



ALLEGATION PROGRAM

ANNUAL TRENDS REPORT

Calendar Year 2011

**U.S. Nuclear Regulatory Commission
Office of Enforcement
Washington, DC 20555**

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EXECUTIVE SUMMARY

U.S. Nuclear Regulatory Commission (NRC) Management Directive 8.8, "Management of Allegations," dated November 15, 2010, requires the Agency Allegation Advisor to prepare an annual report for the Executive Director for Operations that analyzes allegation trends. This annual report fulfills that commitment by providing national, regional, and site-specific trend analyses. In addition, significant staff activity in calendar year (CY) 2011 involving the Allegation Program and related policies are discussed in this report. The reports also includes discussion on the development of enhanced guidance for the NRC staff handling allegations, and for the public engaged in the program, and correlations between safety culture survey scores and allegation data identified by the NRC's Office of Nuclear Regulatory Research. Lastly, the allegation staff continues to implement the agency-sponsored alternative dispute resolution process for discrimination allegations (Early ADR). Twenty-one percent of the discrimination cases raised in CY 2011 offered Early ADR reached settlement.

There has been a declining trend in the total number of allegations¹ received from CY 2009 through CY 2011. The decrease in allegations received in CY 2010 and again in CY 2011 appears to be the result of large reductions in allegation receipt related to two reactor facilities that had experienced problems with their safety conscious work environment (SCWE). As actions were implemented at these facilities in response to the identified SCWE problem, and after receiving a chilling effect letter (CEL) from the NRC, the number of allegations received in subsequent years dropped precipitously. These decreases in allegation receipt do not appear to be the result of a general industry issue or other external factor because the reasons for the substantive changes in the numbers of allegations received about these facilities were based on plant-specific matters.

Each allegation can include multiple concerns. In CY 2011, coinciding with the overall decrease in allegations received, the total volume of allegation concerns received decreased in three of the four regional offices, the Office of Nuclear Reactor Regulation, and the Office of Federal and State Materials and Environmental Management Programs. Region I experienced a substantial increase in the number of concerns received. Twelve percent of the allegations received in Region I in CY 2011 included four or more concerns; one allegation had more than 20 concerns. However, there were no apparent trends in Region I in terms of allegation concerns coming from particular facilities or types of facilities, or as a result of an event. The largest percentage of concerns received nationwide were discrimination concerns, which increased slightly from the number of discrimination concerns received in CY 2010. The total number of chilling effect concerns; however, decreased considerably in CY 2011. While the number of security-related concerns also remained high, most of the security concerns raised (greater than 70 percent) involved only a small number of reactor sites.

For some reactor licensees, the NRC received allegations in numbers that warranted additional analysis. In preparing this report, the staff reviewed a 5-year history of allegations for reactor and materials licensees and vendors to identify adverse trends. The analysis focused on allegations that originated from onsite sources to help inform the NRC's review of the SCWE.² The staff selected five reactor sites for more in-depth review: San Onofre Units 2 and 3,

¹ An allegation is defined as "a declaration, statement, or assertion of impropriety or inadequacy associated with NRC-regulated activities, the validity of which has not been established."

² The total number of allegations received concerning reactor licensees from all sources, as well as other information concerning the Allegation Program, appears on the NRC's public Web site at <http://www.nrc.gov/about-nrc/regulatory/allegations/statistics.html>.

Susquehanna Units 1 and 2, Turkey Point Units 3 and 4, Saint Lucie Units 1 and 2, and Indian Point Units 2 and 3. This report discusses allegation trends at each of these sites. In summary, the trends for these facilities do not suggest a concern about the environment for raising concerns. No materials licensees or vendors were the subject of allegations at a level that warranted additional analysis.

Finally, in CY 2011, the NRC reviewed the effectiveness of 10 Agreement State Programs' responses to concerns and concluded that the Agreement States continue to address concerns promptly, thoroughly document their investigations and closeout actions, inform the concerned individuals of the outcomes, and protect their identity.

OVERVIEW OF SIGNIFICANT PROGRAM ACTIVITIES

In calendar year (CY) 2011, the U.S. Nuclear Regulatory Commission (NRC) undertook several significant activities that affected the agency's Allegation Program and related policies. The agency developed guidance for the NRC staff implementing the Allegation Program on handling allegations that may affect agency decisions late in the decisionmaking process. The staff also developed guidance for the consideration and use of "chilling effect letters" (CELs). NRC Form 3, "Notice to Employees," and a brochure provided to members of the public engaging in the Allegation Program were updated in CY 2011 to incorporate information about the agency-sponsored alternative dispute resolution process for discrimination allegations (Early ADR). At the time this report was prepared, approximately 21 percent of the discrimination cases offered Early ADR in CY 2011 reached settlement. Finally, the Office of Nuclear Regulatory Research conducted an analysis of safety culture survey data and found a correlation between that data and allegation program data. The sections below discuss these areas in more detail.

