



**Southern California Edison Company**

P. O. BOX 800  
2244 WALNUT GROVE AVENUE  
ROSEMEAD, CALIFORNIA 91770

M. O. MEDFORD  
MANAGER, NUCLEAR LICENSING

TELEPHONE  
(818) 302-1749

Director, Office of Nuclear Reactor Regulation  
Attention: Mr. George W. Knighton, Director  
PWR Project Directorate No. 7  
Division of PWR Licensing - B  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362  
San Onofre Nuclear Generating Station  
Units 2 and 3

During a July 1, 1986 telephone conversation between D. Morisseau (NRC) and C. E. Williams (SCE), SCE was informed of the NRC's intent to perform an audit of SCE's training programs that have been accredited by the Institute of Nuclear Power Operations (INPO). In a subsequent conversation (July 8, 1986), the NRC requested that SCE provide a Task List for each of SCE's INPO accredited training programs and for SCE to provide the preferred schedule for the three-day NRC training audit.

The purpose of this letter is to document the selected audit dates of August 12-14, 1986 and to provide the requested Task Lists. Provided as an attachment to this letter are the Task Lists for the following INPO accredited programs:

1. Health Physics
  - a. Health Physics Technician
  - b. Dosimetry Personnel
  - c. Radioactive Materials Control Personnel
2. Non-Licensed Operator
3. Licensed Operator
4. Senior Licensed Operator
5. Shift Technical Advisor

If you have any questions, please contact me.

Very truly yours,

*M. O. Medford*

*Acc'd Add  
D. morisseau*

8608050150 860805  
PDR ADOCK 05000206  
F PDR

Attachments

cc: H. Rood, NRC Project Manager (To be opened by addressee only)  
F. R. Huey, USNRC, Senior Resident Inspector, Units 1, 2 and 3

HEALTH PHYSICS TECHNICIAN

TASK LIST

WR:jrs:4563Z

## TASK DESCRIPTIONS

- o Prepare and Count Samples Using Alpha/Beta/Gamma Gross Counting Systems.
- o Review and Evaluate Gross Counting Sample Data (Alpha/Beta/Gamma).
- o Perform Operational Checks (Including Documentation). Determine LLD, Efficiencies, Background for the Alpha/Beta/Gamma Counter. Prepare QC Charts. Perform Source Checks on Equipment.
- o Calibrate the Alpha/Beta/Gamma Counter.
- o Prepare and Count Samples Using Computer Based MCA.
- o Review and Evaluate Data From Isotopic Analysis.
- o Analyze Samples for Gaseous Iodine 131 Using Gamma Spectrometer and MCA.
- o Perform Background Check and Operation Check on Gamma Spectrometer and MCA. (1) Update the Gamma Spec. library. (2) Determine Resolution and Energy Calibration. (3) Calibrate MCA.
- o Add Liquid Nitrogen to Detector.
- o Manually Evaluate MPC Levels for Various Areas: (1) Calculate Weighted MPC from Isotopic Data; (2) Determine % MPC from Air Sample Data.
- o Perform Upkeep Maintenance on Lab Analyzers: (1) Replace Installed Counting Equipment Detector.
- o Perform Radioactive Sealed Source Leak Test (Including Documenting Results).
- o Inventory Radioactive Sources (Including Documentation).
- o Perform Actions Required When a Licensed Source is Found to be Missing.
- o Perform Source-Distance Calculations.
- o Calculate Source Strengths.
- o Supervise Control and Use of Radioactive Sealed Sources.
- o Dispose of Radioactive Sources - Remove from Inventory.

## TASK DESCRIPTIONS

- o Conduct Preoperational Checks of Portable Radiation Monitoring Instruments/Air Monitors.
- o Perform Minor Maintenance of Portable Survey Equipment/Air Monitors.
- o Tag Surveys/Air Monitor Instruments Indicating Their Functional Status.
- o Record Results on "Portable Survey Instrument Calibration Data Sheet."
- o Calibrate Air Samplers, Including Calculating Air Passage Through Filters Using Flow Meters.
  - (1) Portable
  - (2) CAM
- o Operate Portable Air Sampling Equipment/Monitors.
- o Operate Constant Air Monitor (CAM).
- o Calibrate Portable Alpha, Beta-Gamma Survey Equipment.
- o Operate Portable Alpha, Beta-Gamma Survey Equipment.
- o Calibrate Portable Neutron Dose Rate Meter.
- o Operate Portable Neutron Dose Rate Meter.
- o Obtain Appropriate Survey Instruments/Air Monitors, and Return to H.P. Control.
- o Calibrate Friskers.
- o Perform Routine Source Checks of Friskers.
- o Conduct Functional Check of Equipment (Portal Monitors, Friskers).
- o Calibrate Portal Monitors.
- o Perform Routine Source Checks of Portal Monitors.
- o Zero, Read, Issue Pocket Dosimeters.
- o Operate Whole Body Counter.
- o Perform Personnel Contamination Monitoring During Personnel Decontamination.

