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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 11, 2007

The Honorable Barbara Boxer
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

Dear Madam Chairman:

(U) Section 651 (a) of the Energy Policy Act of 2005 requires the Commission to submit a report to Congress, in both classified and unclassified form, that describes the results of each security response evaluation (i.e., force-on-force (FOF) exercises) conducted and any relevant corrective action taken by a licensee during the previous year. On behalf of the Commission, I am transmitting the second such report addressing inspections conducted during calendar year 2006. I am also providing additional information regarding the overall security and safeguards performance of the commercial nuclear power industry and Category I fuel cycle facilities to keep you informed of the Nuclear Regulatory Commission's (NRC) efforts to protect a key segment of our Nation's electric power infrastructure against terrorist attacks. The unclassified version of this report, as well as a Confidential addendum to the enclosed report, will be transmitted under separate cover.

(U) The NRC is committed to protecting the public health and safety, promoting the common defense and security, and protecting the environment. Conducting FOF exercises and implementing the security inspection program are just two of a number of regulatory oversight activities the NRC performs to ensure the secure use and management of radioactive materials by the commercial nuclear power industry.

~~(S)~~ During calendar year 2006, the NRC conducted 312 security inspections (of which 23 were FOF inspections at nuclear power plants and CAT I fuel cycle facilities). These inspections identified 82 findings of which 73 were of very low security significance and 9 were of low to moderate security significance. Whenever a finding is identified during a security inspection, the NRC ensures that the licensee implements adequate compensatory measures immediately to correct the problem. Compensatory measures can be, for example, additional armed personnel and/or physical barriers to strengthen a licensee's response capabilities. Compensatory measures are usually effective short-term fixes until a more comprehensive analysis can be conducted to identify long-term, permanent solutions.

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(U) The NRC will make available for any member of Congress, or Congressional oversight committee staff, the unclassified and classified inspection reports, as appropriate, for any FOF inspection in their State or Congressional District through the Office of Congressional Affairs. The same offer will be extended, as appropriate under existing protocols and requirements, to governor-appointed State Liaison Officers.

(U) The Commission is confident that nuclear power plants and Category I fuel cycle facilities continue to be among the best protected private sector facilities in the Nation and, through our inspection and oversight processes, the NRC is committed to ensuring strong security at these facilities. Please do not hesitate to contact me if you need additional information.

Sincerely,



Dale E. Klein

Enclosure: As stated

cc: Senator James M. Inhofe

~~SAFEGUARDS INFORMATION~~



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 11, 2007

The Honorable John D. Dingell
Chairman, Committee on Energy
and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

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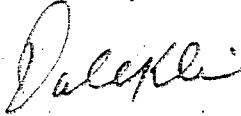
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Sincerely,



Dale E. Klein

Enclosure: As stated

cc: Representative Joe Barton

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Report to Congress on the Security Inspection Program for Commercial Power Reactor and Category I Fuel Cycle Facilities: Results and Status Update

Annual Report for Calendar Year 2006

Manuscript Completed: August 2007
Date Published: September 2007

Safeguards Information determination made by:	
Name/Title:	<u>RP Correia, Deputy Division Director</u>
Organization:	<u>NSIR/DSO</u>
Basis:	<u>Exempt under 10 CFR 2.390</u>
Signature:	<u><i>RP Correia</i></u>
Date:	<u>09/07/2007</u>

Division of Security Operations
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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ABSTRACT

(U) This report fulfills the requirements of Chapter 14, Section 170D of the Atomic Energy Act of 1954 (42 U.S.C. 2201 et seq.), as amended by the Energy Policy Act of 2005, which states, "not less often than once each year, the Commission shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report, in classified form and unclassified form, that describes the results of each security response evaluation conducted and any relevant corrective action taken by a licensee during the previous year." This is the second annual report which covers calendar year 2006. In addition to information on the security response evaluation program (force-on-force exercises), the NRC is providing additional information regarding the overall security performance of the commercial nuclear power industry and selected fuel cycle facilities to keep Congress and the public informed of the NRC's efforts to protect the nation's electric power infrastructure and special nuclear material against terrorist attacks, by guarding against theft and diversion and radiological sabotage.

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EXECUTIVE SUMMARY

(U) This report fulfills the requirements of Chapter 14, Section 170D of the Atomic Energy Act of 1954 (42 U.S.C. 2201 et seq.), as amended by the Energy Policy Act of 2005, which states, "not less often than once each year, the Commission shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report, in classified form and unclassified form, that describes the results of each security response evaluation conducted and any relevant corrective action taken by a licensee during the previous year." This is the second annual report which covers calendar year (CY) 2006. In addition to information on the security response evaluation program (force-on-force inspections), the NRC is providing additional information regarding the overall security performance of the commercial nuclear power industry and selected fuel cycle facilities to keep Congress and the public informed of the NRC's efforts to protect the nation's nuclear facilities and materials against terrorist attacks, by guarding against theft and diversion and radiological sabotage.

