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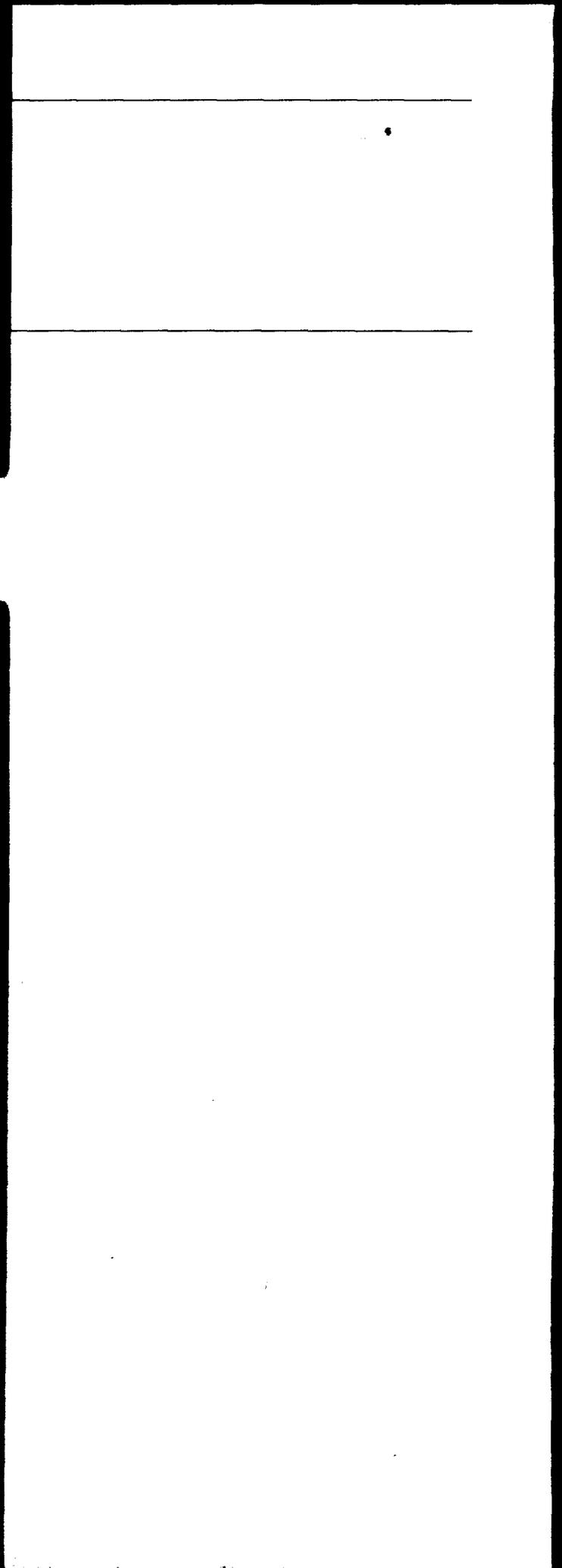
Report to the Chairman, Environment,
Energy, and Natural Resources
Subcommittee, Committee on Government
Operations, House of Representatives

December 1988

NUCLEAR REGULATION

NRC's Security Clearance Program Can Be Strengthened







United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

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December 20, 1988

The Honorable Mike Synar
Chairman, Environment, Energy,
and Natural Resources Subcommittee
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

You asked that we assess the Nuclear Regulatory Commission's personnel security clearance program. This report provides you information on the procedures for granting clearances, the frequency and thoroughness of clearance updates, and the administrative review process.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the appropriate congressional committees; the Chairman, Nuclear Regulatory Commission; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

This work was performed under the direction of Keith O. Fultz, Senior Associate Director. Other major contributors are listed in appendix I.

Sincerely yours,

A handwritten signature in cursive script, appearing to read 'J. Dexter Peach'.

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Because of the national security implications of its programs, the Nuclear Regulatory Commission (NRC) investigates the background of its employees and consultants as well as others to ensure that they are reliable and trustworthy. If the investigation indicates that an employee will not endanger national security, NRC grants a security clearance that allows access to classified information, material, and facilities. NRC also requires periodic checks for some clearance holders to ensure their continued clearance eligibility.

The Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, asked GAO to review NRC's personnel security clearance program and assess the procedures that NRC uses to ensure that those who operate nuclear power plants do not pose a threat to the public. (See ch. 1.)

Background

The Atomic Energy Act of 1954 requires NRC to conduct background investigations of its employees and consultants as well as others who have access to classified information, material, or facilities. To do this, NRC established a personnel security clearance program. Under NRC policies, a security clearance is granted after the Office of Personnel Management (OPM) or the Federal Bureau of Investigation checks the background of those applying for an NRC clearance. NRC also periodically reassesses the integrity of those holding the highest level clearance.

NRC employees, consultants, contractors, and licensees as well as other federal employees hold approximately 10,600 NRC clearances. NRC does not grant clearances to commercial nuclear utility employees unless they require access to classified information or special nuclear material. However, the utilities have voluntarily established screening programs to ensure that their employees do not pose a threat to nuclear plants. (See ch. 1.)

Results in Brief

NRC faces a dilemma when it hires new employees. Although its policy calls for new hires to be cleared before they start work, the security clearance process takes so long that this policy is waived for about 99 percent of new employees. Waivers have become routine because waiting for background investigation results would adversely affect hiring and recruiting, according to NRC staff.

NRC policies do not require reinvestigation of the backgrounds of nearly 50 percent of its clearance holders. Therefore, NRC does not know

whether circumstances in some employees' lifestyles have changed, making them security risks. NRC security staff cited financial reasons for not requiring reinvestigations for all other employees. Further, NRC does not have accurate clearance information—for example, data to determine when reinvestigations are needed—to effectively manage its program.