Allegation Program Guidance

Late-Filed Allegations

In March 1985, the Commission issued criteria for addressing late allegations in the form of a policy statement, "Handling of Late Allegations." The purpose of the policy statement was to explain to all stakeholders how the staff would address allegations brought to its attention shortly before the date on which the agency was to make a decision authorizing the issuance of an operating license under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

The staff incorporated guidance from the 1985 Commission policy statement into the Agency Allegation Program policy guidance in existence at that time and carried the guidance over into the initial issuance of Management Directive (MD) 8.8, "Management of Allegations," in 1996. In 2010, the NRC issued the latest revision of MD 8.8. This revision, among other changes, streamlined the directive handbook to retain primary policy guidance while transferring nonpolicy-related information (e.g., clarifying implementation guidance, situational examples, and letter templates) from the MD to a separate Allegation Manual. During CY 2011, however, questions arose about whether the streamlined guidance in MD 8.8 on the handling of late allegations still clearly reflected previous Commission direction on which allegations needed to be resolved before the agency made decisions. To that end, the staff re-incorporated enhanced guidance for the staff on this topic into the MD and issued Allegation Guidance Memorandum 2011-001, "Late-filed Allegations," dated November 20, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11227A241).

Chilling Effect Letters

Although not finalized until early 2012, the staff also developed enhanced guidance on the consideration and use of CELs. A CEL is a regulatory tool that the agency uses to ensure that licensees and other entities subject to NRC authority are taking appropriate actions to foster a workplace environment that encourages employees to raise safety concerns and to feel free to do so without fear of retaliation. The NRC refers to such an environment as a safety conscious work environment (SCWE).

The staff gathers insights into the SCWE at a particular site in several ways (e.g., reviewing the number and nature of allegations concerning that site and documented observations based on

interviews with the licensees' employees and the review of pertinent documents during the baseline problem identification and resolution inspections). If the staff discerns that a work environment is "chilled" (i.e., not conducive to raising safety concerns internally), the NRC may request, in writing, information about the licensee's SCWE (i.e., a CEL).

A CEL may be warranted in two specific situations. The first situation arises when an allegation of discrimination is made directly to the U.S. Department of Labor (DOL). When an initial DOL investigation concludes that discrimination occurred, the NRC staff considers how the DOL finding will affect the SCWE. In particular, the staff needs to ensure that awareness in the workplace of DOL's discrimination finding has not created a chilling effect (i.e., has not discouraged other employees and contractors from raising safety concerns). The NRC Enforcement Manual currently provides detailed guidance on considering the issuance of a CEL in such cases. (The NRC Enforcement Manual appears on the agency's public Web site at: <http://www.nrc.gov/about-nrc/regulatory/enforcement/guidance.html#manual>.)

The NRC Enforcement Manual also recognizes a second situation in which the staff may consider issuing a CEL; however, it provides no detailed guidance to the staff. For situations involving allegations and other indications of a chilled work environment that do not involve a DOL finding of discrimination, but nonetheless may warrant the issuance of a CEL, the staff prepared new guidance to ensure the effective and consistent use of this tool, Allegation Guidance Memorandum 2012-001, "NRC Chilling Effect Letters," dated March 9, 2012 (ADAMS Accession No. ML12025A055). The guidance does not represent new policies or practices; instead, it documents the NRC staff's existing practices regarding the factors that have been considered when deciding to issue a CEL, the process used to make that determination, the contents of the CEL, the evaluation of a CEL response, and the closure of the CEL.

No CELs were issued in CY 2011, although one issued in CY 2010 for the San Onofre Nuclear Generating Station was closed in September 2011. This issue is discussed in more detail later in this report.

NRC Form 3

The NRC updated two publications related to the Allegation Program in CY 2011. The NRC's Form 3, "Notice to Employees," is required under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," to be posted by NRC licensees and applicants to inform their workers about employee protections against radiation and protections against discrimination for raising safety concerns. In August 2011, Form 3 was updated to incorporate clarifying information about the agency's Early ADR process. The form was updated again in CY 2012 to reflect new contact information following NRC regional office moves. The latest version of Form 3 can be found on the NRC's public Web site at: <http://www.nrc.gov/reading-rm/doc-collections/forms/>.