## TASK DESCRIPTIONS

- o Collect, Count, Evaluate Throat and Nasal Smears for Contamination.
- o Interpret Computerized Data on Personnel Exposure and on Qualifications for Entries Into Radiologically Controlled Areas and for Use of Respiratory Equipment.
- o Calculate Estimated Individual Neutron Radiation Dose.
- o Use and Perform Preoperational Check of Digital Alarming Dosimeters.
- o Perform Dosimeter Drift Test.
- o Collect Necessary Data for Dose Evaluations, (a) External Contamination (b) Internal Contamination (c) Lost, Damaged, Off Scale Dosimetry.
- o Maintain Records and Files on Radiation, Contamination, and Airborne Activity Surveys.
- o Perform General Area Beta-Gamma Survey Using Portable Survey Equipment.
- o Perform General Area Alpha Contamination Survey Using Portable Survey Equipment.
- o Perform "Hot Spot" Survey in a High Radiation Area.
- o Perform a Neutron Radiation Survey.
- o Perform Power Entry Radiological Surveys - Including Reactor Containment Bldg. Entry While at Power.
- o Perform Surveys in Support of Entries Into Areas of Unknown Radiological Hazards.
- o Perform Radiation Monitoring During Industrial Radiographic Operations.
- o Perform an Airborne Activity Survey (Including Iodine Samples).
- o Perform an Airborne Gaseous Activity Survey.
- o Perform a Tritium Activity Survey.
- o Perform On-the-Job Analysis of Air Samples Using Portable Survey Instruments.

## TASK DESCRIPTIONS

- o Perform Smear Surveys for Loose Surface Contamination.
- o Perform Surveys for Uncontrolled Release of Material from a Contaminated Area and Properly Document Results, Including Movement of Radioactive Material.
- o Monitor Radioactive Waste Filter Change Using Portable Survey Equipment.
- o Select Appropriate Survey Equipment for Specific Survey.
- o Perform Job Coverage Surveys.
- o Collect Liquid Samples for Radioactivity Analysis.
- o Perform Underwater Radiation Survey.
- o Perform a Radiological Survey in Conjunction with Receipt of New Fuel.
- o Establish and Maintain a Radiologically Controlled Area as per Procedural Requirements.
- o Inspect Plant Areas for Proper Radiation Warning Posting.
- o Brief Radiation Workers on Radiological Hazards in Work Area or Changes in Radiological Conditions.
- o Inspect Plant Areas for Proper Contamination Control.
- o Perform Radiation/Contamination Survey of Tools and Equipment.
- o Perform Stay Time Calculations.
- o Don and Remove Personnel Dosimetry Equipment and Protective Clothing (Including Plastic Rain Suit); assist others with the same.
- o Issue a Stop Work Order When Significant Radiological Discrepancies are Discovered.
- o Monitor Workers and Ensure Compliance with REPs and Good Work Practices.
- o Provide Close Radiological Coverage for Workers in Potential High Dose Jobs.
- o Assist Other Workers to Don and Remove Respiratory Protection Apparatus.

## TASK DESCRIPTIONS

- o Brief Radiation Workers In Radiological Protection Procedures in the Field.
- o Establish Protective Coverings (Sleeves, bags, etc.) for H.P. Instrumentation and Equipment to Protect Equipment.
- o Establish Radiological Controls and Perform a Transfer of Radioactive Materials from One Controlled Area to Another Through an Uncontrolled Area.
- o Survey Trash Bags During Waste Removal Using Portable Survey Instruments.
- o Survey Dirty Laundry Bags Before Shipping Using Portable Survey Instruments.
- o Monitor MPC Levels During Moving and Loading of Radioactive Materials for Shipping.
- o Rope Off and Label Areas During Moving and Loading Radioactive Materials for Shipping.
- o Promote Radwaste Minimization.
- o Supervise Decontamination of Tools and Equipment or Materials.
- o Instruct Workers in Decontamination of Tools and Equipment in the Field.
- o Perform Decontamination of Own Tools and Equipment.
- o Assist in Decontamination of Personnel.
- o Enter Record of Contamination/Injury on Forms.
- o Direct Area Decontamination.
- o Support and Direct Reactor Cavity Entry and Work.
- o Inspect, Survey, Set-Up Supplied Air Hoods.
- o Don Respiratory Protective Equipment.
- o Remove Respiratory Protective Equipment.
- o Don Self-Contained Breathing Apparatus.
- o Remove Self-Contained Breathing Apparatus.

