter in air.

Item Disposition: Part of the licensee's commitment to satisfy this CAL item was to procure two four-wheel drive vehicles for emergency response use by April, 1983. This item remains open pending receipt of the vehicles and publishing instructions for vehicle use and availability.

PSC Response:

See the response to Appendix A, Item 267/8201-73 and 267/8201-74.

CAL Item 6:

The licensee shall correct the RERP, EPIP's, and station orders to unambiguously define the authorities of the EC (including the shift supervisor, until relieved by another EC) such that the EC has the ultimate Public Service Company (PSC) authority to classify emergencies, make notifications to off-site authorities, and provide recommendation to off-site authorities for off-site protective actions without the need for concurrence or consultation by upper management.

Implementation of this correction shall include both the physical writing of such changes as required in the reference documents as well as the performance of formal training of all EC qualified personnel as to the changes.

Item Disposition: The auditors reviewed the following licensee documents: Operational Order OP-80-18, Licensee's February 26, 1982, response to the CAL, Licensee's August 19, 1982, response to the Appendix A items, the RERP, and the EPIP's.

Despite the licensee's statement in the February 26, 1982, CAL response that he is in full compliance with this item, the auditors discovered several discrepancies in the above listed documents which indicate that the shift supervisor, when serving as the EC, does not have ultimate authority to classify emergencies, make off-site notifications, or make recommendations to off-site authorities. The shift supervisors have been instructed to consult with the licensee's management prior to taking any action with respect to notification, alerting, or recommendations to off-site agencies regarding a radiological emergency.

Failure to correct this CAL item has resulted in a "Notice of Deviation" which is attached to this report. Additional details concerning this item may also be found in items 267/8201-20 and 267/8201-86.

PSC Response:

Appropriate procedure has been revised. For specific information, see our response to the Notice of Deviation (P-83173, dated May 6, 1983).

Appendix A Item 267/8201-02:

Designate a single individual within the PSC organization who shall be given direct working level responsibility for, and authority over, all aspects of the development and maintenance of the emergency preparedness program for both the corporate response and site response functions.

PSC Response:

The Technical/Administrative Services Manager is the single individual within the Public Service Company organization who has direct working level responsibility for, and authority over, all aspects of the development and maintenance of the emergency preparedness program. A departmental procedure has been written to formalize the emergency preparedness program. This procedure identifies those areas where major inter-departmental activities are involved and the required Emergency Planning Coordinator participation.

Final plant and corporate reviews/approvals for this procedure are expected prior to June 30, 1983. Upon approval, no further actions for this item are anticipated.

Appendix A Item 267/8201-16:

Develop and implement an unambiguous description of the line of succession for the EC position, including formal criteria to govern the transfer of the position and the notification of emergency workers of such a transfer.

PSC Response:

Procedure CR-ALERT was revised on March 13, 1983, to include formal criteria governing the transfer of the EC position and the notification of emergency workers of this transfer.

No further actions on this item are anticipated.

Appendix A Item 267/8201-20:

Specifically identify in the EPIP's those actions assigned to the EC (ultimately the Corporate Emergency Director (CED) which may not be delegated to other emergency workers.

PSC Response:

For summary, see our response to Item 267/8201-86. No further actions for this item are anticipated.

Appendix A Item 267/8201-72:

Develop and implement procedures to ensure adequate supplies of clean breathing air (spare bottles) during radiological emergencies when the normal refilling equipment may not be available.

PSC Response:

High efficiency particulate air (HEPA) and charcoal filter equipment is being installed on the Technical Support Center ventilation system. This equipment will be capable of supplying filtered air to the breathing air compressors.

It is expected that this equipment will be available for use by June 1, 1983. Upon installation and testing, no further actions on this item are anticipated.

Appendix A Items 267/8201-73 and 267/8201-74:

Develop and implement procedures describing the type, number, equipment, state of readiness, location of keys, and availability of vehicles for emergency response.

Provide instructions in the RERP and EPIP's that ensure the necessary vehicles are made available at the PCC during an emergency.

PSC Response:

Two four-wheel drive vehicles have been procured for use during an emergency. At least one of these vehicles will remain on-site at all times. The other vehicle will be capable of responding to the site within 60 minutes (disregarding conditions beyond our control such as adverse weather, extremely poor road conditions, maintenance, etc.).

The state of readiness and availability of these vehicles will be under the administrative control of the Station Manager. Periodically, the EPC will confirm availability and state-of-readiness of these vehicles via the procedure discussed in the response to Item 267/8201-02.

