UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 27, 1985

Docket Nos.: 50-275
and 50-323

MEMORANDUM FOR: S. A. Varga, Director
PWR Project Directorate No. 3
Division of PWR Licensing-A

FROM: H. Schierling, Project Manager
PWR Project Directorate No. 3
Division of PWR Licensing-A

SUBJECT: DIABLO CANYON - MEETING WITH PG&E ON DCRDR

DATE & TIME: January 9, 1986
9:00 am

LOCATION: Room AR-5033
Air Rights Building
Bethesda, Maryland

PURPOSE: To discuss status of Detailed Control Room Design Review.

PARTICIPANTS: NRC

H. Schierling, N. Thompson, SAIC Consultants

PG&E

B. Lew, et al.

H. Schierling

H. Schierling, Project Manager
PWR Project Directorate No. 3
Division of PWR Licensing-A

cc: See next page

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TABLE 1

DCRDR MEETING ATTENDEES

Richard Eckenrode	NRC/PWR-A/EICSB
Carol Kain	SAIC/NRC Consultant
Hans Schierling	NRC/PWR-A/Project Manager
John Stokley	SAIC/NRC Consultant
Neil Thompson	NRC/DHF
Sy Weiss	NRC/PWR-A/EICSB
Peter Beckham	PG&E
Charles Coffer	PG&E
Bryant Giffin	PG&E
Lothar Schroeder	General Physics/PG&E Consultant

TABLE 2

SNUBBER MEETING ATTENDANCE

Goutam Bagchi	NRC/NRR/PWR-A EB/Section Leader
Hans Schierling	NRC/NRR/PWR-A/Project Manager
Richard Anderson	PG&E/Bechtel
Charles Coffer	PG&E/Licensing
Paul Hirschberg	PG&E/Senior Mechanical Engineer
Henry Thailer	PG&E/Piping Group Supervisor
Mike Tressler	PG&E/Project Engineering

TABLE 3

RERACK MEETING ATTENDEES

Robert Fell	NRC/NRR/PWR-A/PSB
Ted Quay	NRC/NRR/PWR-A/PSB
Hans Schierling	NRC/NRR/PWR-A/Project Manager
Richard Serbu	NRC/NRR/PWR-A/PSB
James Shapaker	NRC/NRR/PWR-A/PSB
Amarjit Singh	NRC/NRR/PWR-A/PSB
Charles Coffer	PG&E/Licensing
Scott Johnson	PG&E
Mike Tressler	PG&E

TABLE 4

REACTOR TRIP EXPERIENCE MEETING ATTENDEES

V. Benaroya	NRC
A. Gill	NRC
S. Israel	NRC
J. Knight	NRC
H. Schierling	NRC
W. Swenson	NRC
C. Coffer	PG&E

Enclosure 2

DETAILS OF DCRDR MEETING

ON JANUARY 8, 1986

(SAIC SUMMARY)

INCLUDING PG&E DRAFT REPORT

MINUTES OF MEETING BETWEEN NRC AND PG&E
ON THE DCRDR FOR THE
DIABLO CANYON GENERATING STATION, UNITS 1 AND 2

The following are minutes of a meeting held on January 9, 1986, between the Nuclear Regulatory Commission (NRC) and Pacific Gas and Electric (PG&E). Also in attendance were a PG&E human factors consultant from General Physics and NRC consultants from Science Applications International Corporation (SAIC). Specific attendees and the organizations they represent are shown in Attachment 1.

The purpose of the meeting was to address the DCRDR requirement to conduct a systems function and task analysis. In a prior meeting with NRC PG&E had committed to present the methodology for this analysis and identify the personnel in order to assure NRC that it would satisfy the requirement.

The methodology for the function and task analysis was presented by their human factors consultant from General Physics Corporation. Attachment 2 includes a handout of the draft methodology. Discussion of the procedure for data collection and the analysis indicated that a comprehensive approach is being taken and should satisfy the requirement.

The SFTA will be completed primarily by General Physics who will perform the bulk of the analysis in their offices separate from the control room. This should provide a degree of independence and objectivity in the evaluation. The procedure for data collection and methodology to conduct the verification and validation were described. NRC concluded that PG&E has the necessary program plan to conduct the task analysis.

PG&E were also asked if there was a reason the summary report submittal could not be provided sooner than July 1987, which had been indicated in a prior meeting. They believe they could provide it earlier than July 1987 and will notify NRC when they determine the date.