## TASK DESCRIPTIONS

- o Perform Checks of Hoses, Regulator and Manifold for Forced-Air Respirator in Job Coverage.
- o Respond as a Radiological Emergency Team Member.
- o Provide Radiological Protection Coverage of Contaminated/Injured Personnel During Emergency.
- o Sample Off-Site Air for Iodine.
- o Track a Radioactive Plume.
- o Calculate Off-Site Dose.
- o Communicate Using a Radio.
- o Drive an Off-Road Vehicle.
- o Operate a SAM-2A.
- o Analyze Indications of Potential Radiological Problems Based on Quantitative Measurement Results Within a Particular System or Area.
- o Provide Radiological Protection Coverage at the Scene of an In-Plant Radiological Incident to Recommend or Direct Corrective Actions to Mitigate the Consequences.
- o Advise Workers and Management Personnel of Corrective Actions to be Taken Within the Radiological Controlled Area During a Radiological Incident.
- o Know Contents of Radiation Protection Emergency Kits.
- o Issue Radiological Incident Reports (RIRs) and Radiological Infraction Notices (RINs).
- o Respond to Constant Air Monitor Alarm.
- o Respond to an Area Radiation Monitor Alarm.
- o Respond to a Process Radiation Monitor Alarm.
- o Respond to an Effluent Alarm.
- o Respond to a Fuel Handling Accident.
- o Respond to Lost, Damaged, Off-Scale Dosimetry.
- o Respond to Personnel Exposure Exceeding Administrative Limits or Regulatory Limits.



## TASK DESCRIPTIONS

- o Respond to Portal Monitor Alarm.
- o Respond to a Fire in a Controlled Area.
- o Perform as a Re-Entry Team Member.
- o Graph Data and Interpret data in Graphs, Tables, Charts.
- o Provide On-the-Job Training to Radiological Protection Personnel.
- o Select Appropriate Respiratory Protection Equipment Based on Air Sample Results, Contamination Surveys, and/or Procedures.
- o Review and Evaluate the Results of Radiological Surveys.
- o Determine Special Dosimetry for Entry Into a Job Area.
- o Determine Proper Dosimetry Placement on Body for Special Dosimetry.
- o Select Appropriate HP Coverage for Jobs.
- o Select Appropriate Protective Clothing Based on Radiological Conditions and/or Procedures.
- o Estimate Individual and Total Person-Rem Dose from REP Information in Accordance with ALARA Procedures.
- o Issue and Authorize Radiation Protection Permits (REPs), Including Extensions.
- o Control Worker Access to a Radiologically Controlled Area.
- o Operates Computer to Record and Track REP Requirements.
- o Locate Major Plant Components.
- o Identify Potential Radiological Hazards Associated with Major Plant Components.
- o Compliance with Technical Specifications and Regulatory Matters.
- o Performs ALARA Review.

## TASK DESCRIPTIONS

- o Make ALARA Recommendations to Individuals, Work Groups, Management.
- o Direct the Installation and Removal of Temporary Shielding.
- o Evaluate the Effectiveness of Temporary Shielding (Pre- and Post- Shielding Surveys).

DOSIMETRY PERSONNEL

TASK LIST

## TASK DESCRIPTION

- o Operate calibration source well or source calibrator.
- o Perform source distance calculations for calibration sources.
- o Prepare TLD for reissue.
- o Perform TLD/film badge change out.
- o Perform calibration of the TLD reader.
- o Perform periodic QA checks of the TLDS (i.e., ECFS) and TLD Reader System (linear response, glow curve, QA of dose generation program, etc.).
- o Read pocket dosimeters.
- o Zero pocket dosimeters.
- o Perform initial receipt inspection of TLDs.
- o Perform initial receipt testing of PICS (as drift, drop tests).
- o Take action when readings from extremity and special dosimetry exceed some action limit.
- o Evaluate results from extremity and special dosimetry equipment.
- o Maintain computer records of radiation exposure.
- o Evaluate whole body count results.
- o Perform initial issue of TLD/film badge, extremity and special purpose dosimetry.
- o Perform calibration checks of the TLD reader.
- o Operate the TLD reader to read TLDS under (1) routine and (2) emergency processing.
- o Perform calibration of whole body counter (Energy calibration).
- o Operate whole body counter.
- o Based on MPC measurements, assign/schedule personnel to have (a) internal dose assessment (b) WBC performed.
- o Perform dosimeter accuracy drift check.