Appendix A Item 267/8201-86:

Delegate sole authority for all protective actions and notifications to the on-site emergency director, and provide for an on-site emergency director at all times.

PSC Response:

This item was addressed in our response to Notice of Deviation 267/8303-01. Briefly summarized, procedures have been revised to state that the shift supervisor/emergency coordinator has the ultimate licensee authority to classify events, make notifications, and make protective action recommendations.

No further actions for this item are anticipated.

Appendix A Item 267/8201-110

Correct the RERP and EPIP's to remove discrepancy (EC or shift supervisor) between the two documents.

PSC Response:

This item refers to Security Instruction 6.10, wherein the results of personnel accountability are reported to the shift supervisor. We have concluded that the most reliable mechanism to ensure that the EC is informed of personnel accountability are the procedures in current use. This conclusion is based on the following considerations:

1. During the day shift, the TSC is manned almost immediately and the responsibilities of the EC are then assumed by the TSC director. The Implementing Procedures for the TSC already require the TSC Director to obtain a report of personnel accountability from the shift supervisor.
2. On backshifts, the sequence in which the emergency response centers will be manned is unknown. Therefore, at the time personnel accountability is completed, Emergency Coordinator functions could rest with the Shift Supervisor, or the Superintendent of Operations in the Control Room, the TSC Director or his alternate in the TSC, or the Corporate Emergency Director or his alternate in the FCP. Obviously, this situation is not conducive to the effective transmittal of personnel accountability information from the Security Department.
3. With the procedures that are presently in place, the Security Department has one contact who is always available on site, and who then, in turn, is responsible for informing the subsequent Emergency Coordinator of the status of personnel accountability.

No further actions for this item are anticipated.

Appendix B Item 267/8201-03:

Develop and implement explicit and specific functional responsibilities and authorities for all persons assigned duties for the various emergency preparedness planning and coordination functions.

PSC Response:

An emergency preparedness planning procedure has been developed to address this finding. See our response to Item 267/8201-02.

Appendix B Item 267/8201-04:

Develop and implement a program for training individuals, who are assigned emergency planning responsibilities, which will enable them to attain and maintain a state-of-the-art knowledge in the field of emergency preparedness.

PSC Response:

Public Service Company is participating in INPO programs for training and industry information exchange regarding emergency preparedness activities. INPO has also recently conducted an Emergency Preparedness evaluation of Fort St. Vrain. The Emergency Planning Coordinator is on the distribution for NOTEPAD activities associated with conferences, seminars, and courses involving this subject. Finally, monies are budgeted to participate in these programs. We are of the opinion that this involvement is sufficient to ensure "state-of-the-art" training in emergency planning.

No further actions on this item are anticipated.

Appendix B Item 267/8201-10:

Augment existing GET to ensure that all site personnel are adequately trained in their responsibilities during an emergency, providing input to correcting identified deficiencies and in the general provisions of the RERP.

PSC Response:

The GET program has been revised to ensure site personnel receive the training identified in this finding.

No further actions on this item are anticipated.

Appendix B Item 267/8201-12

Develop a program for training individuals who are assigned emergency action responsibilities which will enable them to attain and maintain a state-of-the art knowledge in the field of their assigned emergency station areas.

PSC Response:

A training program is in place to ensure individuals who are assigned emergency action responsibilities are trained in the field of their emergency action areas. This program is in use at the present time.

No further actions on this item are anticipated.

Appendix B Item 267/8201-17:

Develop and implement a method of formal assignment of all personnel in the emergency response organization down to the working level.

PSC Response:

Procedure RERP-ORG has been written to address this item. This procedure is in use.

No further actions on this item are anticipated.

Appendix B Item 267/8201-21:

Develop and implement specific procedures to govern the use and coordination of all outside support organizations and contractors during emergencies.

PSC Response:

A procedure to govern the use and coordination of outside support organizations will be in place by August 31, 1983.

Appendix B Item 267/8201-22:

Correct the RERP and EPIP's to unambiguously identify the authorities, responsibilities, and limits of actions of the corporate, contractor, private organizations, and local services support groups during emergencies.

PSC Response:

RERP, Section 5, already addresses the authorities and responsibilities of corporate personnel who augment the emergency organization. Letters of Agreement for other support organizations will be evaluated by August 31, 1983. If deemed necessary, updated Letters of Agreement will be obtained at that time.

Appendix B Item 267/8201-23:

Establish and implement a formal radiological emergency response training program to provide specialized training and annual retraining for all individuals assigned to each of the functional areas of the emergency organization.