(U) The NRC is committed to protecting public health and safety, promoting the common defense and security, and protecting the environment. Conducting the security inspection program, which includes performance-based force-on-force (FOF) inspections, is one of a number of regulatory oversight activities the NRC performs to ensure the secure, safe use and management of radioactive materials by the commercial nuclear industry. In support of these activities, the NRC employs relevant intelligence information and vulnerability analyses to determine realistic and practical security requirements and mitigative strategies. Further, a risk-informed, graded approach is used to establish appropriate regulatory controls, enhance NRC inspection efforts, assess the significance of issues, and to influence timely and effective corrective action by licensees of commercial nuclear power plants for identified deficiencies. These practices utilize interagency cooperation in the development of an integrated approach to the security of nuclear facilities and contribute to NRC's comprehensive evaluation of licensee security performance.

(U) This report describes the results of the NRC's security inspection program, including the nuclear reactor security baseline inspection program, security of Category I (CAT I) fuel cycle facilities, and exercises conducted as part of FOF inspections. The reporting period included herein is January 1, 2006, through December 31, 2006.

~~(OO)~~ During CY 2006, the NRC conducted 312 security inspections (of which 23 were FOF inspections at power reactors and CAT I fuel cycle facilities). These inspections identified 82 findings of which 73 were of very low security significance and 9 were of low to moderate security significance.

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ABBREVIATIONS

ASM	additional security measure
BWXT	BWX Technologies
CAF	Composite Adversary Force
CAS	Central Alarm Station
CAT I	Category I
CY	Calendar Year
DBT	Design Basis Threat
DOD	Department of Defense
DOE	Department of Energy
EPA	Energy Policy Act
FFD	Fitness-for-Duty
FOF	Force-on-Force
HEU	Highly Enriched Uranium
IDS	Intrusion Detection System
MC&A	Material Control and Accounting
MILES	Multiple Integrated Laser Engagement System
NCV	Non-cited Violation
NFS	Nuclear Fuel Services
NPP	Nuclear Power Plant
NR	Office of Naval Reactors
NRC	U.S. Nuclear Regulatory Commission
OCA	Owner Controlled Area
PA	Protected Area
PI	Performance Indicator
PPSDP	Physical Protection Significance Determination Process
PSP	Physical Security Plan
ROP	Reactor Oversight Process
SAS	Secondary Alarm Station
SDP	Significance Determination Process
SL	Severity Level
SNM	Special Nuclear Material
SSNM	Special Nuclear Material
URI	Unresolved Item
VBS	Vehicle Barrier System

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1. INTRODUCTION

(U) The Energy Policy Act of 2005 amended Chapter 14, Section 170D of the Atomic Energy Act to require, in part, that "not less often than once each year, the Commission shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report, in classified form and unclassified form, that describes the results of each security response evaluation conducted and any relevant corrective action taken by a licensee during the previous year." This report fulfills the requirement for an unclassified report.

(U) Last year, the U.S. Nuclear Regulatory Commission (NRC) provided to Congress the first annual report on the results of the NRC's security inspection program. In addition to outlining the results of the overall security inspection program for Calendar Year (CY) 2005, the report described the evolution of the NRC's security inspection program from the days preceding September 11, 2001, to the current program. This report for CY 2006 conveys the results of inspections for the reporting period, but will not describe the evolution of the program. For that background information, the 2005 report is included as Appendix A of the unclassified version of this report as a reference. For a summary of inspection findings at sites, sorted by state, please see Appendix A of this report.

(U) This report provides an overview of the NRC's security inspection program and force-on-force (FOF) program and summaries of the results of those inspections. NRC's communications and outreach activities with the public and other stakeholders (including other federal agencies) will also be described. Unless otherwise noted, this report does not include security activities or initiatives of any class of licensee other than power reactors or Category I fuel cycle facilities. Category I fuel cycle facilities are those which use or possess formula quantities of strategic special nuclear material (SSNM). SSNM is defined in 10 CFR as uranium-235 (contained in uranium enriched to 20 percent or more in the U235 isotope), uranium-233, or plutonium.

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2. REACTOR SECURITY OVERSIGHT PROCESS

2.1 Overview

(U) The NRC continues to implement the Reactor Oversight Process (ROP) which is the agency's program for ensuring plant and radiological safety, security, and emergency preparedness at operating nuclear power plants. The basic principles and philosophy of the ROP are to ensure that a defined, repeatable, and objective process is applied to identify findings, determine their significance, and document results in accordance with ROP program guidance. Program instructions and inspection procedures help provide assurance that licensee actions and regulatory response are commensurate with the safety or security significance of the particular event, deficiency, or weakness. Within each ROP cornerstone (see Figure 1), NRC residents and regional specialist inspectors conduct inspections using detailed inspection procedures whose results, in the aggregate, contribute to an overall assessment of licensee performance.

