

AUDIT REPORT

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Audit of NRC's Oversight of the
Access Authorization Program for Nuclear Power Plants

OIG-10-A-21 September 30, 2010



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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

**OFFICE OF THE
INSPECTOR GENERAL**

September 30, 2010

MEMORANDUM TO: R. William Borchardt
Executive Director for Operations

FROM: Stephen D. Dingbaum */RA/*
Assistant Inspector General for Audits

SUBJECT: AUDIT OF NRC'S OVERSIGHT OF THE ACCESS
AUTHORIZATION PROGRAM FOR NUCLEAR POWER
PLANTS (OIG-10-A-21)

Attached is the Office of the Inspector General's (OIG) audit report titled, *Audit of NRC's Oversight of the Access Authorization Program for Nuclear Power Plants*.

The report presents the results of the subject audit. Agency comments provided at the August 25, 2010, exit conference have been incorporated, as appropriate, into this report.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this memorandum. Actions taken or planned are subject to OIG followup as stated in Management Directive 6.1.

We appreciate the cooperation extended to us by members of your staff during the audit. If you have any questions or comments about our report, please contact me at 415-5915 or Beth Serepca, Team Leader, Security and Information Management Audits, at 415-5911.

Attachment: As stated

EXECUTIVE SUMMARY

BACKGROUND

The Nuclear Regulatory Commission (NRC) has promulgated regulations requiring that its licensees implement an access authorization program to provide high assurance that individuals who are granted unescorted access and those individuals who maintain unescorted access to nuclear power plants are trustworthy and reliable and do not constitute an unreasonable risk to public health and safety, including the potential to commit radiological sabotage.

NRC inspects licensee access authorization programs to verify that licensees are implementing programs in accordance with NRC regulations and the facilities' security plans. Regional security inspectors conduct these inspections on a triennial cycle. Specifically, these inspectors look to provide assurance that a licensee's access authorization program and its implementation process and procedures ensure individuals granted unescorted access are trustworthy and reliable.

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Sharif Mobley was arrested and charged in Yemen as a suspected member of al Qaeda in March 2010. Prior to his arrest, Mobley worked as a general laborer at six nuclear power plants in the United States between 2002 and 2008. Mobley's arrest prompted congressional interest and in early 2010, following Mobley's arrest, Senator Charles Schumer and

Congressman William Owens sent letters to NRC's Inspector General requesting a thorough and comprehensive review of NRC's process requirements for licensees granting unescorted access at nuclear power plants.

In light of the Sharif Mobley incident, NRC is evaluating the access authorization process and NSIR's interface with the FBI's Terrorist Screening Center. NRC has made some initial enhancements to certain aspects of the access authorization program.

PURPOSE

The purpose of this audit was to determine the effectiveness of NRC's oversight of nuclear power plant access authorization programs. Appendix A contains more information on the audit scope and methodology.

RESULTS IN BRIEF

This audit found that program performance could be enhanced by implementing Office of the Inspector General (OIG) recommendations regarding:

- Behavioral Observation Program training requirements.
- PADS database access.
- NRC's procedures for screening individuals granted unescorted access.

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RECOMMENDATIONS

This report makes recommendations to improve the agency's oversight of the access authorization program for nuclear power plants. A consolidated list of these recommendations appears in Section V of this report.

AGENCY COMMENTS

At an August 25, 2010, exit conference, agency senior managers generally agreed with the audit findings and recommendations and provided editorial suggestions for OIG's consideration. This final report incorporates revisions made, where appropriate, as a result of the agency's suggestions.

ABBREVIATIONS AND ACRONYMS

CFR	Code of Federal Regulations
FBI	Federal Bureau of Investigation
NRC	Nuclear Regulatory Commission
NSIR	Office of Nuclear Security and Incident Response
OIG	Office of the Inspector General
PADS	Personnel Access Data System
SSN	Social Security Number

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I. BACKGROUND

The Nuclear Regulatory Commission (NRC) has promulgated regulations requiring that its licensees implement an access authorization program to provide high assurance that individuals who are granted unescorted access and those individuals who maintain unescorted access to nuclear power plants are trustworthy and reliable and do not constitute an unreasonable risk to public health and safety, including the potential to commit radiological sabotage. Following the terrorist attacks of September 11, 2001, the Commission issued a series of security orders to ensure that nuclear power plants continued to have effective security measures in place given the changing threat environment. Licensees revised their physical security plans, access authorization programs, security officer training and qualification plans, and safeguards contingency plans in response to these orders.