ATTACHMENT 1

DCRDR Meeting Attendees
January 9, 1986

Hans Schierling	NRC, Project Manager
Carol Kain	SAIC/NRC
John Stokley	SAIC/NRC
Richard J. Eckenrode	NRC/PWR-A/EICSB
W. Neil Thompson	NRC/HFEB/DHF
Bryant Giffin	PG&E
Lothar Schroeder	General Physics
Pete E. Beckham	PG&E
Charles O. Coffer	PG&E
Sey Weiss	NRC

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METHODOLOGY FOR THE DIABLO CANYON NUCLEAR POWER PLANT SYSTEM FUNCTION REVIEW AND TASK ANALYSIS

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1.0 System Function Review and Task Analysis

1.1 Purpose

The purpose of the System Function Review and Task Analysis (SFRTA) is to provide a complete set of plant specific information and control characteristics which are required to support operator tasks during DCNPPs 1 & 2 emergency operations and to ensure that required systems can be efficiently and reliability operated under conditions of emergency operation by available personnel.

The SFRTA will also generate information and controls characteristics required to conduct the DCNPP 1 & 2 "Shutdown From Outside the Control Room" procedure.

1.2 Methodology

The activities which comprise the SFRTA for the CRDR are shown in Figure 1.2-1. A methodology for each activity depicted in Figure 1.2-1 is described below:

1.2.1 Activity 1: Identify Plant Specific Systems and System Functions

Plant systems and subsystems in the DCNPP control room and remote shutdown area that the operator must access during emergency operations will be identified. This set will be comparable to the safety and safety-related systems called out in the EOPs and the Operating Instructions, "Shutdown From Outside the Control Room". Descriptions of the functions for each of the systems identified above will be prepared. These system descriptions (see Figure 1.2-2) will include:

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- the function(s) of the system

- under what conditions the system is used

The description of systems functions, in this manner, serves as a reference base for subsequent task analysis. In addition, the systems functions listing will be used to assist in the selection of operating scenarios.

The DCNPP FSAR will serve as the primary source of information to identify a set of DCNPP systems comparable to those found in the EOPs. The FSAR will be supplemented, as necessary with other existing plant information and documentation.

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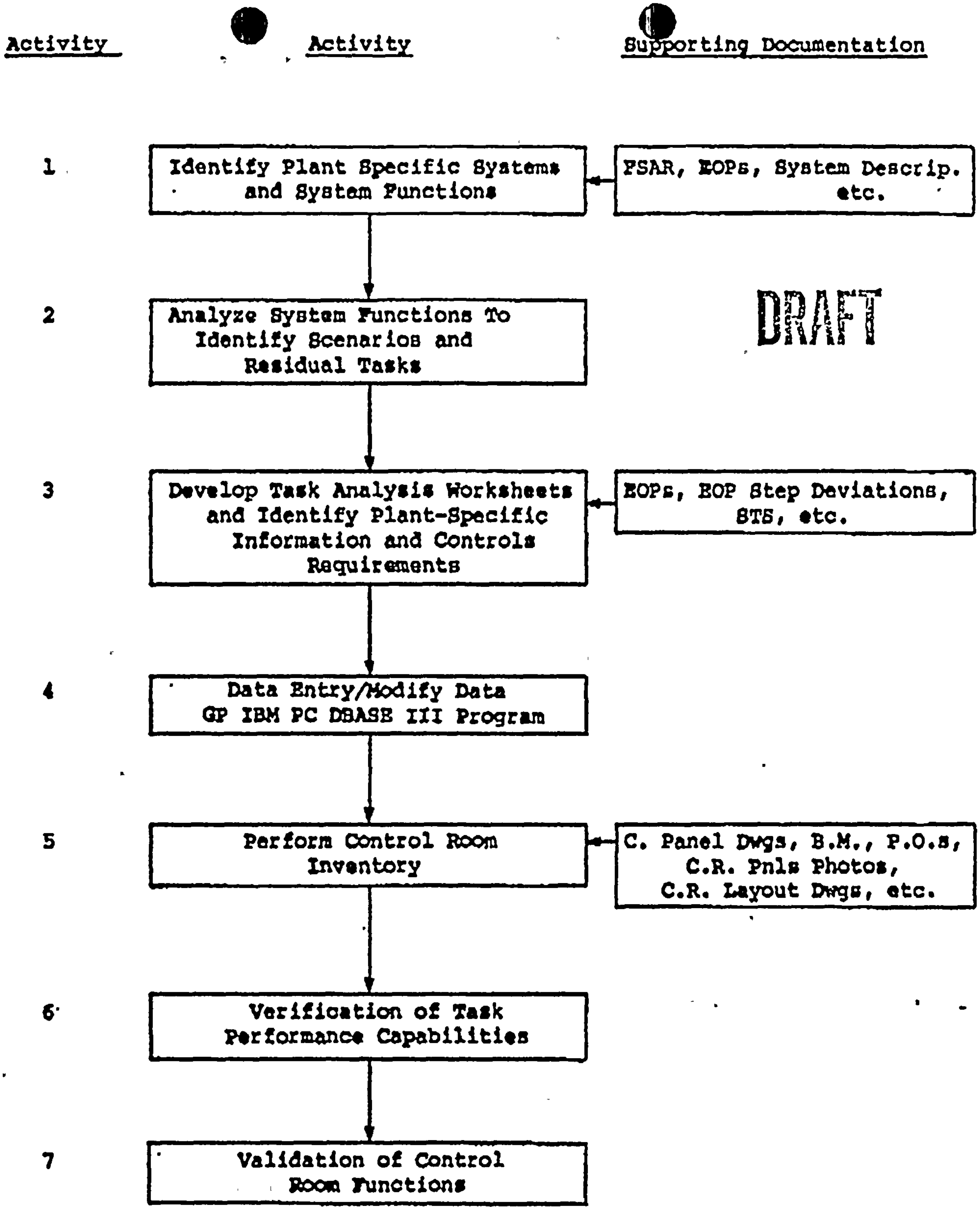