In addition, for over a decade, NRC has debated the need for regulations to ensure that nuclear power plant employees requiring unescorted access to power plants do not pose a threat of radiological sabotage. NRC still has not decided whether it will issue a regulation or endorse industry-developed guidelines.

Principal Findings

Hiring Without Clearances

NRC routinely waives its background investigation requirements for new hires. NRC security staff estimate that 99 percent of new employees are hired before they receive a security clearance. Although NRC's policy allows such waivers when an urgent need exists or when a delay could adversely affect essential operations, waivers have become the rule rather than the exception. NRC staff said that they use the waivers because OPM takes too long to conduct the required background investigations and waiting for investigation results would adversely affect recruiting and hiring. NRC staff estimate that it takes OPM between 10 months and 1 year to complete background investigations necessary to receive the highest level clearance and between 75 and 90 days for the next level clearance.

Although the waivers allow NRC to hire new employees faster, this practice results in less than fully productive use of employees, as well as a potential security risk. For example, inspectors generally cannot have unescorted access to nuclear power plants until they receive clearances. Also, GAO found that about 10 percent of the individuals hired with waivers since 1983 terminated their employment with NRC after background investigations disclosed drug-related, financial, or other serious personal problems.

According to OPM officials, they are taking steps to reduce the time needed to conduct investigations. In the interim, NRC could monitor

investigation times and assess its policies in light of those times. (See ch. 2.)

Reinvestigations Needed

For financial reasons, NRC requires periodic background investigations only for employees who hold the highest level clearance—about 53 percent of all clearance holders. NRC reinvestigates the remaining 47 percent only if it becomes aware of adverse information or upgrades an employee's clearance. NRC security staff favor reinvestigations for all clearance holders and estimate it could cost \$168,000 to begin such a program and \$48,000 annually thereafter. The Director, Office of Administration and Resources Management, disagrees with the need for reinvestigations because lower level clearance holders have limited access to classified information. GAO notes that the initial cost represents a very small portion of NRC's estimated \$450 million fiscal year 1989 budget. The results of a number of cases highlight the need for NRC to reinvestigate all clearance holders. For example, reinvestigations revealed cleared persons with histories of child molestation, drug abuse, and criminal activities. In two cases, NRC dismissed the employees; in one case, the individual elected to terminate employment; another case is pending. (See ch. 3.)

Ineffective Internal Controls

NRC does not have effective internal controls to manage the security clearance program. For example, NRC's computerized system does not have all the data needed to determine when reinvestigations should be requested. The system also contains incorrect social security numbers, even though social security numbers are critical for accuracy because they uniquely identify the individuals in the database. Finally, the system lists as active some clearances that had been terminated. NRC security staff told GAO that they know the problems exist and expect to correct them as time permits. They also said that some of these problems exist because NRC did not enter some information when it created the system. (See ch. 2.)

Screening of Power Plant Employees

For more than a decade, NRC has debated whether to establish access authorization regulations for power plant employees or a policy that supports an industry-developed program. In 1986 the Commission overruled a staff recommendation to go forward with regulations after a utility group, the Nuclear Management and Resources Council, offered an alternative proposal to NRC. Despite the increase of drug- and alcohol-related incidents at nuclear power plants, NRC is still debating this issue.

Although no assurance exists that such incidents would decrease if NRC required a utility access authorization program, such a program could increase the assurance that employees allowed unescorted access remain reliable and trustworthy and do not pose a threat to commit radiological sabotage. (See ch. 4.)

Recommendations

To enhance security and improve the effectiveness of NRC's clearance program, GAO recommends that the Chairman, NRC,

- require periodic reinvestigations for all employees,
- validate and update the security clearance database, and
- expedite a decision to issue either a policy statement or a regulation regarding access to commercial nuclear power plants.

Agency Comments

GAO discussed the facts in this report with NRC staff and incorporated their comments where appropriate. As requested, GAO did not ask NRC to review and comment officially on this report.

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Abbreviations

CPCI	Central Personnel Clearance Index
DOE	Department of Energy
FBI	Federal Bureau of Investigation
GAO	General Accounting Office
MAAP	Material Access Authorization Program
NRC	Nuclear Regulatory Commission
NUMARC	Nuclear Management and Resources Council
OPM	Office of Personnel Management

Introduction

The Nuclear Regulatory Commission (NRC) is responsible for ensuring that those who commercially use or produce nuclear material do so in a manner that protects public health and safety, the environment, and national defense and security. Because of the national security implications of its programs and the need to protect classified and sensitive information and special nuclear material, NRC developed a multipart security clearance program for its applicants, employees, and consultants, some licensees, contractors, and other federal employees. In addition, most utilities that operate nuclear power plants have their own employee screening programs intended to protect against radiological sabotage.

Overview of NRC's Security Clearance Program

The Atomic Energy Act of 1954, as amended, requires NRC to conduct background investigations of individuals who are employed by NRC or have access to classified information or special nuclear materials. In 1975 NRC established a personnel security program to (1) determine the character, associations, and loyalty of those who require such access; (2) ensure that individuals are reliable, trustworthy, and loyal to the United States; and (3) allow NRC employees to work with other federal agencies on classified matters.

In 1985 NRC also began granting clearances for employees at fuel cycle facilities.¹ Prior to that, NRC did not have a general clearance program for these individuals.² However, in response to the fear that employees are a greater and more probable threat than "outsiders," NRC established the Material Access Authorization Program (MAAP). The objective of this program is to protect against the potential that fuel cycle facility employees who work with special nuclear material (enriched uranium or plutonium) might conspire to steal or divert the material or to sabotage the plant, endangering the public by exposure to radiation.