Allegation Program Brochure

The same Early ADR information was also incorporated into a September 2011 update of the agency's brochure provided to concerned individuals interested in the allegation process (NUREG/BR-0240, "Reporting Safety Concerns to the NRC"). A new section was added describing the NRC's SCWE policy and, in response to public comments, the brochure was also revised to clarify that the process applies to both members of the general public as well as workers in the nuclear industry. The brochure can be found on NRC's public Web site at: <http://www.nrc.gov/about-nrc/regulatory/allegations-resp.html>.

Alternative Dispute Resolution Process

The NRC's ADR Program includes the opportunity to use ADR early in the allegation process for cases of alleged discrimination before the NRC investigates the allegation. Early ADR provides parties additional opportunities to resolve their differences outside the normal regulatory framework, and it uses a neutral third party to facilitate discussions and the timely settlement of the discrimination concern. The NRC believes that voluntary dispute resolution by the parties using the communication opportunities that the Early ADR process provides can stem the inherent damage such disputes can inflict on the SCWE more quickly than an investigation. At any time, either party can exit the ADR process; an NRC investigation remains an option if the alleged still wants to pursue the discrimination matter. Should such an investigation and resulting enforcement panel conclude that enforcement is warranted, the NRC and licensee still may engage in what the agency refers to as "Post-Investigation ADR." For more information on that process, please go to <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr/post-investigation.html> on the NRC's public Web site. If during Early ADR, however, the parties reach a settlement, the staff will not pursue an investigation or subsequent enforcement of discrimination findings. The NRC also considers settlements resulting from licensee-initiated mediation as equivalent to settlements reached under the Early ADR Program.

The NRC made 68 Early ADR offers in association with discrimination allegations raised in CY 2011. At the time this report was prepared, 24 cases (35 percent) had resulted in agreements to mediate. Of those 24 cases, 14 (58 percent) mediated discrimination concerns resulted in the parties reaching a mutually agreeable settlement.

Correlations between Safety Culture Survey and Allegation Data

The Institute of Nuclear Power Operations conducted a safety culture survey in 2010 at 97 percent of the operating power plants nationwide. The survey asked a sample of at least 30 employees from each site about their opinions on various aspects of the safety culture at their organization. Although the overall survey was not significantly correlated with allegation counts in 2010, based on an analysis conducted by the NRC's Office of Nuclear Regulatory Research in CY 2011, there was a significant, moderate correlation between the overall survey scores at each site and counts of allegations in the following year. Furthermore, the "questioning attitude" factor of the survey which is meant to measure how comfortable individuals are challenging assumptions, investigating anomalies, and considering potential adverse consequences of planned actions, had a moderately sized, significant correlation with counts of allegations during 2010 and also correlated with counts of allegations in 2011. These correlations suggest that sites with lower safety culture survey scores were more likely to have higher numbers of allegations in the following year, and sites with lower scores on the "questioning attitude" factor of the safety culture survey were more likely to have higher counts of allegations in the same year and the following year.

The NRC issued the Safety Culture Policy Statement in June 2011 which provides the agency's expectation that individuals and organizations performing regulated activities establish and maintain a positive safety culture commensurate with the safety and security significance of their activities and the nature and complexity of their organizations and functions. The Policy Statement can be found on the NRC's public Web site at: <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>. The staff will monitor future allegation trends for indications that the Policy Statement has had an impact on licensees' questioning attitude, environments for raising concerns, and other safety culture traits.

TRENDS IN ALLEGATIONS

The NRC monitors allegations to discern trends or marked increases that might prompt the agency to question a licensee about the causes of such changes or trends. In preparing this report, the staff reviewed a 5-year history of allegations received for reactor and materials licensees and vendors. The staff focused on allegations with the potential to provide insights into the SCWE at a given facility. Such allegations include those submitted by current or former licensees, contractor employees, or anonymous sources that indicate an unwillingness to raise safety concerns internally. For power reactor facilities, the staff analyzes recent allegation activity twice a year in support of the Reactor Oversight Process (ROP) midcycle and end-of-cycle assessments. In addition, the staff may analyze a particular site or licensee whenever allegations or inspection findings indicate that such an analysis is warranted.

The staff also conducts reviews to identify national trends for reactor and materials allegations, shifts in users of the Allegation Program, and the effect that the implementation of the program has on the workload in the regions and program offices. The following section discusses these trends.