Figure 1.2-1 Flow Diagram of Major Activities Involved in Generation of Plant Specific SFRTA I&C Requirements

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Plant System Name:

System Abbreviation:

System Number: System Status:

System Procedure References:

System Function(s):

Conditions for System Use:

Reviewer: Date:

Figure 1.2-2 Plant System Function Description

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1.2.2 Activity 2: Analyze System Functions to Identify Scenarios and Residual Tasks

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The list of DCNPP safety-related systems are used to define a set event of sequences or scenarios which adequately samples various emergency conditions and the plant systems and system functions exercised in those conditions. The related DCNPP EOP (and Remote Shutdown Procedure) steps are also identified in this process.

A check will be performed to ensure that the desired system and system functions are exercised in the scenarios chosen. The scenarios selected ensure the establishment of those tasks applicable to the DCNPP systems.

A brief narrative description of each scenario will be prepared that establishes the limits and conditions of the events to be analyzed. The descriptions will include:

- Procedures Used
- Initial Conditions
- Scenario Sequence
- Expected Response
- Termination Criteria

Residual operator tasks (unique tasks) from the plant-specific EOPs and remote shutdown procedure not covered in the scenarios will be analyzed independently for information and control requirements. The analysis of residual tasks will be done to ensure that all operator interfaces have been examined even if those interfaces are not exercised in the sample of emergency scenarios selected for validation. Note that verification of equipment availability and suitability will be performed for these residual tasks as well as for tasks embedded in the emergency scenarios.

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1.2.3. Activity 3: Develop Task Analysis Worksheets and Identify Information and Control Requirements

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A Task Analysis Worksheet will be developed and used to collect task performance data and other information needed for the CRDR. The worksheet (see Figures 1.2-3, 1.2-4 and 1.2-5) will indicate the operational steps required in each scenario, along with the appropriate information and control requirements, means of operation, and I&C present on the control boards. The operator tasks will be analyzed using the selected plant-specific EOPs as a starting basis and documented in the following manner.

1. The discrete steps in the plant-specific EOPs in order of performance will be recorded in the "Procedure Number and Step Number" column of the Task Analysis Worksheet and branching points noted, depending on the plant transient being analyzed, in the "Scenario Response" column.

2. A brief description of the operator's tasks (in order of procedural steps) will be recorded in the "Tasks/Subtasks" column of the Task Analysis Form. All tasks, both explicit and implicit, will be documented using operations, engineering, and human factors personnel.