NRC regulations 10 C.F.R. parts 10, 11, and 25 set out the agency's requirements and procedures for granting security clearances. NRC's Division of Security, Office of Administration and Resources Management, is responsible for the personnel security clearance program. The program includes

¹Fuel cycle facilities include various plants and transportation companies that process or transport significant quantities of strategic special nuclear material.

²These individuals were cleared by the Department of Energy (DOE) only for access to classified information and those facilities that were part of the naval reactor program.

- determining the level of clearance required on the basis of the sensitivity of the position and the need for access to classified information or special nuclear material;
- assessing an individual's eligibility for an NRC security clearance on the basis of an investigation and report by the Federal Bureau of Investigation (FBI) or the Office of Personnel Management (OPM) regarding the character, associations, and loyalty of the individual;
- periodically reinvestigating some individuals to ensure their continued eligibility;
- evaluating, through interviews and background investigations, the seriousness of problems identified from arrest reports or other sources;
- reviewing, through an appeal (administrative review) process, proposed NRC actions to revoke or deny a clearance; and
- terminating clearances for individuals who no longer need them.

NRC grants four kinds of clearances: Q, L, R, and U. For its own applicants, employees, and consultants, NRC grants Q or L clearances. A Q clearance permits access to top-secret national security information and restricted data (e.g., nuclear weapons design data). NRC makes a decision about granting a Q clearance to individuals occupying highly important or sensitive positions after either OPM or FBI conducts a background investigation. OPM conducts the majority of investigations, including those for employees who occupy critical-sensitive positions. The FBI normally conducts investigations for the chairman, commissioners, and certain commissioner assistants.

An L clearance permits access for up to secret national security information and confidential restricted data (other than that involving broad naval nuclear propulsion policy). NRC grants the L clearance to employees who occupy noncritical-sensitive positions after OPM conducts a national agency check and inquiry of OPM, FBI, military services, and other federal agency records. NRC also grants security clearances to some licensee employees, contractors, and other federal agency employees.

Under MAAP, NRC grants U and R clearances, which are similar to Q and L clearances, respectively. NRC follows the same procedures to grant these clearances as it does to grant a Q or L. Before granting a clearance, for example, NRC reviews the results of OPM-conducted background investigations. The higher level U clearance applies to (1) individuals who require unescorted access to or control over strategic special

nuclear material or unescorted access to vital plant areas,³ (2) jobs in which an individual could steal or divert special nuclear material or commit radiological sabotage, and (3) persons who transport, or escort the transportation of, special nuclear material. NRC grants the lower level R to those who require access to protected plant areas.⁴

As of February 1988, NRC had granted about 10,600 active clearances. Table 1.1 shows the categories, types, and numbers of clearances.⁵

Table 1.1: Categories, Types, and Numbers of Clearances

Category	Q or U	L or R	Total
Employees and consultants	1,852	1,691	3,543
Contractors and other government employees	435	120	555
Licensee employees	14	3,425	3,439
MAAP	1,345	1,697	3,042
Total	3,646	6,933	10,579

Source: NRC.

NRC uses the DOE's Central Personnel Clearance Index (CPCI) to track the number and types of clearances granted, including MAAP clearances, and the location of those holding them. NRC's Division of Security enters this data directly into the CPCI system.

Access Authorization at Nuclear Power Plants

NRC does not routinely grant clearances to employees of the 109 licensed nuclear power plants because they do not normally have access to classified information or special nuclear material. Instead, individual utilities have their own programs, based on the guidelines of the American National Standards Institute (a group that develops various voluntary standards), to screen prospective employees.

In 1977 NRC proposed regulations for an access authorization program for fuel cycle facility employees. Following public hearings, NRC decided to include nuclear power plant employees under the regulations. In 1980 NRC issued proposed regulations that applied only to nuclear power plant employees.

³Any area that contains vital equipment, such as piping, valves, and the central alarm system.

⁴An area enclosed by physical barriers to which access is controlled.

⁵For the purposes of this report, we limited our review to the 3,543 clearances directly granted by NRC. Other federal agencies, such as DOE, initially granted the remaining clearances, and NRC grants clearances based on the agencies' certifications.

In 1984 the Nuclear Management and Resources Council (NUMARC), an industry group, submitted an alternative proposal to NRC and developed guidelines for utilities to evaluate prospective employees. The proposed guidelines suggest that utilities conduct background investigations and psychological evaluations for each employee. The guidelines also include provisions for "grandfathering" persons who were previously screened and for utilities to periodically audit their programs to ensure they meet the guidelines. The guidelines do not suggest that utilities reinvestigate employees to ensure their continued reliability.

Because of these efforts, NUMARC asked NRC to withdraw its proposed regulations. In June 1986, the Commission directed NRC staff to do so, and on March 9, 1988, NRC published in the Federal Register a request for comments endorsing either new regulations prescribing mandatory utility screening requirements or, instead, an industry-developed program. NRC staff told us that they will review the comments and, during the fall of 1988, will make a recommendation to the commissioners. The staff could not estimate when or how the commissioners would resolve this issue.

Objectives, Scope, and Methodology

On July 22, 1987, the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, requested that we review NRC's personnel security clearance program. On the basis of subsequent discussions, we agreed to review NRC's procedures for granting clearances, the frequency and thoroughness of clearance updates, and the administrative review (appeal) process. We also agreed to obtain information on the evolution of NRC's position concerning access authorization requirements for nuclear power plant employees. Because NRC's security clearance functions are centralized, we conducted our work primarily at NRC headquarters in Bethesda, Maryland. We reviewed NRC's clearance program since 1983 for its own applicants, employees, and consultants and for contractors and licensee personnel. We focused on the program since 1983 because in that year NRC began using the CPCI and reinstated its reinvestigation program.