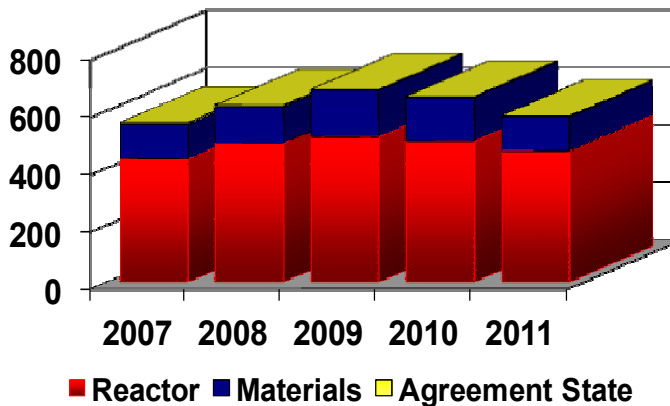
National Trends

National trends provide general information to the staff about the effect of external factors, plant events, and industry efforts to improve the SCWE at NRC-licensed facilities. They can be useful in developing budget and planning assumptions to support future agency and Allegation Program needs.

Figure 1 shows that the NRC receives approximately 600 allegations each year and that there has been a declining trend in the total number of allegations received from CY 2009 through CY 2011. In CY 2008, the total number of allegations received increased by about 10 percent over the total received in CY 2007,

primarily because of substantive increases in allegations received about several reactor facilities and one fuel cycle facility. The decreases in allegations received in CY 2010 and again in CY 2011 appear to be the result of large reductions in allegations received for two reactor facilities that experienced SCWE problems in previous years, which resulted in the NRC issuing a CEL. As actions were implemented at these facilities in response to the identified SCWE problem and the related CEL, the number of allegations received dropped precipitously in subsequent years. The increases and decreases in allegation receipt described above do not appear to be the result of a general industry issue or other external factor, since the reasons for the substantive changes in the number of allegations received about these facilities were plant-specific and varied (e.g., significant outage activity, construction activity, security issues, work environment issues, work planning, or Corrective Action Program changes).

FIGURE 1 - ALLEGATIONS RECEIVED BY CALENDAR YEAR



The number of allegations that the NRC processed for Agreement State matters continues to be minimal. The total number of Agreement States remains at 37. Once the Agreement State Program is explained to them, most individuals who contact the NRC with concerns about Agreement State licensees indicate a willingness to contact and be contacted directly by Agreement State personnel about the evaluation of their concern(s). The NRC forwards these matters to the Agreement State and does not process them as allegations. Generally, the NRC uses the Allegation Program only to track the evaluation of concerns about Agreement State licensees when the concerned individual does not want his or her identity to be revealed to the Agreement State.

Because each allegation can include multiple concerns, the number of concerns received can provide more specific information on the staff effort needed for an appropriate response. Over the last several years, the trend in the total number of concerns in all but one year³ has paralleled the trend in total allegations (e.g., if the number of allegations decreased, the number of concerns decreased as well). In CY 2011, coinciding with the overall decrease in allegations received, the total volume of allegation concerns received decreased in three of the four regional offices, the Office of Nuclear Reactor Regulation, and the Office of Federal and State Materials and Environmental Management Programs. Region I experienced a substantial increase in the number of concerns received. Twelve percent of the allegations received in Region I in CY 2011 included four or more concerns; one allegation had more than 20 concerns. However, there were no apparent trends in Region I in terms of allegation concerns coming from particular facilities, types of facilities, or as the result of an event.

Reactor Licensee Trends

To provide further insight into areas in which the NRC is allocating resources in the followup of reactor-related allegations, Figure 2 depicts the 15 functional areas that represent approximately 80 percent of the issues received nationwide in CY 2011.⁴

Figure 2 indicates that the largest percentage of concerns received nationwide were discrimination concerns, which increased slightly from the number of discrimination concerns received in CY 2010. A review of all discrimination concerns received in CY 2011 found no significant patterns or trends. Claims were made by an almost equal number of licensee employees as contractor employees at a consistent rate throughout the calendar year. Workers at reactor sites in Regions I and II raised more discrimination concerns than workers in Regions III and IV. These concerns involved workers from a variety of functional organizations, although there was a concentration of discrimination concerns raised by personnel in security organizations.