3. The operator decisions and actions that are linked to task performance are then recorded in the "Task Decision Requirements" and "Task Action Requirements" column, respectively. System functional response is described when appropriate in these columns. This set of data also includes branching points in the EOPs that determine the outcome of the operating sequence.

4. Input and Output requirements for successful task performance are recorded in the "Information and Control Requirements" columns. These would typically be system component and parameter, relevant characteristics, and procedural information that is necessary for

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operators to adequately assess plant conditions or system status (e.g., hot leg temperature, reactor coolant system flow, pressurizer pressure, etc. Specific values for parameter readings or control characteristics (i.e, closes-open, off-auto-on) will be recorded based on EOPs, EOP Bases documents, and Technical Specifications.

It is important to note that Steps 1 through 4 above are completed on the Task Analysis Worksheet using independent sources of data other than the actual I&C present in the control room.

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Scenario ______

Page ___ of ___

TASK ANALYSIS WORKSHEET

Procedure Number and Step No	Task/Subtask	Scen Resp	Comm Means	Loc	Task Decision Requirements	Task Action Requirements

Figure 1.2-3 Task Analysis Worksheet

Procedure Number and Step No	Information and Control Requirements		I&C Identification			Verification		SPDS		PAMPs		ESDP		Comments
	System Components/Parameter	Relevant Characteristics	Means	No	Panel	Avail.	Suit	Y	N	Y	N	Y	N	

Figure 1.2-4 Task Analysis Worksheet (continued)

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1. SCENARIO - operating scenario name and identifier (ID).

2. PROCEDURE NO. AND STEP NO. - procedure step number for DCNPP 1 & 2 EOPs or "Shutdown From Outside the Control Room"

3. TASK/SUBTASK - a description of the task/subtask in the operating sequence

4. SCEN.RESP. - a notation designating decision points or branching information needed for correct task execution for the operating scenario (as defined in the operating scenario description).

5. CREW MEMBER - the crew member who performs the task.

6. LOC - the location where the task is performed.

7. TASK DECISION REQUIREMENTS - operator decisions that are linked to task performance.

8. TASK ACTION REQUIREMENTS - operator action requirements for task performance.

9. INFORMATION AND CONTROL REQ. - the information and control requirements for successful task performance (derived <u>independently</u> of the actual I&C in the control room). (1) System Component/Parameter (2) Relevant Characteristics (type of component, range, units, positions).

Figure 1.2-5 Task Analysis Worksheet Forms (Columns) Definitions

10. MEANS - the actual means (e.g. switch, meter, etc.) used by operators to perform the task in the control room.

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11. I&C NO. - the actual Instrumentation and Controls (I&C) number identified from the control room inventory.

12. PANEL NO. - the panel on which the control or instrument is located

13. VERIFICATION (AVAIL/SUIT.) - columns that indicate the availability and suitability of the Instrumentation and Controls (I&C) needed for task performance. These columns would contain a "yes" or "no" answer.

14. SPDS - the presence or absence of the I&C and associated characteristics on the SPDS Computer is noted in the "Y" and "N" columns.

15. PAMP - the presence or absence of the I&C and associated characteristics on the post accident monitoring panels 1, 2, 3 and 4 is noted in the "Y" and "N" columns.

16. HSDP - the presence or absence of the I&C and associated characteristics on the hot shutdown panel is noted in the "Y" and "N" columns.

17. COMMENTS - any comments related to scenario execution, task performance, or the accompanying task requirement columns (the balance of the task analysis worksheet).

Figure 1.2-5. Task Analysis Worksheet Fields (Columns) Definitions (con't).

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The remaining columns of the Task Analysis Form will be utilized during the Verification and Validation (V&V) phases which are described below:

5. Once the Tasks, Decision Requirements, and Information and Control requirements have been specified, the existing Instrumentation and Controls (I&C) that the operator uses or can use for each procedural step will be documented based on the control room inventory. All I&C needed or available to either (1) initiate, maintain or remove a system from service, (2) confirm that an appropriate system response has or has not occurred, i.e., feedback, or (3) make a decision regarding plant or system status, will be listed in the "Means", "I&C No." and "Panel" columns. The "Means" column refers to how the information and control requirements are presented on the existing control boards (e.g., switch, meter, etc.). The "I&C No." column provides the specific identification number of the control or instrument. The "Panel" column provides the specific panel number the control or instrument is located on.