To determine NRC procedures for the granting, updating, and termination of security clearances, including the administrative review process, we reviewed the Atomic Energy Act of 1954; 10 C.F.R. part 10, Criteria and Procedures for Determining Eligibility for Access to Restricted Data or National Security Information or an Employment Clearance; 10 C.F.R. part 11, Criteria and Procedures for Determining Eligibility for Access to or Control Over Special Nuclear Material; 10 C.F.R. part 25, Access

Authorization for Licensee Personnel; appendix 2101, Personnel Security Program; and part VI of NRC's operations manual, which describes requirements and procedures for the agency's clearance program.

In addition, we interviewed NRC Division of Security staff responsible for carrying out the security clearance programs as well as staff in the Offices of Personnel, General Counsel, Nuclear Regulatory Research, and Nuclear Material Safety and Safeguards, and, where possible, we obtained documentation to support the oral evidence provided. For example, we obtained statistics on the number and type of clearances, reports of background investigations, data on the frequency of reinvestigations, and files of cases in the administrative review process. We also met with the OPM official responsible for conducting background investigations for NRC and DOE.

We took several steps to determine the frequency and thoroughness of granting, updating, and terminating security clearances. First, we reviewed a sample of personnel security clearance files—60 of 139—that contained derogatory information and the actions NRC staff took if such information existed, and we reviewed cases that have gone through NRC's administrative review process. We also reviewed NRC's internal controls relating to security clearances by assessing the usefulness, accuracy, and completeness of the CPCI. We compared the CPCI with NRC's automated payroll, personnel security files, and manual card system. We could not, however, independently determine such information as the timeliness of granting initial clearances or reinvestigations because the CPCI did not have the necessary information and using NRC's manual card system, with about 10,600 cards, would have required excessive resources.

Further, to obtain a perspective on NRC's position concerning employee screening programs in the nuclear industry, we reviewed the American National Standards Institute guidelines developed in 1973 and 1982; NRC's March 9, 1988, proposed policy statement on access to nuclear power plants; 65 public comments on the proposed policy statement received by NRC as of September 1988; and NUMARC's guidelines on access. In addition, we met with representatives from NUMARC to discuss the industry's position on access to nuclear facilities. We also reviewed NRC's July 1987 and 1988 Safeguards Summary Event List, which describes safety-related incidents involving NRC-regulated facilities.

We discussed the facts in this report with NRC staff and have included their comments where appropriate. As requested, we did not ask NRC to

Chapter 1
Introduction

review and comment officially on this report. Our work was conducted between January 1988 and October 1988 in accordance with generally accepted government auditing standards.

New Hires Routinely Receive Investigation Waivers and Clearance Database Needs to Be Updated

NRC faces a dilemma when it hires new employees. Despite requirements to waive background investigations only when an urgent need exists, NRC routinely approves preappointment investigation waivers to hire new employees faster. NRC staff told us that OPM delays in conducting background investigations have forced NRC to hire new employees before they receive the background investigations needed for security clearances. According to NRC, it was losing potential employees to other agencies and the private sector. However, this practice results in inefficient use of staff. Also, we found examples of employees hired with waivers who later resigned or were dismissed after background investigations uncovered serious financial, drug, or psychological problems.

NRC can better manage its security clearance program by updating its automated clearance database. We found a number of inaccuracies and omissions when we compared the CPCI with the payroll, security, and manual file card systems. For example, the CPCI lists as active clearances that had been terminated, contains incorrect social security numbers, and lacks other data that are necessary to manage the program effectively.

Most New Employees Receive Preappointment Investigation Waivers

NRC security staff estimate that about 99 percent of new employees begin work without security clearances and that, at any point in time, between 100 and 124 persons are on the job without clearances. In 1978 NRC delegated authority to the Executive Director for Operations to approve waivers. By this authority, the Executive Director may approve NRC's hiring an individual before OPM completes the background investigation as long as the individual does not have access to classified information in the interim. In granting such waivers, according to NRC's policies, the Executive Director must receive an affirmative recommendation from NRC's Director of Security and demonstrate that an urgent need exists or that a delay could adversely affect essential operations. Despite these requirements, preappointment investigation waivers have become the rule rather than the exception.

In addition, NRC has not thoroughly reviewed the use of preappointment investigation waivers since 1983. At that time, the staff recommended that the waivers be continued but said that better support was needed to justify them. In 1985 NRC reassessed its position and found that OPM investigative delays continued to cause problems, especially for new employees requiring Q clearances.

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According to NRC staff, it currently takes OPM an average of 10 months to 1 year to complete a background investigation for a Q clearance and between 75 and 90 days for an L clearance once an applicant completes the required security forms.¹ They also estimate that NRC takes an average of 2 weeks to process either type of clearance after receiving the results from OPM. According to NRC staff, they could not wait for OPM to complete its investigation in all cases because to do so would impair the agency's ability to hire needed personnel. However, they also pointed out that hiring staff without clearances adversely affects their ability to effectively use those new employees, especially those with scientific and technical disciplines essential to NRC's licensing and regulatory functions. For example, NRC resident inspectors are not generally permitted unescorted access to nuclear power plants until NRC grants them clearances. In the interim, resident inspectors complete regional orientation and technical training and are escorted by senior inspectors while on plant sites.