While the number of security-related concerns also remained at a high level, many of the concerns raised (greater than 70 percent) involved only a small number of reactor sites. The majority of security-related allegation concerns were received in CY 2011 from licensee employees. There were concentrations of concerns regarding security staff training and

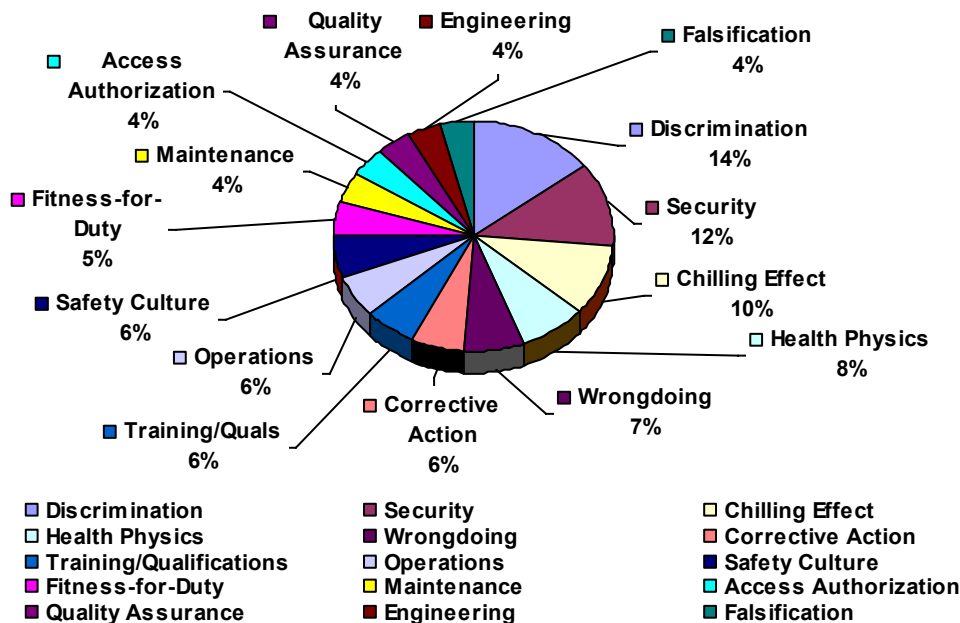
³ Although the total number of allegations in CY 2007 decreased, the number of concerns for reactor facilities actually increased in almost every region and program office.

⁴ The agency received few concerns in the areas not depicted in Figure 2, which represent the remaining 20 percent of the issues received. These areas include chemistry, civil/structural, construction, criticality safety, electrical, emergency preparedness, Employee Concerns Programs, environmental, environmental qualifications, nondestructive evaluation, fatigue/overtime, fire protection, heating, ventilation, and air conditioning, in-service testing, instrumentation and control, licensing, mechanical, procurement, reciprocity, and safeguards.

compliance with post or rounds requirements, but no issue trends were seen at a particular site.

The total number of chilling effect concerns decreased considerably in CY 2011. The NRC uses the term “chilling effect” to describe a condition that occurs when an event, interaction, decision, or policy change results in a perception that the raising of safety concerns to the employer or to the NRC is being suppressed or is discouraged. The decrease can be attributed to the

FIGURE 2 - REACTOR ISSUES NATIONWIDE 2011



continued efforts by one reactor site to address previously identified concerns with the SCWE, which resulted in a significant number of chilling effect allegations in CY 2010. In September 2011, the NRC ended its enhanced oversight activities related to the SCWE at this site. In general, there were concentrations of chilling effect concerns in the health physics and security functional areas, and an upward trend in the area of maintenance, but no functional area trends were seen at a particular site.

There was a slight decrease in the volume of wrongdoing concerns received in CY 2011. The NRC defines “wrongdoing” as the willful violation of regulatory requirements through deliberate action or a violation resulting from careless disregard of regulatory requirements. Wrongdoing allegation concerns involved a number of disciplines; the largest volume involved the areas of security and health physics.