Figure 1. Limerick Nuclear Power Plant
Source: NRC

Operating nuclear power plants need workers with unescorted access during normal operations and scheduled outages (power generation shutdowns) for required maintenance. Some

scheduled outages, such as refueling or steam generator overhaul, are quite extensive and time consuming. During a scheduled outage, a significant additional work force with specific skills is required. This type of work cycle leads to a continuous and ongoing need for temporary workers who must have access to nuclear power plants. Many of these workers move from one nuclear power plant, when the required work is completed, to the next plant that is commencing its maintenance outage.

Congressional Requests for Audit

Sharif Mobley was arrested and charged in Yemen as a suspected member of al Qaeda in March 2010. Prior to his arrest, Mobley worked as a general laborer at six¹ nuclear power plants in the United States between 2002 and 2008. Mobley had unescorted access to these sites; however, he did not have access to safeguards information² or computer systems. **OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE** Based on discussions with affected licensees, NRC management stated that there was no evidence to indicate that Mobley had been “radicalized” prior to his most recent employment at Salem/Hope Creek.

¹Sharif Mobley primarily worked at Salem/Hope Creek [New Jersey] (76 weeks). He also worked at Three Mile Island [Pennsylvania] (2 weeks), Peach Bottom [Pennsylvania] (4 weeks), Limerick [Pennsylvania] (4 weeks), and Calvert Cliffs [Maryland] (2 weeks). The Salem/Hope Creek power plants, although located next to each other, operate under separate licenses.

² Safeguards information – An NRC categorization for information, which, if disclosed, could reasonably be expected to have a significant adverse effect on the health and safety of the public and/or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of materials or facilities subject to NRC jurisdiction.

Mobley's arrest prompted congressional interest and in early 2010, following Mobley's arrest, Senator Charles Schumer and Congressman William Owens sent letters to NRC's Inspector General requesting a thorough and comprehensive review of NRC's process requirements for licensees granting unescorted access at nuclear power plants.

Obtaining Unescorted Access

Unescorted access to a nuclear power plant allows an individual access to protected areas.³

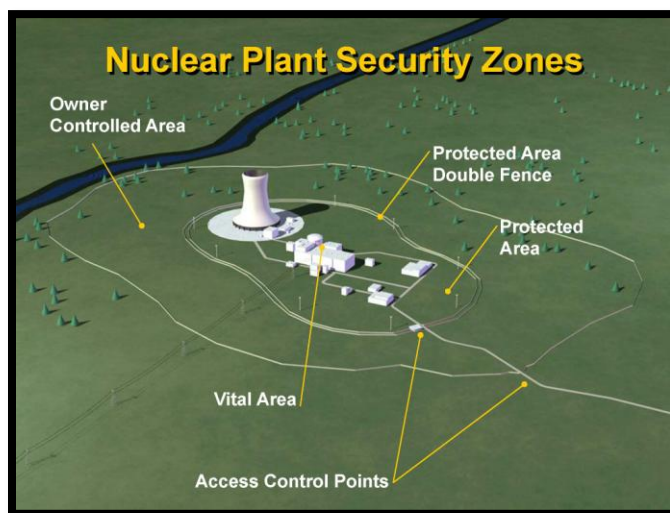


Figure 2. Nuclear Power Plant Security Zones
Source: Nuclear Energy Institute

³ Areas within the protected area that house equipment important for nuclear safety are designated as vital areas. Access to a vital area is allowed only if an individual has been authorized to be in that area. Licensees grant access to vital areas of the plant based on the job specific duties of each individual. Licensees are required to establish a current access authorization list for all vital areas. The access list must be updated by the cognizant licensee manager or supervisor at least every 31 days and must be reapproved at least quarterly. The licensee must include on the access list only individuals whose specific duties require access to vital areas during non-emergency conditions.