In a recent report, we pointed out that OPM was not meeting its target times because it did not hire or otherwise obtain sufficient investigators to keep current with agency requests for background investigations.² According to OPM, however, it is taking steps to improve timeliness. The Office of Federal Investigations—the OPM office responsible for performing background investigations—requested and received congressional approval to increase its staff in fiscal years 1986, 1987, and 1988. Also, OPM hired about 250 retired federal investigators to assist in performing needed background investigations. Finally, OPM is linking all its offices by computer, which will reduce the time spent mailing investigation requests and reports.

NRC's Personnel Security Branch Chief told us that he is not aware of any security violations by persons who were hired with an investigation waiver. The Branch Chief estimates, however, that about 7 percent of background investigations reveal derogatory information about NRC employees, with about 3 percent requiring additional adjudicative actions, such as interviews and psychiatric evaluations, to resolve the issues.

¹We were unable to confirm this estimate because NRC's automated database did not have the information needed to do so. In an earlier report, *Nuclear Security: DOE Needs a More Accurate and Efficient Security Clearance Program* (GAO/RCED-88-28, Dec. 29, 1987), we found that OPM took an average of about 6 months to complete background investigations for DOE Q clearances.

²OPM Revolving Fund: *Investigation Activities During Fiscal Years 1983 Through 1986* (GAO/GGD-87-81, June 26, 1987).

Importance of Background Investigations

Background investigations can reveal drug-related, financial, psychological, or other derogatory information that might affect the reliability and trustworthiness of individuals seeking NRC security clearances. Our review of the files since 1983, in which background investigations revealed derogatory information, showed that in 10 percent of the cases the individuals involved terminated their employment with NRC. The following examples illustrate the types of derogatory information found during background investigations.

- Operator examiner — This individual received a preappointment investigation waiver in October 1986. OPM's subsequent background investigation, for a Q clearance, revealed that the employee had failed to file federal income tax returns for 13 years, received psychiatric treatment for drug overdose and marital problems, received treatment for alcohol abuse, and physically abused his spouse and children. The employee resigned in November 1987 without receiving a security clearance.
- Reactor inspector — This individual received a preappointment investigation waiver in April 1984. A subsequent background investigation for a Q clearance revealed that the individual falsified information on the employment application and failed to list several arrests. The employee resigned in September 1985 without receiving a security clearance.
- Reactor engineer — NRC hired this individual in January 1985 without a security clearance. The background investigation needed to grant a Q clearance revealed that the employee used heroin and had overdosed on the drug in 1984. The employee resigned during the 1-year probation period rather than be terminated by NRC.

Appeals Seldom Requested Under Administrative Review Process

NRC has an administrative review (appeal) process, as part of its security clearance program, that is available to all individuals whose clearances are denied or revoked. Since 1983 only two appeals have been requested.

With respect to its own employees, NRC may deny or revoke a security clearance or suspend or remove an employee when it believes that such actions are in the interests of national security. In taking these actions, NRC considers whether the employee (1) could commit, or attempt to commit, sabotage, espionage, treason, or a terrorist act; (2) uses drugs not prescribed by a physician (such as amphetamines and narcotics); or (3) has been convicted of a crime. When NRC decides to deny or revoke a clearance, the employee can appeal the decision through the administrative review process. The process allows the employee to address the allegations in writing or request a formal hearing.

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If an employee requests a formal hearing, NRC takes the following actions.

- NRC assigns a hearing counsel, who reviews the evidence, consults with the employee's attorney, and arranges for the subpoena of witnesses.
- NRC appoints a hearing examiner to conduct the hearing and make a recommendation to the Executive Director for Operations.
- If the recommendation is adverse to the individual, he or she is notified and advised of the right to request a review by NRC personnel security review examiners, who then make a recommendation to the Executive Director.
- The Executive Director for Operations makes the final decision on the basis of the hearing examiner's findings and notifies the employee of the decision reached.

Since 1983 only two employees have requested a formal hearing. In one case, NRC suspended the employee without pay in January 1983 after the employee was indicted for possible criminal activity. The employee requested a hearing in February 1983; the Executive Director for Operations dismissed the employee in May 1984. In the other case, the employee requested a hearing in February 1986 after NRC suspended his clearance for, among other issues, not answering questions about possible homosexual activity. NRC held the hearing in August 1986. The employee resigned in August 1987.

NRC Needs to Update Its Clearance Database

NRC can better manage its personnel security clearance program by updating its automated clearance database. Since 1983 NRC has used the CPCI as its primary clearance database. Also, NRC maintains a manual file card system. The CPCI lists information for all clearances granted by NRC. It shows the type of clearance, date of the initial investigation, date of the last reinvestigation, social security number, and date of birth for each clearance holder. This information is entered directly into the system by NRC's Division of Security.

We found several omissions when we compared the CPCI with payroll, personnel security, and file card systems. For example, the CPCI lacks information on the time it takes to grant initial clearances or conduct required periodic reinvestigations. The CPCI does not list the dates when NRC requested OPM background investigations for over 2,600 (76 percent) of its 3,500 clearance holders and reinvestigation data for 78 others. Without this data, NRC must manually calculate the time it takes to grant clearances and determine when to reinvestigate some individuals. NRC

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staff told us that most of the missing background investigation data are for individuals who received clearances before 1983; therefore, they do not need this information. We could not determine the extent to which missing data were for those clearances granted before 1983.

In addition, the CPCI contains inaccurate information. For example, we found 69 incorrect social security numbers listed in the database. Social security numbers are critical for ensuring database accuracy because they uniquely identify each individual. The CPCI also listed active clearances for 22 individuals who were no longer employed by NRC and for whom clearances had been terminated. The database listed an active L clearance for one person who left NRC in January 1984. Several other persons listed with active clearances left the agency in 1985 or 1986. NRC staff told us that these clearances were held primarily by summer interns and cooperative education students who did not go through NRC's separation procedures.