6. Verification column (used during V&V phase)

   - "Availability" of the necessary I&C required for successful operator task performance is noted by a "Yes" or "No" in this column.

   - "Suitability" of the existing I&C to meet the postulated information and control requirements for operator tasks is noted by a "Yes" or "No" in this column.

7. SPDS, PAMP, and HSDP (used during V&V phase)

   During V&V, presence or absence of information and control requirements on the SPDS, PAMP, or HSDP will be noted by "X-ing" either the "Yes" or "No".

8. Comments and Candidate HEDs

Comments or candidate HEDs can be noted in this column during any step of the Task Analysis or V&V phases. Data for HEDs will be entered on a HED form and into the computerized database

9. During the validation phase, the identification of which member of the operating crew is performing each task will be recorded in the "Crew Member" column.

10. During the validation phase, the Location of the crew member when performing the task will be recorded in the "Location" column.

The Task Analysis Worksheet thus serves as the complete record of operator tasks, decisions, information and control requirements, and I&C availability and suitability during the selected emergency operating sequences. This record is developed through the series of steps described above. All task data will be entered into a CRDR computerized database (see Activity 4).

1.2.4 Activity 4: Data Entry/Modify Data in GP IBM PC DBASE III Program

This is a continuous task performed throughout the project. The task statements, and information on the task analysis worksheets including information and controls characteristics will be continually evaluated to reflect changes, additions, and delections. Any data base changes initiated are reviewed by the team members before changes are made. All changes are verified after entry into the data base.

Data entry and changes are executed with a General Physics IBM PC DBASE III Program.

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1.2.5 Activity 5: Perform Control Room Inventory

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The purpose of a Control Room Inventory is to provide a current listing of all instruments, controls, and equipment in the control room and hot shutdown panel that the operators interface with during the course of their assigned activities. The Inventory will also include the Post Accident Monitoring Panels 1, 2, 3, and 4. The information and control requirements developed from the task analysis is compared with the control room inventory to determine whether the I&C needed to support DCNPP emergency operations are available.

Documents used to perform this activity are: Control panel photos, purchase orders, control panel layout drawings, Panels Bill of Materials, etc. The inventory will consist of data, in the form of equipment characteristics, that will be entered on an Equipment Characteristics form (see Figure 1.2-6). This form will comprise the inventory control documentation. This documentation will also be entered into a computerized database.

The following types of inventory data will be transfered onto the equipment characteristics forms; the numbers in the list correspond to the numbers of the data input areas on the form:

1. Panel I.D. - the specific panel identification code. It can be a letter code or a number code.

2. Reviewer and Date - the name of the person filling out the equipment characteristics form and the date it was performed.

3. I&C Description - this is the noun name description of the instrument or control as it appears on the panel. The parameter measured should be included as the last part of the I&C Description where applicable.

4. I&C Tag Number - this is the alpha-numeric identification code given to an instrument or control.

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5. Instrument Type - this is either a switch, meter, recorder, controller, potentiometer, pushbutton, indicator light, etc.

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6. Range - this is the meter range from minimum to maximum on the scale.

7. Units - the standard of measurement such as GPM, AMPS, INCHES, RPM, etc.

8. Divisions and Scale - the divisions are listed as major and minor graduations. The scale is either log or linear.

9. Control and Lights - for a control, list all of the switch positions (i.e., open-normal-close). For lights, list the color and its meaning when illuminated.

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EQUIPMENT CHARACTERISTICS

Reviewer: ____________________

Panel ID: ____________________

Date: ____________________

I & C Description and Parameter	I & C Number	Inst. Type: SW/Meter/ Recorder/Controller	Range	Units	Divisions: Major/Minor Scale: Log/Linear	Control: SW Positions Lights: Color/Meaning

Figure 1.2-6 Equipment Characteristics Form

1.2-6 Activity: Verification of Task Performance Capabilities

The purpose of the Verification of Task Performance Capabilities is to systematically verify that the Instrumentation and Controls that were identified in the Task Analysis as being required by the operator are:

- Present in the Control Room or Hot Shutdown Area

- Effectively designed to support correct task performance.