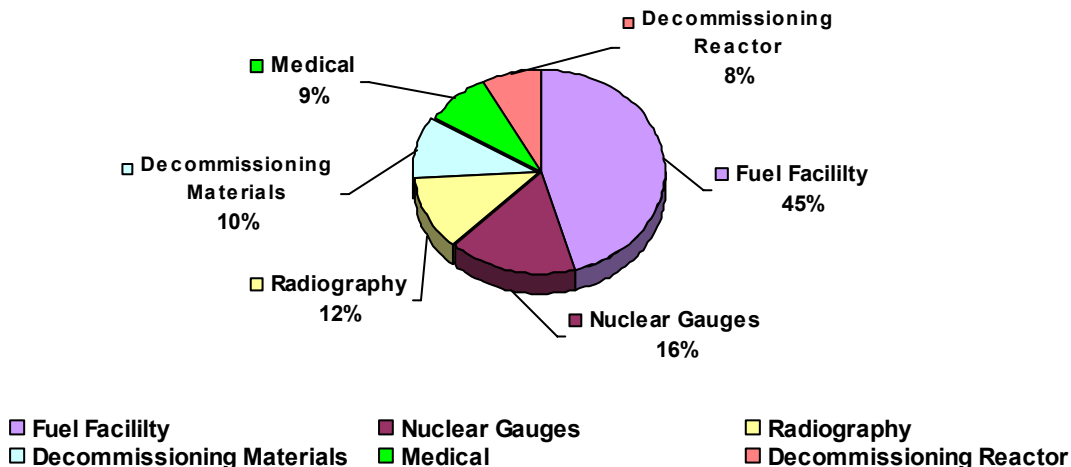
Lastly, there was a notable increase in the number of concerns related to health physics and notable decreases in maintenance, fitness-for-duty, and worker fatigue and overtime concerns. However, these changes could not be attributed to a particular facility, work group, or event.

Materials Licensee Trends

A comparison of the types of issues received does not produce meaningful results because there are many different types of materials licensees and the activities they perform vary greatly. To provide insights into areas in which the NRC focused its attention on materials-related

allegations, Figure 3 depicts the eight types of materials licensees that accounted for approximately 80 percent of allegation concerns that the NRC received nationwide.⁵

FIGURE 3 - MATERIALS LICENSEE TYPES NATIONWIDE 2011



The NRC received 22 percent fewer allegations in CY 2011 in the materials area. Since CY 2004, the number of allegations related to fuel cycle facilities constituted the highest percentage (30 percent to 50 percent) of such allegations. For a number of years, allegations in the medical area have constituted the second highest percentage of materials-related allegations. However, these allegations dropped significantly in CY 2011, while those associated with nuclear gauge licensees, radiography, and both decommissioning reactors and materials facilities increased.

Source Trends

Figure 4 provides a breakdown of 99 percent of the sources for reactors and materials allegations received in CY 2011.⁶ The data indicate that the distribution of source categories remained consistent from CY 2007 to CY 2011. That is, employees of licensees (or former employees) and contractors (or former contractors) continue to be the primary sources of allegations. It was noted, nonetheless, that the number of allegations raised by licensee employees declined somewhat, while the number of allegations raised by contractors rose over the previous year. Persons wishing to remain anonymous continued to be the third largest source of allegations, although that number declined in CY 2011 by approximately 25 percent.

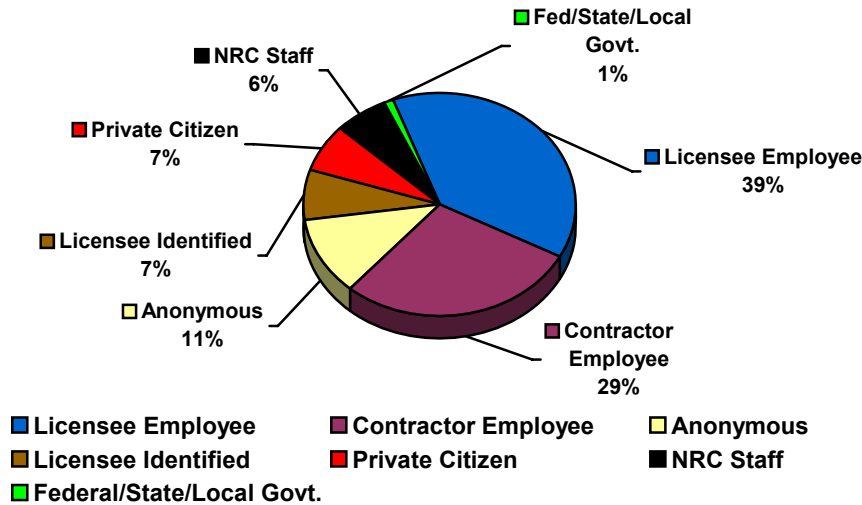
In considering those allegation sources mentioned previously that have the potential to provide insights into the SCWE at a given facility (i.e., allegations submitted by current or former licensee or contractor employees or by anonymous sources), the percentage of allegations from these sources since CY 2007 has notably remained consistent around 75 percent.