## TASK DESCRIPTION

- o Issue and read:
  - a. Pocket dosimeters,
  - b. Exposure control cards, and
  - c. IMTC cards.
- o Post and collect general area TLDS.
- o Perform maintenance on TLD readers (as cleaning).
- o Issue audible and visual dosimeters - including pre-operational checks.
- o Expose personnel dosimeters for calibration purposes (e.g., pocket dosimeters, TLDS, digital-audible alarm dosimeters).
- o Collect personnel dosimetry devices (film badges or TLDS).
- o Obtain printout and/or plot of whole body count data.
- o Maintain inventories of PIC's.
- o Maintain inventories of TLDS.
- o Calibrate PIC's (source, leak, drop, drift).
- o Performance test PIC's.
- o Remove defective PIC's from service.
- o Remove defective TLD's from service.
- o Maintain a control point (that is, supply required materials, logs, etc.)
- o Perform stay time calculations for neutron dose estimates and MPC estimates.
- o Control worker access to a radiologically-controlled area.
- o Enter record of contamination in Personnel Decontamination Log Book.
- o Collect data for dose evaluations.
- o Conduct required routine inspection of respirators.
- o Repair respiratory protective equipment (minor).
- o Prepare respirators for reuse.
- o Issue respiratory protective equipment.

## TASK DESCRIPTION

- o Perform checks on SCBA.
- o Perform quantitative respirator fit tests for personnel.
- o Calibrate the respirator fit booth (i.e., check aerosol concentration).
- o Perform functional test of respiratory equipment.
- o Perform air quality checks on plant breathing air systems at manifold on working platform.
- o Set up forced-air respirator for use.
- o Perform checks of hose, regulator and manifold for forced air respirator; calibrate supplied air manifolds and perform flow checks.
- o Use respiratory protective equipment.
- o Perform inspection of respirator canisters.
- o Package respirators for storage.
- o Replace the catalyst agent in a re-breather type respirator (such as BIOPACK-60, SCOTT, MSA).
- o Replace the oxygen bottle on a re-breather type respirator (such as BIOPACK-60, SCOTT, MSA).
- o Perform checks on a re-breather type respirator (such as BIOPACK-60, SCOTT, MSA).
- o Supervise donning of respirators and SCBA equipment for respirator fit tests.
- o Inventory respiratory gear.
- o Ensure individuals complete paperwork and meet physical requirements for fit test.
- o Record fit test results in logs and appropriate forms.
- o Interpret printout from fit test to determine protection factor.
- o Respond as a radiological team member to a site or general emergency.
- o Assist in emergency response planning during an emergency.

## TASK DESCRIPTION

- o Issue additional dosimetry as required by the Plant Emergency Plan.
- o Respond to an abnormal TLD readout.
- o Respond to a lost TLD.
- o Respond to a pocket dosimeter being found off scale.
- o Respond to personnel exposure exceeding regulatory or administrative limits.
- o Administer first aid to injured personnel.
- o Process requests to exceed the current radiation exposure authorization.
- o Prepare radiation exposure reports.
- o Collect data to be included in the radiation evaluation program (ALARA).
- o Maintain station manrem plots and graphs.
- o Review personnel exposure history.
- o Review daily computer printout of personnel exposure (i.e., top 100 Dose and MPC Report).
- o Update exposure records using TLD data and vendor dosimetry data.
- o Audit daily radiation exposure records (i.e., top 100 Dose and MPC Report).
- o Record individual dose in computer.
- o Review daily dosimeter records (i.e., top 100 Dose and MPC Report).
- o Provide on-the-job training to other dosimetry personnel.
- o Initiate Radiation Incident Report.
- o Perform routine checks/audits of radiological emergency equipment and kits.
- o Use SRC on computer terminal (enter fit test results; trend analysis; record WBC results; verify accuracy of documents, etc.).

## TASK DESCRIPTION

- o Run programs on computer for whole-body counting system.
- o Run programs on computer for TLD system.
- o Control access to red badge zones.
- o Log individuals in/out of red badge zones via computer system and manually.
- o Take action when radiation exposure limits are approached or exceeded.
- o Ensure adherence to respiratory and dosimetry requirements on REP's.
- o Initiate dose evaluations for lost, offscale or damaged dosimetry.
- o Promote radwaste minimization.