Obtaining unescorted access requires that an individual satisfactorily complete all NRC regulatory requirements established in the access authorization program. The primary requirements that individuals must satisfy when initially applying for unescorted access and during periodic reinvestigations⁴ consist of the following:

- **A background investigation** that includes a verification of true identity, employment verification with a suitable inquiry (i.e., education in lieu of employment and military service as employment), a credit check, and character and reputation determination. Many licensees use specialized security screening companies (contractors) to conduct these background investigations, although the licensee is required to adjudicate the results.
- **A criminal history check** is used as an evaluative measure to assist in the determination of whether the individual has a record of criminal activity that may adversely affect his or her trustworthiness and reliability. Licensees are required to collect fingerprints from applicants and forward them to NRC's Division of Facilities and Security. The Division of Facilities and Security acts as a conduit and submits the fingerprints to the FBI to obtain the applicant's criminal history record information. The Division of Facilities and Security sends the FBI investigation results to the licensees, who use them in determining the trustworthiness and reliability of an individual.
- **A psychological assessment** that provides information to identify indications of disturbances in personality or psychopathology and to assist in evaluating the possible

⁴ Most reinvestigations are required to be completed at intervals not to exceed 5 years, although reinvestigations for individuals classified as belonging to the "critical group" are required to be completed at intervals not to exceed 3 years. Critical group individuals have extensive knowledge of defensive strategies and design and/or implementation of the plant's defense strategies.

adverse impact of any noted psychological characteristics on the individual's trustworthiness and reliability.

- ***Drug testing*** of all applicants for the use of illegal drugs occurs during the initial application process for unescorted access. Additionally, when a pre-access drug sample is collected, the individual is then placed in an approved random testing program that satisfies NRC requirements.

Maintaining Unescorted Access

Federal regulations⁵ require participating in a Behavioral Observation Program and a Fitness-for-Duty Program to maintain unescorted access. These programs are elements of a licensee's overall access authorization program that assist in the oversight and monitoring of individuals granted unescorted access. Behavioral Observation Program training educates staff to recognize and report behaviors adverse to the safe operations and security of the facility and/or aberrant behavior that might adversely affect an individual's trustworthiness or reliability. A Fitness-for-Duty Program's objective is to provide reasonable assurance that individuals are not under the influence of any substance that would adversely affect their ability to safely and competently perform their duties.

⁵ Title 10, Code of Federal Regulations (CFR), Part 26 subparts b & c, and 10 CFR 73.56.



Figure 3: Calvert Cliffs Nuclear Power Plant
Source: NRC

NRC's Role in Access Authorization

NRC inspects licensee access authorization programs to verify that licensees are implementing programs in accordance with NRC regulations and the facilities' security plans. Regional security inspectors conduct these inspections on a triennial cycle. Specifically, these inspectors look to provide assurance that a licensee's access authorization program and its implementation process and procedures ensure individuals granted unescorted access are trustworthy and reliable. If there are any inspection findings, inspectors also present these findings to the licensee's management and conduct followup inspections to ensure that the licensee has taken corrective action.

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II. PURPOSE

The purpose of this audit was to determine the effectiveness of NRC's oversight of nuclear power plant access authorization programs. Appendix A contains more information on the audit scope and methodology.

III. FINDINGS

NRC's access authorization requirements are intended to provide high assurance that individuals granted unescorted access to nuclear power plants are trustworthy and reliable and do not constitute an unreasonable risk to public health and safety, including the potential to commit radiological sabotage. Reports that Sharif Mobley, a suspected member of al Qaeda, worked at several nuclear power plants prompted congressional requests for the Office of the Inspector General (OIG) to conduct this audit. This audit found that program performance could be enhanced by implementing OIG recommendations regarding:

- Behavioral Observation Program training requirements.
- PADS database access.
- NRC's procedures for screening individuals granted unescorted access.

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A. Behavioral Observation Program Training

One of the Behavioral Observation Program's stated objectives is to detect and report behavior that may constitute an unreasonable risk to the public health and safety, including a potential threat to commit radiological sabotage. **OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE**

Objective of the Behavioral Observation Program

One of the Behavioral Observation Program's objectives is to detect and report behavior that may constitute an unreasonable risk to public health and safety, including a potential threat to commit radiological sabotage. **OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE**

Behavioral Observation Program training is mandatory for all individuals who are designated for unescorted access or are maintaining their unescorted access to a nuclear power plant.

The training addresses the knowledge and abilities necessary to detect behavior or activities that potentially constitute an unreasonable risk and communicates the requirement to report noticeable changes in behavior, activities, or fitness-for-duty concerns about other individuals to management-designated personnel. The training program includes an initial comprehensive examination, annual refresher training, and an annual supervisory review by the individual's immediate supervisor.



Figure 5. Salem Nuclear Power Plant
Source: NRC

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OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE NRC regional security inspectors, who routinely review licensee Behavioral Observation Programs, stated that the essence of the program is to provide personnel with unescorted access tools for how to recognize other employees who are abusing substances. The following table (Figure 4) illustrates some behaviors included, and not included, in current Behavioral Observation Program training.