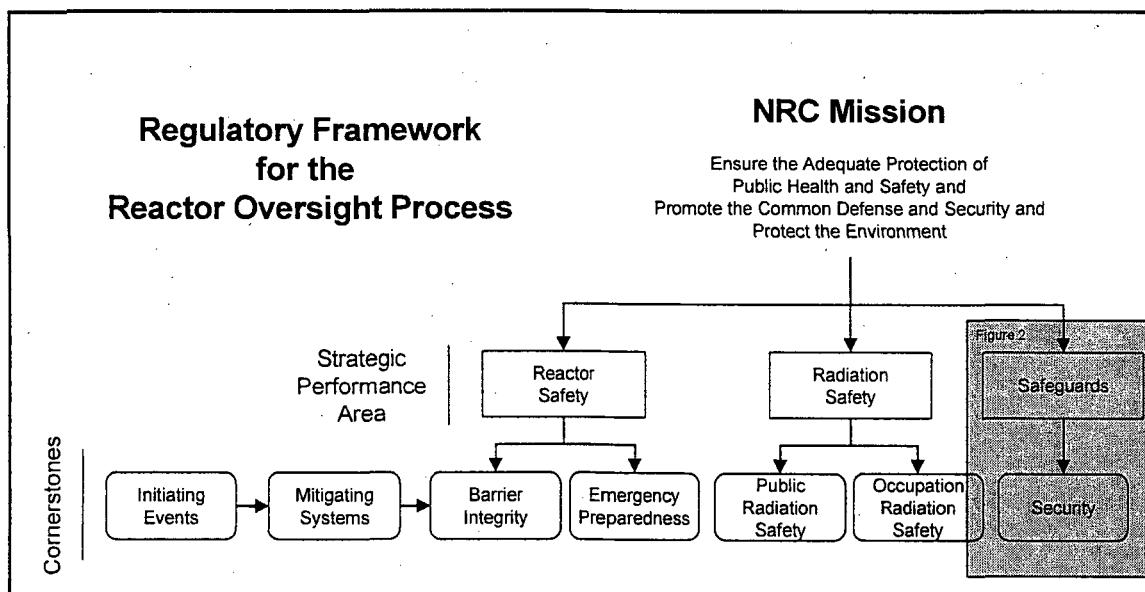


Figure 1: Cornerstones of the Reactor Oversight Process

(U) As part of post 9/11 actions, the NRC issued a number of Orders requiring licensees to strengthen security programs in a number of areas. Based on these Orders, the NRC significantly enhanced its baseline security inspection program for commercial nuclear power plants (NPP). This inspection effort resides within the "Security Cornerstone" of the agency's ROP. The Security Cornerstone focuses on five key licensee performance attributes: access authorization; access control; physical protection; material control and accounting (MC&A); and response to contingency events. Through the results obtained from all oversight activities, including baseline security inspections and performance indicators (PI), the NRC determines whether licensees comply with requirements and can provide assurance of adequate protection against the design basis threat (DBT) for radiological sabotage.

(U) The Security Cornerstone has four objectives: (1) to obtain information providing objective evidence that the security and safeguards at NRC-licensed NPPs are maintained in a manner that contributes to public health and safety and promotes the common defense and security; (2) to determine that licensees have established measures to deter, detect, and protect against the DBT of radiological sabotage as required by regulations and other Commission mandates such as orders; (3) to determine the causes of declining performance in the physical protection arena before such performance reaches a level that may result in a degradation to reactor safety or undue risk to public health and safety; and (4) to identify those significant issues that may have generic or cross-cutting applicability. These objectives help ensure the secure use and management of radioactive materials.

(U) Licensees currently report data on three performance indicators in security: (1) Protected Area Equipment; (2) Personnel Screening Program; and (3) Fitness-for-Duty/Personnel Screening Program. The data reported by the licensees are compared to an established set of thresholds to determine their significance, which is represented by the colors green, white, yellow, and red (in order of increasing severity). The PIs measure aspects of the licensees' security programs that are not specifically inspected by the NRC's baseline inspection program.

(U) The baseline inspection program requires 12 "inspectable areas" to be reviewed periodically at each facility (see Figure 2). One of the inspectable areas, contingency response, is assessed through the conduct of FOF inspections, described in detail in a later section. In addition, MC&A inspections are conducted to ensure that licensees take adequate measures to control the risk of loss, theft, or diversion of SNM.

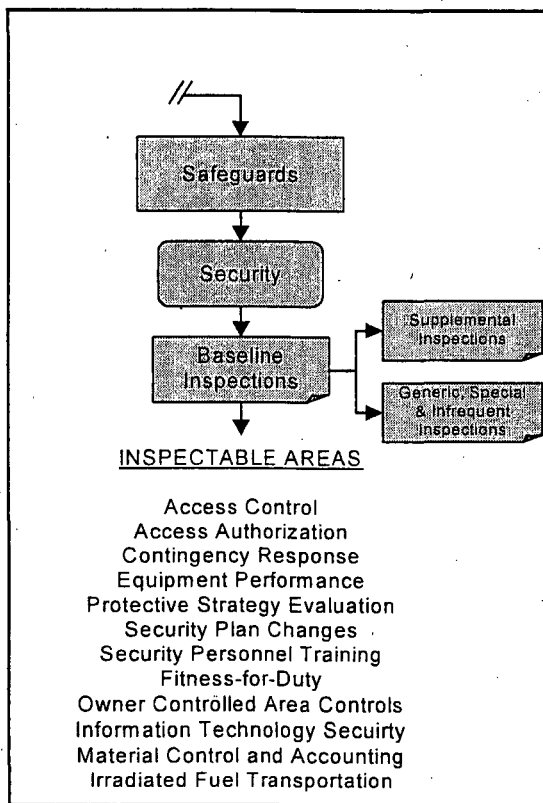


Figure 2: Inspectable Areas of the Safeguards Cornerstone

(U) Where performance issues have been identified at a particular licensee, supplemental inspections may be conducted to further investigate a particular deficiency or weakness. In certain situations, the NRC may conduct a generic, special, or infrequent inspection. Such an inspection is not part of the baseline or supplemental inspection program and would only be conducted after a review and assessment of a particular security or safeguards event or condition. These types of inspections include, but are not limited to: resolution of employee concerns, security matters requiring particular focus, licensee plans for coping with strikes, and inspection of international safeguards. During this reporting period, there were three special inspections at NPPs. These special inspections covered topics such as: blast vulnerabilities, inadequate searches of packages and materials, and improper compensatory measures.