The Verification of Task Performance Capabilities will utilize a two-phase approach to achieve the purpose stated above. In the first phase, the presence or absence of the Instrumentation and Controls that were noted in the Task Analysis Worksheets will be confirmed. This will be done by comparing the postulated requirements in the "Information and Control Requirements" column of the Task Analysis Form to the actual control room I&C listed in the "I&C Identification" columns and referenced in the Control Room Inventory.

a. I&C Availability

The presence or absence of the required Instrumentation and Controls will be noted by a "Yes" or "No" in the "Availability" column of the Task Analysis form. If it is discovered that required Instrumentation and Controls are not available to the operator, any such occurrence will be identified as an HED and documented accordingly on an HED form.

A result of the verification of I&C availability will be a control room inventory listed in the task analysis worksheet columns, labeled "I&C Identification". The parameter, range, scaling units, and related information is compiled on a separate inventory listing (see Activity 5). A separate review of the I&C identified above will be done to verify that direct (rather than indirect) indications of parameters are provided.

b. I&C Suitability

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The second phase will determine the human engineering suitability of the required Instrumentation and Controls by comparing them against the criteria shown on Figure 1.2-7. For example, if a meter utilized in a particular procedure step exists in the control room, that particular meter will be examined to determine whether or not it has the appropriate range and scaling to support the operator in the corresponding procedural step. If the range and scaling were appropriate, it will be noted by placing "Yes", in the "Suitability" column of the Task Analysis Form. Conversely, if the meter range or scaling is not appropriate for the parameter of interest to the operator, "No" will be written in the "Suitability" column of the Task Analysis Form. This type of occurrence will be defined as an HED and documented accordingly on an HED form. The suitability review of I&C will be performed by an operations expert, an I&C engineer, and a human factors engineer as specified in Figure 1.2-7.

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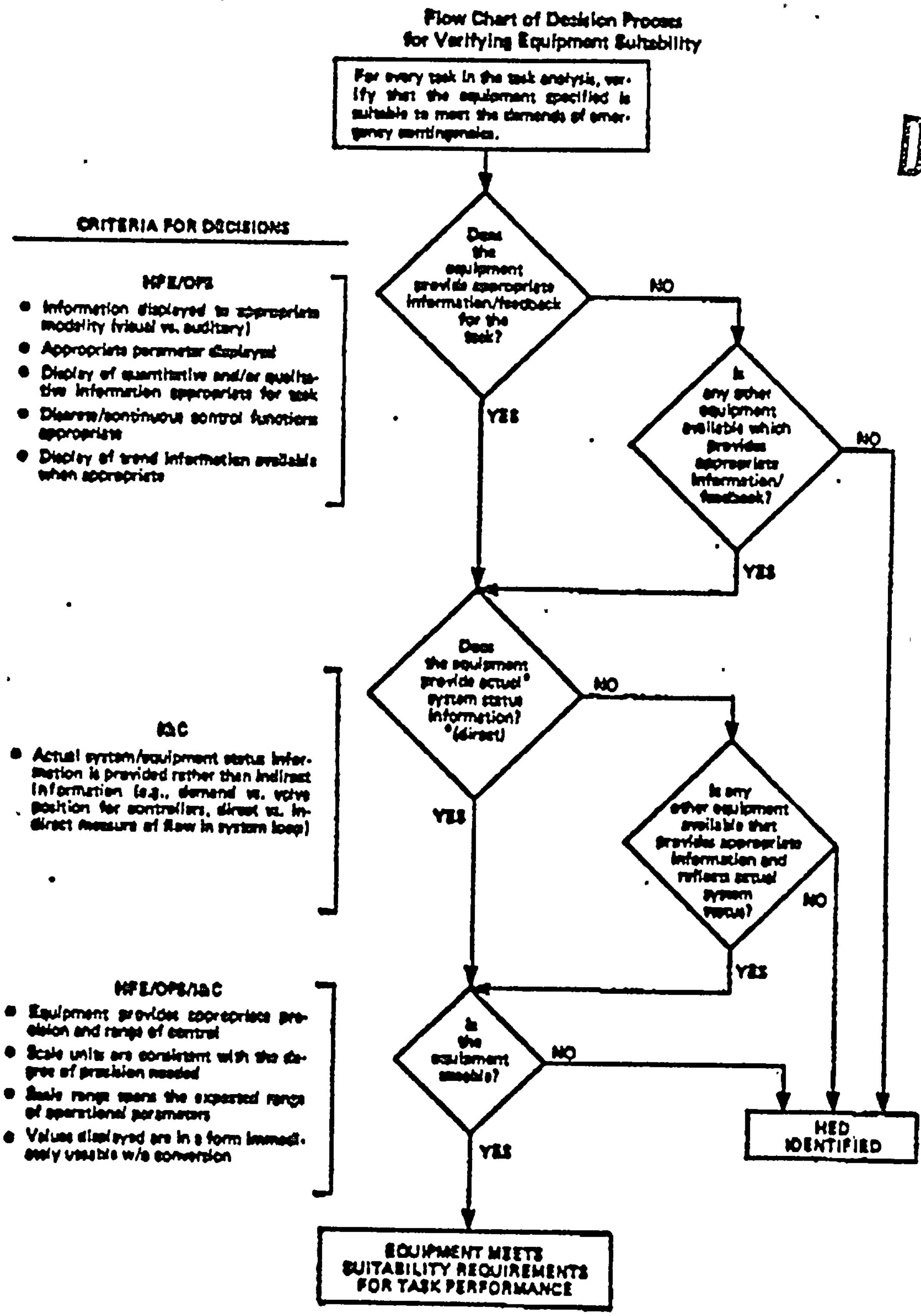