NRC staff said they are aware that the CPCI lacks some data, and they intend to update the system as time permits. The security staff said some of the problems occurred because they did not enter all available data from their records for individuals who received clearances before 1983. Resource constraints, they said, prevented them from doing so. The staff also said they have detailed manual records to supplement all personnel clearance actions taken. On the basis of our observation, this system—over 10,600 index cards filed alphabetically—would be extremely cumbersome to use in obtaining management data, such as when reinvestigations are needed.

NRC Should Reinvestigate All Clearance Holders

NRC does not routinely reinvestigate its L clearance holders—48 percent of its employees and consultants. As a result, NRC does not know whether changes have occurred in the lifestyles of these employees such that they might be susceptible to engaging in espionage, sabotage, or theft of nuclear materials. We found several examples of cleared employees who later became suspect because of personal circumstances. These examples underscore the need for reinvestigations. However, NRC said it could not broaden its program because of financial constraints.

Also, NRC's reinvestigation policies are inconsistent. Under MAAP, NRC requires periodic reinvestigations for fuel cycle employees holding clearances similar to the L clearance. However, NRC does not have the same requirements for its own employees with L clearances.

Importance of Reinvestigations

The need for periodically reinvestigating cleared employees has assumed added importance because of espionage cases in various federal agencies over the last few years. Virtually all these cases involved cleared employees. Furthermore, recent DOE testimony and reports prepared by the Secretary of Defense noted that an individual who has received a clearance is more likely to be recruited into espionage and poses a greater security threat than "outsiders."

Because cleared employees can be a security risk, NRC periodically reinvestigates certain employees to ensure their continued eligibility for access to sensitive information or nuclear materials. Through reinvestigations, NRC determines whether personal problems—such as indebtedness, alcoholism, drug abuse, or mental illness—have developed since an employee received the initial clearance. Periodic reinvestigations can highlight these problems and provide NRC information needed to determine whether an employee could be a possible candidate for activities, such as espionage, that would endanger national security.

Reinvestigation Requirements

In 1981 NRC suspended its reinvestigation program because of increasing costs and a reevaluation of the clearance levels held and needed by its staff. During this process, NRC reduced the number of Q clearances by 39 percent. NRC reinstated a reinvestigation program in 1983.¹ Although NRC considers all its positions to be "sensitive" and thus requires clearances, it only reinvestigates those employees and consultants who hold

¹For the purposes of this report, we reviewed NRC's reinvestigation program initiated in 1983.

the highest level Q clearance. NRC requires that these individuals be reinvestigated every 5 years.

Between fiscal years 1983 and 1986, NRC reinvestigated 1,215 employees and other persons. NRC staff told us that they did not have a large backlog of reinvestigations but had not yet received OPM's results for some requested in fiscal year 1987. According to NRC's security staff, none of the reinvestigations resulted in a clearance suspension or revocation, but about 37 cases identified derogatory information. However, NRC, primarily for financial reasons, does not reinvestigate those individuals who hold L clearances. NRC security staff estimate that it would cost about \$168,000 to start such a program and about \$48,000 annually thereafter. According to the Director, Office of Administration and Resources Management, L clearance holders have only limited access to classified information and, therefore, does not favor expanding the reinvestigation program.

Although NRC employees, consultants, and contractors who hold L clearances are exempted from reinvestigations, NRC will soon begin periodic reinvestigations for all MAAP clearance holders, including those holding clearances similar to the L. According to NRC's security staff, NRC will investigate all these employees because of the potential "insider threat" and the types of material to which they have access. NRC expects to begin these reinvestigations in 1991.

In addition to conducting mandatory reinvestigations, NRC investigates individuals when it becomes aware of derogatory information that raises questions about whether a clearance for that employee continues to be justified. NRC becomes aware of derogatory information from outside sources, such as arrest reports and credible comments from other individuals. When the security staff receive derogatory information, they may take several steps. Security may send the employee a letter asking for answers to specific questions about the allegation, or it may interview the individual to attempt to resolve the case. Security may then either continue the clearance or recommend that OPM conduct a full-field background investigation.

Since 1983 NRC has requested full-field background investigations on 7 of 23 individuals for whom it had received derogatory information. Of the seven individuals who were investigated, three subsequently resigned, three had their clearances continued, and one is still awaiting the review's outcome. Of the remaining 16 individuals, 12 had their

clearances continued, 1 had the clearance revoked, 2 resigned, and 1 is still waiting for the review's conclusion.

What Reinvestigations Can Find

Our review of a sample of NRC's personnel security files for active clearances since 1983 identified specific cases that highlight the importance of, and the need for, periodic reinvestigations. The following cases show that cleared employees who held sensitive positions at NRC and a fuel cycle facility had serious sexual, drug, or financial problems.