2.2 Significance Determination Process

(U) The Significance Determination Process (SDP) for NPPs uses risk insights, where appropriate, to help NRC inspectors and staff determine the security significance of inspection findings. Security-related findings are evaluated using the baseline Physical Protection Significance Determination Process (PPSDP). These findings include both programmatic and process deficiencies. The PPSDP provides the security significance of any security program deficiency. If it is unclear whether or not an observation is a finding, it will be documented in the inspection report as an unresolved items (URI) until clarifying information can be gathered. A URI is an issue about which more information is required to determine if it is acceptable, if it is a finding, or if it constitutes a deviation or violation. Such a matter may require additional information from the licensee or may require additional guidance or clarification/interpretation of the existing guidance. Certain violations that cannot be evaluated by the PPSDP are assigned a severity level based on the NRC's Enforcement Policy.

(U) FOF findings are evaluated using the FOF SDP. The significance of findings associated with FOF adversary actions are dependent on how far into the plant the mock adversary force progresses, their impact on critical equipment (referred to as a target set), and a determination of whether or not these actions could have had an adverse impact on public health and safety. Other security-related findings identified during FOF activities are also evaluated using the baseline PPSDP. These findings may include programmatic and process deficiencies that are not directly related to a FOF inspection outcome, but are identified during the FOF exercise. In situations where the NRC cannot clearly determine the outcome of an exercise, the exercise will be considered indeterminate and an additional exercise scheduled, if appropriate.

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3. FORCE-ON-FORCE INSPECTION PROGRAM

3.1 Overview

(U) A full FOF inspection, spanning several days, includes both table-top drills and exercises that simulate combat between a mock commando-type adversary force and the licensee security force. At a nuclear power plant, the adversary force may attempt to reach and damage key safety systems and components that protect the reactor's core or the spent fuel pool, potentially causing a radioactive release to the environment. At other facilities, the adversary force may attempt theft or diversion of SNM. The licensee's security force, in turn, seeks to prevent the adversaries from causing such a release or theft. In addition to significant participation of plant operators and NRC personnel, these exercises may include observers from an array of Federal, state, and local law enforcement agencies and emergency planning officials.

(U) In conducting FOF inspections, NRC notifies the licensee in advance for safety and logistical purposes. This notification provides adequate planning time for licensee coordination of two sets of security officers - one for maintaining actual plant security and the other for participating in the exercise. In addition, arrangements must be made by the licensee for a group of individuals who will control and monitor each exercise. A key goal of the NRC is to balance safety (both personnel and operational) while maintaining actual plant security during an exercise that is as realistic as possible.

(U) In preparation for an FOF exercise, information from table-top drills, which probe for potential deficiencies in the licensee's protective strategy, other baseline security inspections, and security plan reviews are factored into a number of commando-style attack scenarios. The objective of the site's responders is to prevent the attackers from destroying or damaging (simulated in an FOF exercise) critical equipment (target sets) or the theft and diversion of SNM. Any potential deficiencies in the protective strategy identified during FOF exercises are promptly reviewed and corrected before NRC inspectors leave the licensee's site.¹

3.2 Program Activities in 2006

(U) In 2006, the FOF inspection program focused on effectively evaluating licensee protective strategies while maintaining regulatory stability and consistency in the evaluation process. The staff continued to work with the nuclear industry to improve the standard of training and qualification for exercise controllers. In 2007, the staff endorsed industry's revised controller guidance document for the remainder of the current inspection cycle which ends in December 2007. The NRC remains committed to working with the industry to improve the realism and effectiveness of the FOF inspection program and will continue to pursue methods to improve certain exercise simulations and the controller responses to those simulations.

(U) The composite adversary force (CAF) used for NPP inspections continued to meet expectations for a credible, well-trained and consistent mock adversary force. In order to meet security clearance requirements, the staff enlisted a composite adversary team from the Office of Naval Reactors (NR) to conduct FOF exercises at CAT I fuel cycle facilities instead of the CAF, who are only cleared for safeguards information. The NR adversary team all had Department of Energy (DOE) Q clearances.

¹ See "Protecting Our Nation," and Office of Public Affairs "Backgrounder" on Force-on-Force. <http://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0314/>

(U) In improving its own processes internally, the NRC took part in benchmarking efforts with other agencies that conduct similar security performance assessments. NRC staff observed FOF exercises conducted by the DOE and the Department of Defense (DOD). DOE and DOD representatives observed NRC FOF exercises as well. These interagency observations were in an effort to share best practices among agencies.