PSC Response:

A formalized program to provide specialized training and annual retraining of emergency response personnel is in place. This program includes formal classroom instruction, lesson plans with objectives, written tests, and demonstrations.

No further actions on this item are anticipated.

Appendix B Item 267/8201-24:

Provide in the new training program: formal classroom instruction and practical demonstration drills; walk throughs; formal lesson plans; and a means of evaluating student performance; i.e., written tests, as well as evaluations of individual performance in drills and walk throughs. Lesson plans shall include student performance objectives.

PSC Response:

See our response to item 267/8201-23.

Appendix B Item 267/8201-26:

Revise the Training Programs Administrative Manual (TPAM) to include the new Section 4.6, to remove the redundancy between the sections, and to revise Forms G-8 and G-9 to reflect the current training.

PSC Response:

Section 4.6 of the TPAM has been rewritten as a separate section for Situation Response Training. Forms G-8 and G-9 have been revised to reflect this change.

No further actions on this item are anticipated.

Appendix B Item 267/8201-27:

Rectify the discrepancy between the training requirements of RERP Figure 8.1-1 and TPAM, Forms G-8 and G-9.

PSC Response:

The discrepancy has been corrected on the new forms equivalent to G-8 and G-9.

No further actions on this item are anticipated.

Appendix B Item 267/8201-28:

Rectify the discrepancy between the training requirements of TPAM Section 4.1.1.1 and Section 2.2.

PSC Response:

The discrepancy has been corrected.

No further actions on this item are anticipated.

Appendix B Item 267/8201-29:

Develop and implement formal training requirements for the off-site organizations and specify those requirements in the RERP and EPIP's.

PSC Response:

We are presently evaluating the training needs of St. Luke's Hospital, Weld County Ambulance, Northern Colorado Medical Center, local fire departments, and Public Service Company corporate organizations. Where deemed necessary, we will provide such training by June 15, 1983.

Appendix B Item 267/8201-30:

Develop and implement formal training lesson plans which clearly state student performance objectives for local support service groups.

PSC Response:

Training lesson plans for local support groups have been drafted. We are presently soliciting comments from these groups. It is expected that the formal program can be in place by August 31, 1983.

Appendix B Item 267/8201-31:

Develop and implement formal selection criteria to be used in selecting training instructors.

PSC Response:

We have re-evaluated the feasibility of placing the selection criteria for training instructors in the TPAM and have concluded that this is inappropriate.

All employees in Public Service Company have recently completed a Position Information Questionnaire which will be used to determine the job functions and responsibilities for the various Public Service Company job descriptions. This activity afforded us the opportunity to re-evaluate the necessary skills, education, and experience requirements for all Fort St. Vrain personnel, including Fort St. Vrain training instructors. Based on this review, and upon the good experiences we have had in selecting past instructors, we will continue to use the job descriptions.

No further actions on this item are anticipated.

Appendix B Item 267/8201-32:

Develop and implement a written examination for the health physics GET (8-hour class).

PSC Response:

A written examination for the health physics GET has been developed and is in use.

No further actions on this item are anticipated.

Appendix B Item 267/8201-36:

Establish a method for ensuring that new employees cannot enter a radiation zone prior to receiving health physics training.

PSC Response:

A radiation protection training instructor has been obtained by the Training Department. This instructor provides the necessary training for employees who may work in a radiation zone.

No further actions on this item are anticipated.

Appendix B Item 267/8201-46:

Demonstrate that a fixed monitor has a range of at least 5 Ci/cc (Sic-should be 5 μ Ci/cc) of mixed noble gases and that ambient radiation fields will not interfere with this measurement.

PSC Response:

Letter G-83166, Madsen to Lee, dated April 27, 1983, indicates that our monitoring equipment is adequate.

No further actions on this item are anticipated.

Appendix B Item 267/8201-60:

Provide cofferdams and shower curtains at the two entries into the personnel decontamination shower to prevent the unnecessary spread of contamination to the adjacent area during use.

PSC Response:

A Change Notice has been written to install shower curtains and cofferdams in the decontamination shower. This design change will be completed by August 31, 1983.

Appendix B Item 267/8201-65:

Install a high range radiation monitor on the reactor refueling floor.

PSC Response:

The high range radiation monitor for the reactor refueling floor is scheduled to be installed by August 31, 1983.

Appendix B Item 267/8201-66:

Establish a level of uncertainty associated with the use of meteorological information from the proposed primary system in the dose projection process and provide direction such that recommended protective actions are adequate.