⁵ The agency received few concerns about the materials licensee types that are not depicted in Figure 3, which represent the remaining 20 percent of the issues received. These licensee types include academic, casks, exempt distribution, general licensee, high-level waste, irradiators, nuclear pharmacies, special nuclear material, test and research reactors, well logging, and other types.

⁶ The NRC received few concerns from the 1 percent of sources not depicted in Figure 4. These sources include the news media and special interest groups.

Two of the source categories deserve some explanation. The source category “NRC Staff” designates an NRC staff member who suspects that a regulatory requirement has been violated

FIGURE 4 - ALLEGATIONS BY SOURCE CATEGORY 2011



deliberately or as a result of careless disregard, thus prompting the initiation of an investigation by the NRC Office of Investigations. The source category “Licensee Identified” denotes that a licensee representative, acting in his or her official capacity, has reported potential wrongdoing to the NRC. The agency staff assigns an allegation process tracking number to such items so that the evaluation progress of the alleged wrongdoing issue may be tracked.

Allegation Trends for Selected Reactor Sites

Trending the number and nature of allegations for specific reactor sites, individually and in the aggregate, is one method the NRC staff uses to monitor the SCWE at reactor sites. The appendix to this report provides statistics on allegations for all operating reactor sites. The NRC received the listed allegations during the 5-year period between January 2007 and December 2011 and included only allegations received from onsite sources (i.e., those that may be indicative of the health of the SCWE). Onsite sources include current or former licensee employees, current or former contractor employees, or anonymous alлегers. For the purpose of this analysis, the NRC assumed that anonymous allegations came from onsite personnel.

Because a large volume of allegations from onsite sources may be indicative of a SCWE at risk, the staff conducted a more in-depth SCWE review of sites with onsite allegations exceeding three times the median value for operating reactor sites. For CY 2011, the median number of allegations per operating reactor site was four. San Onofre Units 2 and 3 (23), Susquehanna Units 1 and 2 (22), Turkey Point Units 3 and 4 (17), Saint Lucie Units 1 and 2 (16), and Indian Point Units 2 and 3 (15), are the five operating reactor sites that met this criterion. The sections below discuss the staff’s analysis of the SCWE at each of these sites.

In CY 2011 the Agency Allegation Advisor requested that the NRC’s Office of Research conduct a study and identify a straightforward way to appropriately weight the allegation data. Because sites with a larger population of employees and contractors (such as 3-unit reactor sites) typically would generate more allegations, normalizing the data would help ensure that those sites were not disproportionately chosen for further analysis. The study supported the use of the following

criteria to consider the varying workforce size at different sites, both reactor and material. The staff will begin using these criteria in CY 2012 to determine which sites' SCWE may warrant further consideration:

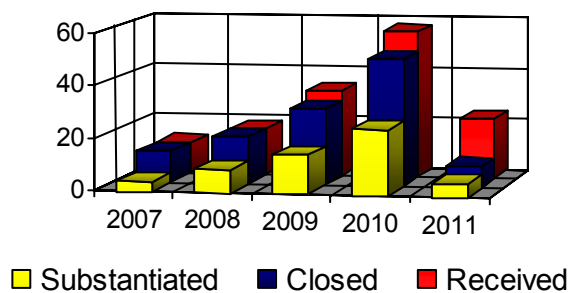
- 1-unit reactor sites (or any site with fewer than 600 persons) with an onsite allegation volume greater than 2.25 times the median
- 2-unit reactor sites (or any site with 600 to 1,000 persons) with an onsite allegation volume greater than 3 times the median
- 3-unit reactor sites (or any site with more than 1,000 persons) with an onsite allegation volume greater than 4.5 times the median

The staff recognizes, and will take into consideration when using the above criteria, that during times of significant site activity, the site population may increase substantially.

San Onofre Units 2 and 3

During 2011, the NRC received allegations from onsite sources concerning San Onofre Units 2 and 3 at a decreasing rate compared to the very high number of allegations received in CY 2010. Analysis of the subject matter of the CY 2011 allegations indicates that allegations were received in many functional areas and were not indicative of a trend in a particular department or discipline. Allegations were received consistently throughout the year (i.e., not concentrated in a specific timeframe). Most of the allegations received were from former and current licensee employees, rather than contractors, who contributed significantly to the large volume of allegations received in CY 2010.