3.3 Results of FOF Inspections - Commercial NPPs

(U) Between January 1, 2006, and December 31, 2006, FOF inspections were conducted at 21 commercial NPPs. During the conduct of FOF inspections, two findings related to other areas of the security baseline program were identified. These findings included: failure to provide adequate detection at a barrier; and failure to adequately evaluate the effectiveness of a change to the Physical Security Plan.

(U) As of the end of 2006, FOF inspections have been conducted at 45 out of a total of 66 sites² (including both commercial power reactors and CAT I fuel cycle facilities). Table 1 summarizes the 21 FOF inspections at NPPs and Table 2 summarizes the inspections chronologically, by site. For a summary of inspection findings during CY 2006 at commercial NPPs, sorted by state, please see Appendix A of this report. A summary of the CAT I inspections is included in the classified addendum.

(U) Violations and non-cited violations (NCV) of NRC requirements are categorized by significance, and are given corresponding color or severity level (SL) codes. For inspection findings evaluated with the SDP, violations are assigned colors, as follows: green (very low security significance); white (low to moderate security significance); yellow (substantial security significance); and red (high security significance). White, yellow and red findings are considered greater than green and are described as such in inspection report cover letters to licensees.

(U) Violations that are not evaluated through the SDP are categorized in terms of four levels of severity to show their relative importance or significance. SL I has been assigned to violations that are the most significant and SL IV violations are the least significant. SL I and II violations are of very significant regulatory concern. In general, violations that are included in these severity categories involve actual or high potential consequences on public health and safety. SL III violations are cause for significant regulatory concern. SL IV violations are less serious but are of more than minor concern. Violations at SL IV involve noncompliance with NRC requirements that are not considered significant based on risk.

²(U) NOTE: For the purposes of the security inspection program, Salem and Hope Creek are counted as one site, as they share a common security program, bringing the total number of reactor sites to 64.

(U) Table 1: CY 2006 FOF Inspection Program Summary at NPPs	
21	Total number of inspections conducted.
2	Total number of inspection findings.
1	Total number of Green findings
0	Total number of greater than Green findings.
1	Total number of SL IV violations.
0	Total number of greater than SL IV violations.

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(U) Table 3 summarizes the cumulative results of the FOF inspections conducted at NPPs since the current cycle began in November 2004. During a FOF inspection, three FOF exercises are scheduled. If an exercise is canceled due to severe weather or other reasons, NRC management may consider less than three exercises only when a licensee has successfully demonstrated an effective protective strategy in at least two exercises, with no significant issues identified. If those conditions are not met, the team may have to expand the schedule or schedule a subsequent visit.

(U) Of the total number of exercises conducted, four exercises were inconclusive and deemed indeterminate. An indeterminate exercise is one where the NRC inspectors are prevented from effectively gathering sufficient information to evaluate the licensee's protective strategy or to

(U) form a cogent conclusion. These exercises were indeterminate due to: excessive safety or administrative holds; insufficient exercise control; or extreme malfunctions of exercise simulation systems. Another four exercises were canceled because of potential safety concerns associated with dangerous weather conditions or a plant transient.

(U) **Table 3: Cumulative FOF Inspection Program Results at NPPs**

44	Total number of inspections conducted.
43	Total number of inspection sites.
128	Total number of exercises conducted.
0	Total number of times a complete target set damaged or destroyed.
5	Total number of inspection findings.
4	Total number of Green findings.
0	Total number of greater than Green findings.
1	Total number of SL IV violations.
0	Total number of greater than SL IV violations.

3.4 Discussion of Findings - Commercial NPPs

Ex 3

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3.5 Results of FOF Inspections - CAT I Facilities

~~(OUO)~~ In CY 2006, FOF inspections were conducted at the 2 CAT I fuel cycle facilities. Table 4 below summarizes those inspections.

(OUO) Table 4: CY 2006 FOF Inspection Program Summary at CAT I Fuel Cycle Facilities	
2	Total number of inspections conducted.
1	Total number of inspection findings.

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3.6 Discussion of Findings - CAT I Facilities

~~(U)~~ The detailed discussion of the findings for the CAT I fuel cycle facility FOF inspection results may be found in the classified addendum to this report.

3.7 Discussion of Corrective Actions

(U) If inspectors identify deficiencies during the conduct of FOF inspection activities that indicate a licensee cannot demonstrate the ability to protect against the applicable DBT or does not meet other regulatory requirements, that licensee must take immediate corrective actions. NRC inspectors review any proposed compensatory measures and/or corrective actions, and once determined acceptable, must verify that those actions have been completed by the licensee before leaving the site. As appropriate, the licensee must also plan for long term corrective actions, with oversight from the NRC.

(U) In many cases, though not required by regulation, licensees implement corrective actions in response to lessons learned from FOF inspections, even after demonstrating that their protective strategy can effectively protect against the DBT. Those corrective actions typically fall into one of three categories: procedural or policy changes; physical security and/or technology improvements and upgrades; and personnel or security force enhancements. In CY 2006, FOF inspectors have observed corrective actions taken in each of these categories.

(U) As an example of a procedural or policy change, one licensee kept keys for a security response vehicle in an unprotected area. During an FOF exercise, the CAF team acquired those keys and used the vehicle to facilitate its simulated attack. Although the licensee was not in violation of NRC requirements and demonstrated an effective protective strategy, the site's security management recognized the potential vulnerability, and made procedural changes to enhance its protective strategy based on the FOF exercise.