- **Branch chief** — This employee, who had access to restricted data, national security information, and highly sensitive personnel, proprietary, and other NRC-protected information, was granted a Q clearance in September 1979. NRC suspended the clearance in 1983 after learning that the employee had been indicted on 52 counts of interstate transportation in aid of racketeering. Information revealed at the trial (the employee was found not guilty) and an NRC personnel security investigation indicated that the employee, among other things, established and maintained an ongoing business association with an outcall massage and escort service and counseled the operator of the service on how to conduct the business so that it appeared to be legal. Following an administrative review, NRC dismissed the employee in 1984.
- **Machine operator** — This individual worked at a fuel cycle facility. In 1967 DOE granted the individual an L clearance, and in 1981 NRC granted an L clearance on the basis of a DOE certification. In 1986 NRC was upgrading the clearance to a U under MAAP. Following completion of an OPM background investigation, NRC suspended the clearance in 1987 after learning that the employee sexually molested minor boys between 1982 and 1984. Also, the individual threatened persons with bodily harm if they revealed these actions to others. Later in 1987, the individual elected to "take early retirement" rather than appeal the security clearance suspension.
- **Secretary/stenographer** — NRC granted the employee a Q clearance in 1976 but did not conduct a reinvestigation until 1984. The employee had access to classified reports, applications for construction permits, and operating licenses for commercial power reactors, spent fuel processing plants, and waste disposal facilities. The 1984 investigation showed that the employee was about \$37,000 in debt because of alcohol and drug abuse problems. NRC agreed to continue the clearance and review the employee's status in 6 months to determine the individual's progress in NRC's alcohol and drug abuse program and other counseling. Subsequently, the employee was arrested and found guilty of writing bad

checks and attempting to illegally withdraw funds from someone else's account. NRC terminated the employee in May 1985.

- Clerk typist — In 1987 a coworker notified NRC that this individual, who received an L clearance in 1984, had been arrested and convicted of stealing and using a credit card. During a subsequent investigation, the employee told NRC that the theft was brought on by the use of phencyclidine, otherwise known as PCP. The employee received probation, and the case is pending, subject to the outcome of an OPM full-field background investigation.

Cost to Reinvestigate All Clearance Holders

Although these cases illustrate the importance of periodically reinvestigating cleared employees and NRC's Personnel Security Branch Chief believes all clearance holders should periodically be reinvestigated, NRC does not do so primarily for financial reasons. NRC staff estimate that it would cost about \$168,000 to initiate a reinvestigation program for L clearance holders and about \$48,000 each year to continue the program. To derive its estimates, NRC assumed a program modeled on DOE's requirements for L clearance holders. These requirements include: (1) a national agency and credit check after 5 years; (2) a review of an updated personnel security questionnaire, with an FBI file and fingerprint check, after 10 and 15 years; (3) a national agency and credit check after 20 years; and (4) a review of an updated personnel security questionnaire, with an FBI file and fingerprint check, every 5 years thereafter. NRC's estimate, among other things, takes into account the number of required reinvestigations and includes the costs for additional staff, clerical and professional time to process reinvestigations, and OPM checks. The cost to initiate this program represents less than 1 percent of NRC's estimated fiscal year 1989 budget estimates and would require only one additional staff member.

NRC Has Taken Too Long to Require an Access Authorization Program at Nuclear Power Plants

For over a decade, NRC has considered establishing regulations to increase the assurance that persons requiring unescorted access to protected and vital areas in nuclear power plants are trustworthy, reliable, and emotionally stable and do not pose a threat of radiological sabotage. During that time, NRC published proposed rules twice, established a hearing board, and asked for public comments on whether to issue a policy statement that endorses industry-developed guidelines or promulgate a rule that codifies access authorization provisions. As of October 1988, NRC was reviewing the public comments received. Although drug- and alcohol-related incidents continue to increase, NRC has not decided whether to establish regulations or issue a policy statement.

History of the Access Authorization Program

On March 9, 1988, NRC published a proposed policy statement for unescorted access to nuclear power plants. The statement represents the culmination of many years of events in which NRC attempted to establish requirements regarding unescorted access to these plants. Some of these events are described below.

- March 17, 1977 — NRC published proposed regulations to establish an access authorization program for individuals who have unescorted access to or control over special nuclear material.
- December 28, 1977 — NRC issued a notice of a public hearing on the proposed regulations.
- April 1979 — A hearing board recommended that NRC issue regulations applicable to future personnel screening for nuclear power plant, but not fuel cycle facility employees.
- 1979 to 1983 — NRC considered the need to include psychological evaluations as part of the regulations.
- August 1, 1984 — NRC published proposed access authorization regulations that included three major components: psychological assessments, background investigations, and continual behavioral observations.

Shortly after NRC published the proposed regulations, NUMARC, which received an extension of the public comment period, opposed the regulations, pointing out that they were too prescriptive, limited utilities' ability to hire new employees quickly, and would give potential employees rights they normally would not receive. Also, NUMARC said that on the basis of its member utilities' experience, no credible threat existed that warranted such regulations. Consequently, NUMARC submitted to NRC an alternative proposal for the industry to implement an access authorization program based on guidelines it had developed.

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The guidelines suggested, among other things, that utilities prescreen prospective employees and conduct background investigations and psychological evaluations for those individuals hired. The guidelines did not contain provisions for utilities to periodically reinvestigate plant employees. Instead, the guidelines stated that utility managers would watch all persons to identify changes in work or personal behavior that might raise questions about their trustworthiness or reliability. Since the guidelines provided for continual behavioral observations by plant supervisory personnel, NUMARC concluded that periodic reinvestigations were not needed and would not increase plant protection in the long run. NUMARC also argued that reinvestigation would be too costly. According to NUMARC representatives, the utilities' commitment to adhere to the industry program would be included as an amendment to the physical security plan for each licensed plant, and their programs would be subject to NRC inspection.

NRC staff recommended that the Commission adopt a regulation, although the NUMARC proposal was consistent with other regulations under consideration with respect to industry self-regulation (fitness-for-duty and personnel training and qualification). The staff reasoned that a regulation would (1) ensure a standardized program with uniform application throughout the industry, (2) provide for the kind of direct oversight NRC has over other aspects of its security program (physical protection, guard training, and contingency plans), and (3) ensure a well-defined mechanism for NRC to correct deficiencies promptly and effectively.