PSC Response:

Public Service Company's new sixty (60) meter on-site meteorological tower provides the Control Room and the Technical Support Center the meteorological parameters specified in Regulatory Guide 1.97, Revision 2, as well as many other values. In addition, Public Service Company has backup capability via on-site ten (10) meter tower instrumentation. Both of these sources provide information which is processed by the plant computer.

We also have on-site capabilities to retrieve information via the National Oceanic and Atmospheric Administration (NOAA) computer, as well as remote readout adjacent to the tower.

Instrument quality and reliability are similar to that provided in proposed Regulatory Guide 1.23, Revision 1. Since Public Service Company has developed these systems in close conformance to Nuclear Regulatory Commission standards and proposed standards, we maintain the position that no such analyses are warranted for the automatic data acquisition equipment, and we do not plan further actions for these systems.

With regard to the manual assessment calculations, we recognize that improving the estimates of meteorological conditions within the plume exposure EPZ deserves consideration. On the other hand, it must be remembered that the manual calculation is a backup to the 10-meter instrumentation, which is, in turn, a backup to the 60 meter instrumentation. Therefore, we question the desirability of significantly complicating the manual calculation, particularly when it could jeopardize the capability to disseminate accurate information in a timely manner.

Regardless, we have proceeded to re-evaluate our manual assessment procedure. If it is determined that protective action recommendations based on this procedure can be made substantially more accurate, and that this consideration outweighs the increased complexity of the procedure, then we will revise the manual procedure accordingly.

We expect to have this re-evaluation completed, and procedure changes made if warranted, by September 30, 1983.

Appendix B Item 267/8201-67:

Identify within the RERP and EPIP's how to gain access to alternate meteorological sources, how to use (e.g., adjust) available information, and how documentation of data sources (other than primary system) will be achieved.

PSC Response:

New procedure RERP-MET addresses this finding.

No further actions on this item are anticipated.

Appendix B Item 267/8201-68:

Facilitate the input of the transport and diffusion data into the dose projection process for manual assessment methods.

PSC Response:

Please see our response to the manual assessment calculation finding in Item 267/8201-66.

Appendix B Item 267/8201-69:

Formalize the meteorological measurements preventive and corrective maintenance program and data qualification program to provide reasonable assurance that meteorological data will be available for use during a radiological emergency.

PSC Response:

Public Service Company has contracted with a local service supplier for preventive and corrective maintenance. This supplier is providing training in maintenance and calibration to our Results Department. It is expected that appropriate calibration equipment and procedures will be available for use by December 31, 1983.

Appendix B Item 267/8201-81:

Clarify the purpose of the Fort St. Vrain procedure classification system to remove the confusion of policy procedures having a higher classification than the RERP.

PSC Response:

Appropriate training to remove the confusion in the FSV procedure classification system has been provided via the "Systems Training" classes we have conducted. "System Training" is an on-going program on a two-year rotation, and is required training for nearly all Fort St. Vrain personnel.

No further actions on this item are anticipated.

Appendix B Item 267/8201-88:

Revise the guidance for protective actions to include plant system parameters and off-site monitoring in the decision basis.

PSC Response:

Implementing Procedure RERP-FAG "Protective Action Guideline Recommendations" will be revised to include plant system parameters and offsite monitoring data. This revision will be completed by July 31, 1983.

Appendix B Item 267/8201-89:

Provide for use of isotopic release data in dose assessment procedures.

PSC Response:

A computer program which utilizes isotopic release data and time dependence has been developed. It is expected that this program will be run (as a test only) concurrently with our existing dose assessment calculations during the upcoming annual exercise scheduled for June 15, 1983. The new computer program is very sophisticated and requires significant computer-processing. If, at the time of the annual exercise, it is determined that the new program is compatible with all the other functions the computer must perform, then it will be incorporated. If not, the new program will be simplified until it is compatible.

Appendix B Item 267/8201-95:

Correct all procedures intended for use under emergency conditions to include specific guidance in additional health physics aspects needed to maintain personnel exposures ALARA.

PSC Response:

Public Service Company policy is to maintain radiation exposures As Low As Reasonably Achievable at all times and not just during an emergency. Employee training programs specifically address the ALARA concept and the Company position on ALARA. The success of this training is evident by the very low man-rem exposure of 0.40 man-rem in 1982. We believe that the precautions we observe in our routine operations will carry over into radiological emergency situations. Furthermore, implementing procedures which could involve substantial radiation hazards do address these hazards, if only as a brief reminder.

No further actions on this item are anticipated.

Appendix B Item 267/8201-102:

Correct the EPIP's to include the criteria used to determine the need to initiate the evacuation of owner controlled areas.