Training Includes Recognizing and Reporting:	
<p>Personal Health Behaviors</p> <ul style="list-style-type: none"> • Drug and alcohol abuse • Sleepiness-yawning, tired eyes • Increased irritability • Shaky hands or twitching • Dizziness/Fainting 	<p>OFFICIAL USE ONLY – SECTION HAS BEEN REDACTED FOR PUBLIC RELEASE</p>
<p>Social Interaction Behavior</p> <ul style="list-style-type: none"> • Temper outbursts • Refuses social contact • Overly suspicious of others 	

Figure 4. Behavioral Observation Program training comparison
Source: OIG generated

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OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE An internal industry investigation following the Sharif Mobley incident uncovered that Mobley made statements to other employees that could be construed as suspicious. Specifically, one licensee investigative report uncovered that during Mobley's employment at a nuclear power plant, he stated, "We are brothers in the union but if a Holy War comes, look out." Mobley also expressed his belief that Islam is the only true faith and that non-Muslims are infidels. Additionally, Mobley was observed with unusual Web sites on his personal computer, including one with a picture of a mushroom cloud. Although an employee who knew Mobley since 2002 was aware of this information, this information was only brought to light during the course of the investigation. **OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE**

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Recommendation

OIG recommends that the Executive Director for Operations:

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B. PADS Database Access

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Federal Control Standards

The Government Accountability Office's *Standards for Internal Control in the Federal Government* prescribes internal control standards for timeliness, accuracy, and validity of data. These standards require that management ensure there are adequate means for promptly recording transactions to maintain their relevance and value to management in controlling operations and making decisions.

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Figure 6. Hope Creek Nuclear Power Plant
Source: NRC

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Reliance on Licensees

NRC regional inspectors request licensees to provide information from PADS during inspections or on a case-by-case basis if there is a need to query the database for a specific person of interest. Commonly, inspectors will request information by telephone or during nuclear power plant site visits. Licensees then extract the data or run an inquiry in PADS for the inspectors. One inspector reported that during site visits, inspectors must physically look over someone's shoulder while they retrieve the information from PADS for the inspector to verify information presented by licensees. The majority of inspectors interviewed suggested it would be beneficial for NRC to have direct access to PADS.

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Limited PADS access also restricts the inspectors' ability to independently review and analyze PADS data for trends and exceptions prior to actually inspecting the licensee. The validity and/or completeness of licensee provided data is also an area of concern.

Recommendation

OIG recommends that the Executive Director for Operations:

2. Obtain direct access to the Personnel Access Data System (PADS) database.

C. Screening Procedures for Individuals Granted Unescorted Access

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Figure 7. Peach Bottom Nuclear Power Plant

Source: NRC

Internal Control Requirements

Control is any action taken by management to enhance the likelihood of achieving established objectives and goals. Control activities are the policies, procedures, techniques, and

mechanisms that enforce management's directives. Federal standards require that NRC maintain a system of internal controls.

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Management Oversight

NRC planned to develop guidance describing the roles, responsibilities, and expectations of the access authorization program manager to achieve successful oversight of nuclear power plant access authorization programs; however, no formalized guidance exists.

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Recommendation

OIG recommends that the Executive Director for Operations:

- 3. OFFICIAL USE ONLY – RECOMMENDATION HAS BEEN
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IV. OBSERVATIONS

Verification of True Identity

NRC regulations⁶ require that licensees validate the social security number (SSN) that an individual provides prior to granting access to a nuclear power plant. Licensees accomplish SSN validations through background checks of employment history, credit history, and reference checks. **OFFICIAL USE ONLY – SENTENCE HAS BEEN REDACTED FOR PUBLIC RELEASE**



Figure 9. Three Mile Island Nuclear Power Plant
Source: NRC

E-Verify is an Internet-based system, operated by the U.S. Citizenship and Immigration Services, designed to help employers determine employment eligibility of new hires and the validity of their SSNs.

⁶ 10 CFR 73.56(d)(3), *Verification of True Identity*.

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U.S. Citizenship and Immigration Services management stated that under current law,⁷ use of the E-Verify database is restricted to confirming employment eligibility, thereby prohibiting NRC and licensees from gaining access to the system for verifying the SSNs for all licensee contractor employees.