RADIOACTIVE MATERIALS CONTROL (RADWASTE) PERSONNEL  
TASK LIST

WR:dek:4564Z

## TASK DESCRIPTIONS

- o Prepare samples for counting.
- o Operate gross gamma counting systems (manual or automatic).
- o Operate gross beta counters (manual or automatic).
- o Operate gross alpha counting systems (such as SAC-4).
- o Count samples with computer-based multi-channel analyzer.
- o Refill the Ge(Li) with liquid nitrogen.
- o Transfer radioactive source to/from other departments.
- o Dispose of decayed or no longer usable radioactive source.
- o Calculate radioactive source activity strengths.
- o Inventory radioactive source (contaminated materials and shipping containers).
- o Perform source distance calculations.
- o Operate portable beta-gamma survey equipment (such as Cutie Pie 740A, Eberline Ion Chamber Model RO-2A, Teletector).
- o Frisks self for contamination check.
- o Change batteries in portable instruments.
- o Conduct preoperational checks of instruments.
- o Perform (obtain, count, and document) a smear survey for loose surface contamination.
- o Review the results of a smear survey.
- o Determine the location of radioactive hot spots on radwaste materials and containers.
- o Perform an industrial hygiene survey (air quality) to determine physical habitability of an area.
- o Perform surveys to support the movement of radioactive materials.
- o Perform a beta radiation survey on radwaste materials and containers.

## TASK DESCRIPTIONS

- o Prep containment area (tent) with associated vent to reduce personnel exposure to airborne contaminants.
- o Prepare a glove box to reduce personnel exposure to airborne contamination.
- o Maintain a containment area (tent) with associated ventilation to reduce personnel exposure to airborne contaminants including evaluating vent filters for replacement.
- o Survey tools and equipment for release from a radiologically controlled area.
- o Perform certification inspections of tents, glove boxes, and other containment devices.
- o Prepare tents with shrouds and ventilation units for S/G work.
- o Set up decon tents and ventilation units.
- o Set up glove boxes on piping and equipment as required.
- o Work with ALARA groups in placing shielding.
- o Promote Radwaste Minimization.
- o Survey a shipment of radioactive material prior to shipping.
- o Package (including labeling) dry radioactive waste for shipment.
- o Document packaged material survey data in the radioactive material shipping record.
- o Survey transport vehicles.
- o Supervise loading radioactive material on transport vehicle.
- o Examine reports accompanying radioactive material shipment received to ensure compliance with federal regs.
- o Perform radiation and contamination surveys of rad material received.
- o Maintain records of the receipt/shipment of radioactive materials.

## TASK DESCRIPTIONS

- o Inspect the transport vehicle to ensure safe transportation of radioactive materials over public thoroughfares.
- o Survey waste materials to segregate high and low level wastes in preparation for shipment.
- o Weight drums and packages in preparation for shipment.
- o Conduct surveillance of drum and box compaction operation.
- o Segregate contaminated/non-contaminated waste generated within rad controlled area by frisking.
- o Obtain and analyze samples of radioactive material for shipping.
- o Determine transport index and classify radioactive material as Type A, Type B, or LSA.
- o Perform a radiological survey in conjunction with the receipt of radioactive sealed sources.
- o Select appropriate containers and package radioactive materials.
- o Placard the transport vehicle.
- o Control the movement of radioactive material through unrestricted (non-radiological) areas of the plant.
- o Collect, sort, label, and log radioactive waste for storage.
- o Move radioactive materials and waste.
- o Apply State and Federal Regulations.
- o Evaluate contaminated material and equipment to determine if decontamination effort is practical.
- o Direct decontamination of equipment or materials.
- o Perform decontamination of equipment or materials.
- o Direct area decontamination.
- o Perform area decontamination.
- o Operate hydrolaser for decon of required equipment.

## TASK DESCRIPTIONS

- o Decon reactor cavity with special fixture and hydrolaser.
- o Decon RCP shrouds with steam cleaners.
- o Decon by applying ALARA paint.
- o Decon piping using hydrolaser with self-traveling tips.
- o Dewater sumps, steam generators, etc., using Sandpiper & Randolph pumps.
- o Prepare decontamination solutions and agents for use (such as GOSH).
- o Decontaminate anti-contamination clothing.
- o Operate ultrasonic decontamination unit.
- o Operate decontamination vapor degreaser unit.
- o Operate decontamination electropolisher unit.
- o Perform decontamination of own tools and equipment.
- o Use respiratory protective equipment.
- o Perform radiological surveys of respirators.
- o Decontaminate respirators.
- o Administer first aid to injured personnel.
- o Set up and maintain methods for controlling spread of radioactive spills and leaks.
- o Dispose of post-accident samples.
- o Issue and receive contaminated tools and equipment, storage area.
- o Inventory contaminated tools and equipment.
- o Communicates rigging needs to Maintenance personnel.