(U) Licensees will also commonly make improvements to or add physical security structures and technologies based on lessons learned from FOF exercises. For example, if a licensee determines that the adversary team did not encounter enough delay throughout the simulated attack, extra delay barriers, such as fences, or locks on doors or gates, may be added. As another example, if a licensee determines that earlier detection and assessment is necessary (even after demonstrating an effective protective strategy in FOF exercises), they may choose to add sensors, cameras, and/or lighting to the OCA (the area of the facility beyond the boundary of the protected perimeter).

(U) Finally, licensees may commit to additional security personnel as a result of lessons learned from FOF exercises. Inspectors have observed situations where licensees determined that additional margin was necessary to ensure that adversaries would be interdicted before completing their mission.

3.8 Future Planned Activities

(U) In CY 2007, 23 FOF inspections are scheduled to complete the current inspection cycle. Two of the twenty-three are follow-up inspections to test improvements resulting from previous FOF inspections. Although significant enhancements have been made, NRC will continue to seek additional methods to improve realism in FOF exercises during the third year of this 3-year inspection cycle.

(Q/DQ) In the CY 2005 annual report, the NRC reported that an inspection had been postponed at [redacted] because of the impact of Hurricane Katrina and that the inspection would be rescheduled in 2006. The facility was, in fact, rescheduled for late 2006, but had to be rescheduled later in the cycle to make that time slot available for another facility that needed immediate assessment because of performance concerns in the area of security. The FOF inspection of [redacted] was completed in May 2007. The results of that inspection will be captured in the CY 2007 report to Congress.]

Ex 3

(U) In addition to completing the inspection cycle, in CY 2007, NRC staff will integrate beyond-DBT training exercises into the FOF program, with voluntary participation from the industry. For the licensees that volunteer, a beyond-DBT exercise will be substituted for the third evaluated exercise provided that the protective strategy was conclusively demonstrated with high assurance in the first two evaluated exercises, with no significant issues identified during those exercises. These training exercises will offer the opportunity for licensee security forces to face an increased threat, and for the NRC to observe how the licensees' protective strategies adjust to that increased threat.

4. BASELINE SECURITY INSPECTION PROGRAM

4.1 Overview

(U) The baseline security inspection program is a primary component of the Security Cornerstone of the ROP that the NRC uses to ensure plant and radiological safety, security, and emergency preparedness at operating NPPs. It is important to note that FOF inspections are just one piece of the NRC's overall security oversight process. In addition to FOF inspections, the baseline security inspection program includes: Access Authorization; Access Controls; Security Plan Changes; Equipment Performance, Testing and Maintenance; Protective Strategy and Evaluation; Security Training; the Fitness for Duty Program; Owner Controlled Area Controls; Information Technology Security; Material Control and Accounting; and Physical Protection of Shipments of spent nuclear fuel. These inspections are conducted by specialist inspectors from both regional offices and headquarters, as well as resident inspectors.

4.2 Results of Inspections

(U) Table 5 summarizes the overall results of the security baseline inspection program of NPPs, including MC&A inspection results, but excluding FOF inspection results (which were discussed in Section 3). This information provides a summary overview of licensee performance within the Security Cornerstone.

(U) Detailed information about individual plants, such as inspection findings from baseline inspections, special inspections, and MC&A inspections, can be found in Table 6. For a summary of inspection findings at commercial NPPs in CY 2006, with the sites sorted by state, please see Appendix A of this report.

(U) For the purpose of this report, an inspection is considered complete after: (1) the inspection report is issued with no findings; or, (2) any findings have been dispositioned or any applicable enforcement action has been taken.

(U) Violations and non-cited violations (NCV) of NRC requirements are categorized by significance, and are given corresponding color or severity level (SL) codes. For inspection findings evaluated with the SDP, violations are assigned colors, as follows: green (very low security significance); white (low to moderate security significance); yellow (substantial security significance); and red (high security significance). White, yellow and red findings are considered greater than green and are described as such in inspection report cover letters to licensees.

(U) Violations that are not evaluated through the SDP are categorized in terms of four levels of severity to show their relative importance or significance. SL I has been assigned to violations that are the most significant and SL IV violations are the least significant. SL I and II violations are of very significant regulatory concern. In general, violations that are included in these severity categories involve actual or high potential consequences on public health and safety. SL III violations are cause for significant regulatory concern. SL IV violations are less serious but are of more than minor concern. Violations at SL IV involve noncompliance with NRC requirements that are not considered significant based on risk.

(U) Table 5: CY 2006 NPP Baseline Security Inspection Program Results (Without FOF)	
277	Total number of inspections conducted across the industry.
71	Total number of inspection findings across the industry.
60	Total number of Green findings.
2	Total number of greater than Green findings.
5	Total number of SL IV violations.
4	Total number of greater than SL IV violations.
3	Total number of special inspections conducted.

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5. OVERALL REACTOR SECURITY ASSESSMENT

5.1 Overview

(U) The previous two sections described the results of FOF inspections and the rest of the baseline security inspection program. The security assessment process collects the information from those inspections and other performance indicators provided by NPP licensees to enable the NRC to arrive at objective conclusions about a licensee's performance in security. Based on this assessment information, the NRC determines the appropriate level of agency response.