Despite the staff's position, on June 25, 1986, the Commission decided to develop a policy statement, enforceable only if licensees agreed in writing to commit to the industry program. The Commission directed the staff to work with NUMARC in developing the statement. On March 9, 1988, NRC issued a proposed policy statement in the Federal Register and asked for public comments not only on the scope of but also on the need for regulations. As of September 20, 1988, NRC had received comments from 65 organizations and individuals. Utilities submitted 34 comments, unions submitted 13, individuals and other organizations submitted 12, and utility groups, 6.

With only one exception, the utilities supported a policy statement instead of a regulation. Although many utilities did not give specific reasons for their support, several said that a policy statement would be more timely and efficient because most utilities already use NUMARC's guidelines and the industry is committed to them. Other supporters said

that a policy statement would provide a sound approach to establish a consistent access authorization program and could minimize differences among utilities. Further, of the 65 respondents, 13 supported the need for regulations. Several said that regulations would provide a more precise and prescriptive means of ensuring consistency than a policy statement. A utility consultant favored a rule saying that utilities often implement programs differently. One respondent said NRC should implement the program directly by a rule rather than indirectly by a policy statement.

NRC staff told us that they will review all public comments and they expected to make a recommendation to the commissioners during the fall 1988. The staff could not estimate when or how the commissioners would decide this issue.

Types of Events That Have Occurred at Nuclear Power Plants

Continued safety-related occurrences underscore the importance of ensuring that persons requiring unescorted access to nuclear power plants be reliable and trustworthy. NRC periodically publishes information on safety-related incidents connected with NRC licensees and nuclear material. The incidents include bomb-related, transportation, radiological sabotage, arson, firearms, and drug and alcohol-related events. NRC's latest analysis, published in July 1988, shows that excluding bomb threats, the frequency of these types of events at nuclear power plants increased by 144 percent between 1986 (84 events) and 1987 (205 events). Drug- and alcohol-related events represented 87 percent of this increase. Also, for the 10-year period ending December 31, 1987, utilities reported that drug- and alcohol-related events increased from 2 to 150. NRC attributes this primarily to increased industry reporting and NRC and industry initiatives to achieve a drug-free work force.

As can be seen, drug- and alcohol-related incidents continued to increase over the past decade despite utility programs to monitor employees. Although no assurance exists that such incidents would decrease if NRC required a utility access authorization program, such a program could increase the assurance that employees allowed unescorted access remain reliable and trustworthy and do not pose a threat to commit radiological sabotage.

Conclusions and Recommendations

NRC established a personnel security clearance program to ensure that its employees and consultants as well as others who have access to classified information, material, or facilities are trustworthy. The agency, among other things, grants security clearances after OPM or FBI conducts background investigations of prospective employees, reinvestigates employees holding the highest level clearance, and evaluates derogatory information it receives on clearance holders. However, we found several weaknesses in NRC's program that cause potential security risks or adversely affect the operation of its program.

NRC faces a dilemma when it hires new employees. The Atomic Energy Act allows NRC to hire new employees without background investigations only when a clear need exists to do so. However, NRC hires most new employees without background investigations because it believes that waiting until OPM completes the investigations adversely affects the agency's ability to recruit needed personnel. This practice results in inefficient use of staff, since NRC cannot use new employees to their full potential because they cannot perform some of the functions for which they were hired. For example, new resident inspectors generally cannot have unescorted access to power plants. Also, we found examples of employees hired with waivers who later resigned or were dismissed after background investigations uncovered serious financial, drug, or psychological problems.

A potential security risk exists because NRC does not reinvestigate its employees and consultants who hold L clearances. Although NRC considers all its positions sensitive and requires background investigations for all individuals who do business with the agency, NRC does not follow this policy through and reinvestigate all clearance holders. As a result, NRC allows almost 50 percent of its employees access to classified information or special nuclear material even though changes in their lifestyles may make them security risks. We found cases in which periodic reinvestigations of Q clearance holders and investigations initiated after NRC received derogatory information about employees revealed sexual, drug, or financial problems. In addition, NRC's reinvestigation requirements are not consistent. NRC recognizes the "insider threat" by requiring periodic reinvestigations of fuel cycle facility employees, but it does not have a similar requirement for NRC employees and consultants. Although NRC security staff agree that all clearance holders should be reinvestigated, NRC does not do so for financial reasons. Estimated costs, however, are minimal compared with the potential security threat.

Further, NRC does not have effective internal controls to determine the length of time it takes to complete background investigations and ensure that only active employees, consultants, and others have clearances. For example, we found that the CPCI did not have the data needed to determine how long it takes to grant initial clearances for about 2,600 of its 3,500 (76 percent) active clearances. Also, when we compared the CPCI with payroll and personnel files and the manual card system, we found incorrect social security numbers and active clearances listed for persons who were no longer employed by NRC.

Finally, NRC has taken too long to require an access authorization program at nuclear power plants. NRC has debated the merits of such a program for over 10 years—a period when drug- and alcohol-related events have steadily increased at nuclear power plants. During that time, NRC proposed both regulations and a policy statement to control access to vital and protected plant areas. At one point, the Commission overruled a staff recommendation and proposed a rule in favor of a policy statement allowing utilities to voluntarily adopt NUMARC's guidelines. To date, however, NRC still has not decided the best approach; it has proposed a policy statement, asking for public comments on the best way to resolve the access authorization issue.

Recommendations

To eliminate potential security risks and ensure a reliable and efficient security clearance program, we recommend that the Chairman, NRC,

- require periodic reinvestigations of employees holding L clearances,
- validate and update the security clearance database, and
- expedite a decision to issue either a policy statement or a regulation regarding unescorted access to commercial nuclear power plants.

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