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# DOE STANDARD

## GUIDE TO GOOD PRACTICES FOR CONTROL AREA ACTIVITIES



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**AREA MISC**

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*Guide to Good Practices for Operations Turnover*

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## **FOREWORD**

The purpose of this Guide to Good Practices is to provide Department of Energy (DOE) contractors with information that can be used to validate and/or modify existing programs relative to Conduct of Operations. This Guide to Good Practices is part of a series of guides designed to enhance the guidelines set forth in DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities*.

## **KEYWORDS**

Ancillary Duties

At-the-Controls Area

Control Area

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## **DEFINITIONS**

Ancillary Duties	Those activities that may be performed by an operator that are not directly related to their prime responsibility, such as the operation and monitoring of equipment.
“At-the-Controls” Area	A designated area where special access and controls are necessary. Examples of which may be the space in front and to the immediate sides of a control panel, control station, computer terminal, etc. The area where facility, work station, or experiment controls (e.g., switches, knobs, buttons) are located.
Control Area (Control Room)	The physical area (e.g., room, booth, desk) where the facility or portions of the facility operations are monitored and controlled.
Turnover	The process of formally transferring duties and responsibilities from one person to another.

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## **GUIDE TO GOOD PRACTICES FOR CONTROL AREA ACTIVITIES**

### **1. INTRODUCTION**

This Guide to Good Practices is written to enhance understanding of, and provide direction for, “Control Area Activities,” Chapter III of Department of Energy (DOE) Order 5480.19, Conduct of Operations Requirements for DOE Facilities. The practices in this guide should be considered for controlling the activities in control areas. Contractors are advised to adopt methods that meet the intent of DOE Order 5480.19.

“Control Area Activities” is an element of an effective Conduct of Operations program. The complexity and array of activities performed in DOE facilities dictate the necessity for maintaining a formal environment in operational control areas to promote safe and efficient operations.

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## 2. OBJECTIVE

The objective and criteria are derived from DOE Order 5480.19. They are intended to aid each facility in meeting the intent of the order.

Control area activities are conducted in a manner that achieves safe and reliable facility operation.

Criteria:

- a. Control area access is limited to only personnel on official business.
- b. Professional behavior is displayed in the control area.
- c. Main control panels are properly monitored.
- d. Control area equipment is operated only by authorized personnel.
- e. Ancillary duties assigned to control area personnel do not interfere with their ability to monitor facility parameters.

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### 3. DISCUSSION

The control area of a DOE facility is the focal point of safe and efficient facility operations. It is a central operating base and coordination point for important facility activities. A control area may range in size from a desk or computer terminal to a room of instrumentation and control panels. Whatever the size, a professional atmosphere must be maintained so activities performed in the control area remain focused on the operation of the facility. A properly organized and structured control area should enhance safe and efficient operations.

Large facilities may have a central control area for coordinating overall facility operations and several other areas designated as control areas for specific portions of the facility. Similarly, small facilities may have only one designated area that controls operations. The guidance provided in this document can be used to enhance facility operations in either situation.

DOE Order 5480.19, Chapter III, "Control Area Activities," deals only with situational elements specific to the control area. The information contained in this guide should be used in addition to the information contained in DOE Order 5480.19, Chapter II, "Shift Routines and Operating Practices," to ensure that shift routines for control areas are properly addressed.

Control of access is the key to limiting the number of personnel in the control area. By limiting the number of personnel in the control area, the associated noise, confusion, and possible distractions will be minimized. Access must be controlled to maintain a formal, disciplined atmosphere that promotes teamwork and professionalism.

Professional, businesslike behavior by personnel will enhance the quality of control area activities. Although this behavior is the focus in each chapter of the guidelines to DOE Order 5480.19, nowhere is there more of a need for this type of behavior than in the control area. Whether it is in communications, logkeeping, turnover, or any of the other chapters,

these professional practices embody high standards of technical and ethical performance and help build a foundation for safe and reliable facility operation. Professional behavior during normal operations carries over to handling off-normal and emergency situations safely and efficiently. Maintaining a clean, quiet, neat and orderly environment enhances control area professionalism. Also, this type of environment makes it easier to operate and makes a positive statement about the personnel working there.

Monitoring the instrumentation and control panels in the control area provides personnel with current facility operating information and a means of detecting abnormal conditions before they become problem situations. Although some of the parameters displayed in the control area may also be displayed locally, the control area provides a central area for displaying and monitoring these parameters.

Besides providing an area for consolidating remote indications, the control area may have controls for operating facility equipment. These controls could be used to operate remote equipment in areas with high personnel hazards (e.g., radiation areas, toxic environments) or emergency equipment. In either case, unauthorized operation of controls may hinder facility operation, stop facility operation, or create an adverse environmental, safety, or health situation. These situations can be avoided by identifying who has the authority and responsibility to operate control area equipment.

Monitoring and operating the instrumentation and control panels are the primary responsibilities of control area personnel. When ancillary responsibilities are assigned, they compete with the primary responsibilities for the time and attention of control area personnel. Overburdening control area personnel with ancillary responsibilities will distract them from properly monitoring facility parameters. A structured program for assigning ancillary duties will prevent this situation.



## 4. GOOD PRACTICES

### 4.1 Control Area Access

Facility policies should state access requirements for control areas. In special cases, which involve security concerns, access may need to be more rigidly enforced through security policies and procedures. Access requirements should include permission to enter, when (i.e., time periods) personnel are allowed to enter, and under what conditions personnel may enter. The policies should also indicate the positions of personnel who have authorization to enter the control area without permission (e.g., Operations Manager, on-duty Shift Supervisor). Personnel should be instructed to adhere to procedures and restrictions for entering a control area. As a reminder to personnel, control area entrances should be posted with the access requirements. Access to control areas that are open (i.e., no walls or partitions) may require additional guidance (e.g., communicating from outside the control area into the area, what constitutes entry into the control area).