5.2 Performance Indicators

(U) Licensees voluntarily report data on three performance indicators in security: (1) Protected Area Equipment; (2) Personnel Screening Program; and (3) Fitness-for-Duty/Personnel Screening Program. The data reported by the licensees are compared to an established set of thresholds to determine their significance, which is represented by the colors green, white, yellow, and red (in order of increasing severity). The PIs measure aspects of the licensees' security programs that are not specifically inspected by the NRC's baseline inspection program.

(U) As of the end of CY 2006, all licensees reported that each security performance indicator was categorized as green.

5.3 Security Cornerstone Action Matrix

(U) Similar to the ROP action matrix, the security cornerstone has five response columns: Licensee Response; Regulatory Response; Degraded Cornerstone; Repetitive Degraded Cornerstone; and Unacceptable Performance. Table 7 summarizes the security cornerstone action matrix.

~~(U)~~ Most licensees fall into the Licensee Response column, which indicates that all assessment inputs (PIs and inspection findings) were green and the cornerstone objectives were fully met. Licensees that fall into the Regulatory Response column have assessment inputs that resulted in no more than one white input, and the cornerstone objective was met with minimal reduction in security performance. In CY 2006, three sites fell into this column. Ex. 2 Ex. 3

(U) The Degraded Cornerstone column describes licensees that had multiple white inputs or one yellow input, with the cornerstone objective met with moderate degradation in security performance. If a licensee falls into the Repetitive Degraded Cornerstone column, they have received multiple yellow inputs or one red input, while meeting the cornerstone objective with longstanding issues or significant degradation in security performance. The most significant column in the security action matrix is the Unacceptable Performance column. Licensees in this column have overall unacceptable performance and margin for security. In CY 2006, no licensees fell into the Degraded Cornerstone, Repetitive Degraded Cornerstone, or Unacceptable Performance categories.

(U) Table 7: Summary of Security Action Matrix³

Number of Sites	Response Band
61	Licensee Response
3	Regulatory Response
0	Degraded Cornerstone
0	Repetitive Degraded Cornerstone
0	Unacceptable Performance

³(U) NOTE: For the purposes of the security inspection program, Salem and Hope Creek are counted as one site, as they share a common security program, bringing the total number of reactor sites to 64.

6. CAT I SECURITY INSPECTION PROGRAM

6.1 Overview

(U) The NRC implements regulatory oversight of safeguards and security programs of two CAT I fuel cycle facilities. BWX Technologies (BWXT), located in Lynchburg, Virginia, and Nuclear Fuel Services (NFS), located in Erwin, Tennessee, manufacture fuel for government reactors. They also downblend highly-enriched uranium (HEU) into low-enriched uranium (LEU) for use in commercial reactors. Each CAT I facility stores and processes strategic special nuclear material (SSNM), which must be reliably protected against unauthorized access, and theft and diversion. The facilities have significantly enhanced their security posture since September 11, 2001. NFS is currently implementing a major program of additional security upgrades.

(U) The primary objectives of the CAT I security oversight program are to ensure that the fuel cycle facilities are operating safely and securely in accordance with regulatory requirements and Commission Orders; detect indications of declining safeguards performance; investigate specific safeguards events and weaknesses; and identify generic security issues. NRC headquarters and regional specialist inspectors conduct inspections using detailed inspection procedures whose results, in the aggregate, contribute to an overall assessment of licensee performance.

(U) The NRC CAT I core inspection program is implemented by inspectors based at NRC offices in Atlanta, Georgia and Rockville, Maryland. Similar to the reactor baseline inspection program, it is applied to identify findings, determine their significance, document results, and assess licensee's corrective actions. The core inspection program requires three physical security areas ("inspection procedure suites") to be reviewed annually at each CAT I facility. These include HEU access control, HEU alarms and barriers, and other security topics such as security force training and contingency response. The core inspection program also requires two MC&A inspections annually and a transportation security inspection once every three years. NRC regional inspectors also review the U.S. Department of Energy's (DOE) audits of licensee's programs to protect classified material and information.

(U) The core inspection program is complemented by the FOF inspection program, which is implemented by the NRC Headquarters. In addition, NRC resident inspectors, assigned to each CAT I facility, provide an onsite NRC presence for direct observation and verification of licensee's ongoing activities. Through the results obtained from all oversight efforts, the NRC determines whether licensees comply with regulatory requirements and can provide assurance of adequate protection against the DBT for theft and diversion of CAT I SSNM.

~~(U)~~ Similar to the ROP, plant-specific supplemental or reactive inspections may be conducted to further investigate a particular deficiency or weakness. Such an inspection is not part of the core inspection program and would only be conducted after a review and assessment of a particular security or safeguards event or condition.

Ex. 2



6.2 CY 2006 CAT I Security Inspection Program Results

(U) Table 8 summarizes the overall results of the security inspection program of CAT I fuel cycle facilities, excluding FOF inspection results (which are discussed in the classified addendum to this report). This information provides a summary overview of licensee performance.