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Figure 1.2-7. Flowchart of Decision Process for Verifying Equipment Suitability

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1.2.7 Activit[illegible] Validation of Control Room [illegible]ctions

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Utilizing the Task Analysis Worksheets (Operator Tasks, Information and Control Characteristics Requirements, etc.) walkthroughs will be performed in the simulator (if available) for each scenario developed (e.g., Spurious Safety Injection, LOCA, Loss of Secondary Coolant, ATWS) with DCNPP control room operators. The walkthroughs will be directed by GP Human Factors specialists, operations specialists and PG and E I&C Engineers.

The walkthroughs will first be performed in real-time. The purpose of the real-time walkthrough is to evaluate the operational aspects of the control room design in terms of control/display relationships, display grouping, control feedback, visual and communication links, manning levels and traffic patterns. During the walkthroughs, observers will note any dynamic performance problems on the comments field of the Task Analysis Worksheet. Figure 1.2-8 will serve as a guide during these observations.

Following each real-time walkthrough of a scenario, the operators will perform the walkthrough at a slower place. During these slow walkthroughs, operators will be instructed to speak one at a time and describe their actions. Since this will force serial action, the operations will not be performed simultaneously.,

Specifically, the operators will verbalize:

- The component or parameter being controlled or monitored
- The purpose of the action
- The expected result of the action in terms of system response.

As the operators walk through the event, they will point to each control or display that they utilize, and indicate which annunciators are involved.

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The operators who performed the event will review the Task Analysis Worksheets along with human factors specialists. The operators will be asked to note any errors or problems that were encountered in the walkthroughs and to expound upon the source of the errors or problems. These errors or problems will be documented for investigation as possible HEDs. For each task, the following types of information will be recorded:

- An indication that the scenario response was accomplished will be noted in the "Scen. Resp." column.

- The identification of which member of the operating crew is performing the task. This was noted in the "Crew Member" column on the Task Analysis Worksheet. (From real-time walkthrough).

- The location of the crew member when performing the task in the "Loc." column. (From real-time walkthrough).

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ISSUES TO BE ADDRESSED DURING VALIDATION
AND SUPPORTED BY WALK-THROUGHS

1. Are all required displays and controls reachable and readable?

2. Does placement of the controls and related displays require one person to read and display while another manipulates the control?

3. Does the arrangement of the control room tend to cause members of the crew to get in each other's way?

4. Can the tasks listed in the scenario be accomplished by the number of people on shift?

5. Is there confusion as to who is in charge during emergency operations?

6. Is any one operator overburdened?

7. Is there sufficient coordination between control room and support personnel?

8. Are the spatial relationships of work stations/panels appropriate for the demands of the tasks?

9. Are any controls susceptible to accidental activation?

Figure 1.2-8. DCRDR Issues To Be Addressed During Validation and Supported by Walkthroughs

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- A verification of the specific decisions and contingent actions that are associated with each operator task. This will include communications between and among crew members. (From real-time walkthroughs)

- A verification of the Instrumentation and Controls required in the associated procedural step, for example, an indicating light on a controller energizing to red, or a pointer on a meter deflecting upward. This will be added to the "I&C Ident." column on the Task Analysis Worksheet. (From slow walkthroughs)

- Comments related to verification or validation and potential HEDs. (From fast and slow walkthroughs).