Access to the control areas of a facility should be limited to personnel on official business. Access should not be granted when additional personnel would obstruct the ability to monitor or control. Since information transfer in the control area is crucial to safe operations, during periods of turnover, access should be restricted to on-coming control area personnel needed for the turnover. For information concerning turnovers, refer to DOE Order 5480.19, Chapter XII, "Operations Turnover." This should reduce the distractions from monitoring of the control panels and associated noise generated from additional personnel. During abnormal or emergency operations, entry should be limited to personnel attending to the situation. Reports should be communicated from outside work stations through work station communication equipment instead of attempting to access the control area. Access for non-work-related reasons should be

prohibited. Necessary facility-related technical and administrative business should be conducted at a location that compromises neither control area personnel attentiveness nor the professional atmosphere.

Access to a control area should be controlled by a designated individual, normally the lead control area person (e.g., cognizant manager, cognizant supervisor, lead operator). Permission to enter the control area should be obtained from this individual. Personnel should know who is designated to grant access.

Control areas may contain one or more control panels. These panels should be clearly identified as “at-the-controls” areas. Their boundaries should be understood by all personnel (e.g., colored tape on the floor, chains or bars placed across the area). Facility policy should state who may grant permission to enter the “at-the-controls” areas. Permission should be obtained from this person before entry. A list of personnel who have authorization to enter, based on their job duties and responsibilities (e.g., control panel operators, control area supervisors), should be established so that these persons can access the area without acquiring additional permission. Access for additional persons into “at-the-controls” areas should be restricted to those personnel who need to be in the area (e.g., maintenance personnel, test engineers).

## **4.2 Professional Behavior**

A formal, professional atmosphere is necessary in the control area. Only activities essential to supporting facility operation and activities authorized by management should be conducted in the control area. Control area personnel should direct their full attention to monitoring and controlling their facility operations. Potentially distracting activities (such as radio listening, reading of non-facility-related information, game playing, and horseplay) should be prohibited. Personnel should not linger in the control area; they should exit the control area when their business is complete. Non-work-related discussions should be minimized.

### 4.3 Monitoring the Main Control Panels

Control area personnel monitor instrumentation and control panels to ensure that the facility is operating safely. They should be alert and attentive to indications and alarms. Control panel indications should be frequently scanned, with emphasis on trending, to detect problem situations early. Prompt action should be taken to determine the cause of abnormalities and correct the problem situation.

Facilities should develop procedures that dictate alarm response actions. Response to alarms should be timely. Control area personnel should inform the lead control area person of each alarm and take actions to identify and correct its cause(s). All reasonable action should be taken to clear alarming conditions. The abnormal conditions resulting from the alarm should be monitored more frequently until they have returned to normal.

Instrumentation and control panel indications should be monitored with increased frequency during evolutions that affect them. When the indications stabilize, monitoring frequency can return to normal. The number of evolutions affecting instrumentation and control panel indications performed concurrently should be limited so that personnel can detect and respond to abnormal conditions appropriately. If necessary, the lead control area person should stop one or more of the evolutions or assign additional personnel to assist in monitoring. The lead control area person should ensure that monitoring of non-affected indications continues during these situations.

If computer or automated monitoring and control systems are used, they should be monitored for proper operation. In addition, manual response should backup these systems. For example, if a variable exceeds an action setpoint and the action does not occur, personnel should initiate manual action. It must be understood in these cases, control area personnel still have the responsibility to monitor and control facility operation.

#### **4.4 Operation of Control Area Equipment**

Duties and responsibilities for control area personnel during normal, abnormal, and emergency situations should be well defined. Administrative policies and procedures should specify the personnel requirements for operation of control area equipment. Operation of control area equipment should be performed only by authorized personnel. Equipment to be controlled and monitored by each control area person should be specified. Control area personnel should receive training on their duties and responsibilities.

A list of personnel authorized to operate control area equipment should be maintained in the control area. Trainees who operate control area equipment should be supervised and controlled by the person who is authorized to operate that equipment. The person supervising should not allow the trainee to perform operations without direct supervision. For more information about supervising trainees, refer to DOE Order 5480.19, Chapter V, “Control of On-shift Training.”

#### **4.5 Control Area Ancillary Duties**

Ancillary duties of control area personnel should not affect their ability to monitor and operate instrumentation and control panels. Their administrative duties should be minimized. Activities such as preparation of lockouts and tagouts, review of maintenance work activities, assisting maintenance groups, required reading, or housekeeping should be conducted to minimize the effect on their primary duties and responsibilities. Administrative activities not required to be performed within the “at-the-controls” area should be assigned to other personnel.

Facility policies and procedures should address ancillary duties and responsibilities. Within the control area, the lead control area person should have the responsibility for ensuring that ancillary duties do not compromise primary job duties. Ancillary duties should not be performed during off-normal or emergency situations. These situations

should command the complete attention of the control area personnel. Control area personnel should be instructed on the importance of not allowing their ancillary duties to interfere with their primary duties and responsibilities.

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## **SUPPLEMENTAL RESOURCES**

The following sources provide additional information pertaining to topics discussed in this Guide to Good Practices:

DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, Chapter II, “Shift Routines and Operating Practices.”

DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, Chapter III, “Control Area Activities.”

DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, Chapter V, “Control of On-Shift Training.”

DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, Chapter XII, “Operations Turnover.”

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**CONCLUDING MATERIAL**

**Review Activities:**

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