Required Disclosure of Past Employment Information

Licensees are required to verify employment/unemployment history prior to granting access to a nuclear power plant. Background investigators are required to ask previous employers questions regarding an employee's past performance. The past performance questions primarily focus on fitness-for-duty compliance and reason for termination. Both industry and NRC staff stated that many previous employers verify the dates of employment for an applicant, while refusing to answer the past performance questions for fear of litigation. When a licensee is unable to obtain past employment performance information from a previous employer, the use of "best effort" is permitted. Best effort allows a licensee to use employment information obtained from an acceptable alternate or secondary source to determine trustworthiness and reliability. An acceptable alternate source could be a co-worker or a reference on a current application for unescorted access, while an acceptable secondary source could be a pay stub or W-2 form. **OFFICIAL USE ONLY – SENTENCE HAS BEEN
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⁷ Illegal Immigration Reform and Immigrant Responsibility Act of 1996, Public Law 104–208, September 30, 1996.

Disclosure of Foreign Travel

Disclosure of foreign travel is not required on personal history questionnaires used to assist in processing background investigations of individuals seeking to obtain unescorted access to nuclear power plants. Requiring disclosure of foreign travel on personal history questionnaires was an idea conveyed to OIG during interviews. **OFFICIAL USE ONLY – SECTION HAS BEEN REDACTED FOR PUBLIC**

V. CONSOLIDATED LIST OF RECOMMENDATIONS

OIG recommends that the Executive Director for Operations:

1. **OFFICIAL USE ONLY – RECOMMENDATION HAS BEEN REDACTED FOR PUBLIC RELEASE**
2. Obtain direct access to the Personnel Access Data System (PADS) database.
3. **OFFICIAL USE ONLY – RECOMMENDATION HAS BEEN REDACTED FOR PUBLIC RELEASE**

VI. AGENCY COMMENTS

At an August 25, 2010, exit conference, agency senior managers generally agreed with the audit findings and recommendations and provided editorial suggestions for OIG's consideration. This final report incorporates revisions made, where appropriate, as a result of the agency's suggestions.

SCOPE AND METHODOLOGY

The audit objective was to determine the effectiveness of NRC's oversight of nuclear power plant access authorization programs.

To achieve the audit objective, the audit team reviewed pertinent laws, regulations, and agency guidance to identify criteria relevant to managing nuclear power plant access authorization programs. Guidance reviewed included:

- Code of Federal Regulations, Title 10 Section 73.56, *Personnel access authorization requirements for nuclear power plants*, March 27, 2009.
- Illegal Immigration Reform and Immigrant Responsibility Act of 1996, Public Law 104–208, September 30, 1996.
- Nuclear Energy Institute procedure, *Nuclear Power Plant Access Authorization Program*, NEI 03-01 (Revision 3), May 2009.
- Nuclear Energy Institute procedure, *Guideline for Plant Access Training*, NEI 03-04 (Revision 7), December 2009.
- The 2006 Memorandum of Understanding between the Terrorist Screening Center and NRC in support of terrorist screening.
- NRC Inspection Procedure 71130.01, *Access Authorization*, April 1, 2010.

Auditors met with congressional staff to gain an understanding of the requested scope for this audit. In addition to conducting interviews with current and former NRC staff, auditors also interviewed an Access Authorization Program Manager and a background investigation contractor. Interviews with inspectors

from each of NRC's four regions were conducted. Auditors also reviewed access authorization files and analyzed reports. This

work gained auditors an understanding of NRC's oversight of nuclear power plant access authorization programs. Current issues, problems, and known deficiencies were uncovered because of this work.

This performance audit was conducted from April 2010 through July 2010, in accordance with generally accepted Government auditing standards. Those standards require that the audit is planned and performed with the objective of obtaining sufficient, appropriate evidence to provide a reasonable basis for any findings and conclusions based on the stated audit objective. OIG believes that the evidence obtained provides a reasonable basis for the report findings and conclusions based on the audit objective. Internal controls related to the audit objective were reviewed and analyzed. Throughout the audit, auditors were aware of the possibility or existence of fraud, waste, or misuse in the program.

Beth Serepca, Team Leader; Robert Woodward, Audit Manager; Andrea Ferkile, Senior Management Analyst; and Michael Dickerson, Summer Intern, conducted this work. We performed this audit work at NRC headquarters in Rockville, MD; NRC Region I office in King of Prussia, PA; and Exelon Power Headquarters in Kennett Square, PA.