Walkthroughs will be videotaped to fully document the tasks involved for all crew members and the candidate human engineering discrepancies which may arise. Once the events have been analyzed to extract the information noted above, Link Analyses, which trace the movement patterns of the operating crew in the control room, will be prepared to assess whether the control room layout hinders operator movement while performing the events.

Any dynamic performance problems that were uncovered during this phase of the CRDR process will be documented for review in the HED assessment phase of the CRDR.

1.3 Results

All findings from the Systems Function Review and Task Analysis Phase will be documented on HED forms. The forms will contain a description of the findings as well as the source, panel, and instruments found discrepant from Human Factors Criteria. The HED forms will be maintained in the computerized DBMS for retrieval and update during the Assessment and Implementation Phase.

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Enclosure 3

UNIT 2 LOAD REJECTION/REDUCTION TESTING

UNIT 2 LOAD REJECTION/REDUCTION TESTING

	Test/Date	Test Results	Cause	Corrective Action
1.	S. U. Test 43.7, Net Load Rejection From 50% Power, November 6, 1985	Unacceptable. Reactor trip due to low-low steam generator level. LER 2-85-013 issued on December 6, 1985.	The turbine intercept valves electro-hydraulic control (EHC) size of the orifice was too small causing the intercept valves to open too slowly following their closure. The interaction between the valves and the steam dump system resulted in an increase in steam generator pressure and consequent reduction in level.	The size of the orifices supplying hydraulic fluid to the turbine intercept valves hydraulic system was increased to improve the valves' response time per Westinghouse recommendation.
2.	S. U. Test 43.7, Net Load Rejection From 50% Power, November 14, 1985	Successfully completed without trip.	NA	NA
3.	S. U. Test 43.3, 50% Load Reduction From 75% Power, November 26, 1985	Unacceptable. Reactor trip and safety injection due to high steam flow with steam line low pressure. LER 2-85-016 issued on December 24, 1985.	Adjustment of steam dump valves did not compensate for transient. All dump valves opened, increasing steam flow to the trip setpoint.	Steam dump valves response was analyzed and readjusted.
4.	S. U. Test 43.3, 50% Load Reduction From 75% Power, December 7, 1985.	Unacceptable. Reactor trip and turbine trip due to high-high level in steam generator 2-2. LER 2-85-016 issued on December 24, 1985.	Feedwater control system setting did not properly compensate for transient. Heating of cool feedwater introduced into steam generators caused water level to swell to trip setpoint.	Feedwater control system settings were analyzed and readjusted.

UNIT 2 LOAD REJECTION/REDUCTION TESTING

(Continued)

	Test/Date	Test Results	Cause	Corrective Action
5.	S. U. Test 43.3, 50% Load Reduction From 75% Power, December 7, 1985	Successfully completed without trip.	NA	NA
6.	50% Load Reduction From 100% Power	Successfully completed without trip.	NA	NA
7.	S. U. Test 43.2, Full Load Rejection Test, December 25, 1985	Unacceptable. Automatic reactor and turbine trips due to low-low steam generator water level. LER 2-85-024 to be issued.	Slow response of steam dump control system caused steam generator pressure increase resulting in steam generator level shrink.	Modified steam dump control system by installing volume boosters on all 40 and 35 percent steam dump valves to improve their response time.
8.	S. U. Test 43.2, Full Load Rejection Test, January 2, 1986	Unacceptable. Reactor trip from low-low steam generator water level, LER 2-86-00X tentative.	Technical Review Group to determine exact cause.	Technical Review Group to determine exact corrective action.

MEETING SUMMARY DISTRIBUTION
OPERATING REACTORS BRANCH NO. 1

Docket or Central file
NRC PDR
Local PDR
PAD#3 RDG
Steve Varga
H. Schierling
OELD
E. Jordan
B. Grimes
ACRS (10)
Plant Service List
C. Vogan

NRC Participants

V. Benaroya
A. Gill
S. Israel
J. Knight
W. Swenson
Robert Fell
Ted Quay
Richard Serbu
James Shapaker
Amarjit Singh
Goutam Bagchi
Richard Eckenrode
Carol Kain
John Stokley
Neil Thompson
Sy Weiss

Meeting. Jan