PSC Response:

People who live on the owner-controlled property are members of the general public, and as such are under the jurisdiction of the State of Colorado and not Public Service Company. If Public Service Company should conclude that an evacuation of the owner-controlled property is advisable, we will make our recommendation to the state authorities just as we would for all other affected members of the general public. Procedures to accomplish these actions are already in place.

No further actions on this item are anticipated.

Appendix B Item 267/8201-103:

Develop and implement procedures to ensure positive control of all persons in the owner controlled areas during evacuation.

PSC Response:

Please refer to our response for Item 267/8201-102.

Appendix B Item 267/8201-105:

Provide clear and conspicuous markings for primary and secondary evacuation routes both within the plant and outside the plant.

PSC Response:

Public Service Company maintains the position that posting of emergency evacuation routes is unwarranted. Personnel are instructed that upon the sounding of either the "Fire" or "Radiological Emergency" alarms, they are to respond to their personnel accountability stations as specified in procedure G-5. Furthermore, personnel are instructed that in the event they are in the Reactor Building at the time the alarm is sounded, they will first report to the health physics access area for monitoring. If contamination is found, the Health Physics technician at the access area will be informed of the evacuation route so other necessary steps can be taken. We believe that this is sufficient instruction to eliminate the need for posting evacuation routes.

No further actions on this item are anticipated.

Appendix B Item 267/8201-111:

Develop and implement specific procedures to govern the establishment and operation of a search and rescue team.

PSC Response:

This procedure has been developed (RERP-TEAMS) and is in use.

No further action on this item is anticipated.

Appendix B Item 267/8201-113:

Specifically identify in the RERP and EPIP's the persons, by name and title, who are individually responsible to take personnel accountability at each emergency station.

PSC Response:

Administrative Procedure G-5 already states that departmental supervisors are responsible for ensuring that personnel accountability is taken and reported. Furthermore, procedure G-5 directs the supervisor to designate an alternate person to take personnel accountability in the supervisor's absence. Finally, a "delegation of authority" memo states, by name, the appropriate line of succession for all management/supervisory staff. The acceptability of existing procedures has been demonstrated on numerous occasions.

No further actions on this item are anticipated.

Appendix B Item 267/8201-117:

Provide permanent radiological monitoring equipment to determine habitability of CAS and SAS during radiological emergencies.

PSC Response:

Appropriate radiological monitoring equipment has been ordered. It is anticipated that this equipment will be in use by July 31, 1983.

Appendix B Item 267/8201-118:

Develop and implement specific procedures which govern the formation, direction, and control of emergency repair and corrective action teams during an emergency.

PSC Response:

This procedure has been developed (RERP-TEAMS).

No further action on this item is anticipated.

Appendix B Item 267/8201-123:

Develop and implement procedures, during recovery operations, to periodically estimate total population exposure and integrated dose.

PSC Response:

Procedure RERP-DOSE addresses this finding for all conditions, not just recovery operations.

No further actions on this item are anticipated.

Appendix B Item 267/8201-124:

Develop and implement methods to inform members of the various response organizations of the initiation of the recovery organization or of any other changes in the licensee response organizational structure or functions.

PSC Response:

Public Service Company disagrees with the follow-up finding that there are no means for informing members of response organizations that recovery operations have been initiated. Procedures are presently in place which state that the CR Director recommends initiation of recovery actions based on an operational analysis; the TSC Director recommends the initiation of recovery operations based on his analysis and the recommendation of the CR Director; and the Corporate Emergency Director initiates recovery operations based on his analysis and the recommendation of the TSC Director. We believe that there is sufficient decision-making involvement and that initiation of recovery operations will be conveyed to the response centers by the appropriate directors.

No further actions on this item are anticipated.

Appendix B Item 267/8201-125:

Add Nuclear Regulatory Commission Public Affairs representatives to the list of authorized representatives listed in Section SEOC 2.0, "Implementation", paragraph 2.1.2 of the Fort St. Vrain RERP.

PSC Response:

The State Emergency Operations Center (SEOC) is under the jurisdiction of the State of Colorado. We will discuss this finding with the State of Colorado, but the final decision to include a Nuclear Regulatory Commission Public Affairs representative is not ours to make. If approved by the state, we will revise the Fort St. Vrain RERP to reflect this fact by June 30, 1983. If not approved by the state, then we believe it is the responsibility of the Nuclear Regulatory Commission to negotiate with the state on this matter.

Appendix B Item 267/8201-128:

Develop and implement a formal procedure that describes, in detail, the drills and exercise program.

PSC Response:

The requested procedure is being developed. It is anticipated that it will be in place by July 15, 1983.