~~SAFEGUARDS INFORMATION~~

(U) For CAT I fuel cycle facilities, violations and NCVs are categorized by significance, and are given corresponding severity level (SL) codes. SL I has been assigned to violations that are the most significant and SL IV violations are the least significant. SL I and II violations are of very significant regulatory concern. In general, violations that are included in these severity categories involve actual or high potential consequences on public health and safety. SL III violations are cause for significant regulatory concern. SL IV violations are less serious but are of more than minor concern. Violations at SL IV involve noncompliance with NRC requirements that are not considered significant based on risk.

12	Total number of inspections conducted across the industry.
8	Total number of inspection findings across the industry.
6	Total number of SL IV violations.

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7. STAKEHOLDER COMMUNICATIONS

7.1 Communications with Public and Industry

(U) As part of an effort to improve openness to the public, in 2006 the Commission reviewed several options that would make some security oversight information available to the public. The Commission decided to have the cover letters to security-related inspection reports made available in the public domain. However, the information contained in the letters would have to be such that the letters do not identify actual or potential vulnerabilities at the inspected plant. The cover letters for security-related inspection reports issued after May 8, 2006, are now being released to the public.

(U) The restrictions placed on releasing security-related information to the public after September 11, 2001, also impacted the NRC's ability to share information with alлегers who brought security-related concerns to the NRC. The restrictions have made it difficult for the staff to assure alлегers that their concerns have been addressed, and a number of alлегers have expressed dissatisfaction with the NRC's limited response. Some, in an effort to obtain a satisfactory response, have chosen to pursue their concerns publicly by engaging elected officials and public interest groups and by disseminating their concerns via public websites or media outlets. In some instances these actions have necessitated that the staff respond in a public manner to the alлегers' concerns. While the alлегers were receptive to the feedback provided, at this time, the staff does not consider a public response to be the most advisable primary means of addressing security-related concerns. The Commission has approved a three-tiered approach to responding to security alлегers based on the severity of the concern raised and normal availability of the information to the alлегer (i.e., the alлегer is a member of a licensee's security force).⁴

(U) As an additional effort to improve public awareness and understanding, the NRC held annual public meetings specifically on nuclear security issues in August 2004, September 2005, and September 2006. Additionally, security topics are presented at the NRC's Regulatory Information Conference, held each spring in Rockville, Maryland.

(U) NRC also communicates with the industry to disseminate key lessons learned and generic issues. NRC analyzes findings and observations from the security inspection program to determine if a potentially generic issue may exist across the industry. When applicable, NRC staff supplements periodic security meetings held with the industry and develops generic communications or advisories as another effective communication tool. In CY 2006, the NRC issued nine security advisories (SA) and one Information Notice (IN) covering a variety of topics.

CY 2006 List of Generic Communications by title:

SA-06-01 - Notice to maintain heightened vigilance for State of the Union Address.

SA-06-02 - Notice to maintain heightened vigilance for State of the Union Address.

SA-06-03 - Notice to maintain heightened vigilance for State of the Union Address.

⁴For more information, see SECY-07-0032, "Recommended Staff Actions Regarding Correspondence with Alлегers Involving Security-Related Concerns," dated February 12, 2007. <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2007/>

- SA-06-04 - Implementing search requirements and approved exceptions for packages and materials at NRC-licensed facilities.
- SA-06-05 - Administrative controls of alarm station security computers at NRC-licensed facilities.
- SA-06-06 - National Special Security Event - President Ford Funeral - RTR
- SA-06-07 - National Special Security Event - President Ford Funeral - Materials Licensees
- SA-06-08 - National Special Security Event - President Ford Funeral - SNM/SNF/RAMQC
- SA-06-09 - National Special Security Event - President Ford Funeral - Power Reactors
- IN 2006-16 - Implementing Search Requirements for Personnel, Packages and Material at NRC-Licensed Facilities.

(U) After each FOF inspection, NRC staff gathers lessons learned in a variety of categories. Those lessons learned are disseminated to the industry through the Nuclear Security Working Group (NSWG), a consortium of security representatives from NRC-licensed facilities, with the combined goal of safe and realistic performance evaluations.

7.2 Communications with Local, State, and Federal Agencies

(U) In most NRC FOF inspections, representatives from local law enforcement agencies attend planning activities and observe the exercise to improve understanding of the licensee's response and coordination of integrated response activities. Other representatives from State emergency management agencies, State governments, the Government Accountability Office, and Congress have also observed FOF inspections.

(U) The NRC continues to support the U.S. Department of Homeland Security/Homeland Security Council (DHS/HSC) initiative to enhance integrated response planning for power reactor facilities. The staff is continuing to work with DHS/HSC, the Federal Bureau of Investigation (FBI) and others to develop plans to address recommended actions resulting from the initiative. In addition, the staff has coordinated with other Federal agencies and State and local security partners in completing the development of Emergency Action Levels for all imminent threats to NRC-licensed facilities.⁵

⁵For more information, see NRC Regulatory Issue Summary 2006-12, "Endorsement of Nuclear Energy Institute Guidance 'Enhancement to Emergency Preparedness Programs for Hostile Action'", published on July 19, 2006.
<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2006/>

APPENDIX A

Summary of 2006 Inspection Program By State

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(DUO) This appendix summarizes the overall number of inspections and findings at each site in CY 2006, arranged alphabetically by state. For details on those inspections and findings, page numbers are listed for convenience.

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