FIGURE 5 - SAN ONOFRE 2 & 3 ALLEGATIONS



NRC inspection follow-up activities in early 2010 relating to a previous licensee assessment of site safety culture found that some employees in multiple workgroups at San Onofre perceived that they were not free to raise safety concerns using all available avenues. Furthermore, they felt that management had not been effective in encouraging employees to use all available avenues without fear of retaliation. (The NRC had requested the licensee to conduct the safety culture assessment). As a result, in March 2010, the NRC issued a CEL (ADAMS Accession No. ML100601272), asking the licensee to provide an action plan to improve the SCWE at San Onofre and to specifically address how it would improve each avenue for raising concerns. With the issuance of the CEL, the NRC substantiated a number of chilling effect allegations. Of the 29 allegations closed and substantiated in CY 2010, over half were associated with one regulatory action; namely, the issuance of the CEL.

In response, the licensee initiated several actions to improve the SCWE, including (1) supervisor and workforce training on SCWE behavior expectations and avenues available to raise concerns, respectively, (2) the improvement of avenues to raise concerns, and (3) the

enhancement of monitoring tools, including surveys, focus groups, and metrics. Multiple inspections, including two focused problem identification and resolution inspections in January and May 2011 (ADAMS Accession No. ML111250473), and public meetings were conducted to review the licensee's corrective actions to address the issues identified in the CEL. In early 2011, the NRC also closed a substantive cross-cutting issue in the problem identification and resolution area, indicating that sustained improvement in that area likely would improve the SCWE. In September 2011, the NRC ended its enhanced oversight activities related to the SCWE, based on the results of inspections conducted in early to mid-2011 and a noted decreasing trend in NRC receipt of allegations and SCWE-related concerns (ADAMS Accession No. ML112490114).

Chilling effect concerns continued to be raised from various sources in 2011 as the licensee was completing implementation of corrective actions related to the previously identified SCWE issue. While the total number of chilling effect concerns brought to the NRC in 2011 about San Onofre were notably fewer than those identified during the peak of the site's SCWE challenges, it remains a relatively high number compared to the industry. Chilling effect concerns were raised in a number of different departments at the facility in 2011. More than a third of the chilling effect concerns were found to have been addressed directly by licensee corrective actions in response to the previously identified SCWE problem. More than half of the chilling effect concerns received in 2011 about San Onofre lacked specifics and did not indicate that the corrective actions the licensee had taken were ineffective.

The licensee's Employee Concerns Program saw similar declining trends in CY 2011. According to informal discussions with the licensee, employees (not contractors) reported most of the concerns. Many licensees establish such programs to provide a way to report, investigate, and resolve safety concerns that is independent of the concerned individual's chain of command. A SCWE assessment conducted in CY 2011 also indicated a positive trend in staff perceptions. A new Employee Concerns Program Manager was appointed in late CY 2011 and he conducted a number of outreach activities to introduce himself to the staff.

From CY 2007 through CY 2011, the NRC received more discrimination concerns regarding San Onofre than any other reactor facility. More than half of these discrimination concerns were received in the 2009–2010 timeframe, when the facility was experiencing significant challenges associated with its SCWE. Seven discrimination concerns were received in CY 2011. This was fewer than the number received in both 2010 and 2009. To date, none of the discrimination concerns received in the 2007–2011 timeframe have been substantiated; however, 14 remain under review. Fewer than half of the discrimination concerns received in 2011 were from a contractor or former contractor, in contrast to a significant concentration of discrimination concerns received from those sources in previous years.

In summary, there were substantive decreases in the total number of allegations received from onsite sources and in the number of discrimination and chilling effect concerns that the NRC received regarding San Onofre in CY 2011. These decreases are attributable to corrective actions the licensee took in response to a CEL issued in March 2010, which ultimately resulted in the cessation of enhanced NRC oversight activities in September 2011. However, the number of allegations and SCWE-related concerns the NRC received about San Onofre in 2011 remain high compared to the industry. The NRC will continue to monitor the licensee's efforts to improve the SCWE at San Onofre 2 and 3 through baseline inspection efforts focused on whether SCWE improvements are sustained.

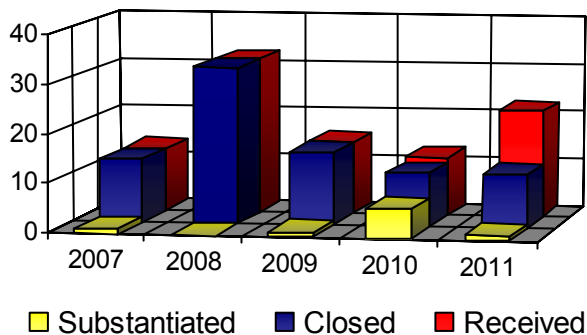
Susquehanna Units 1 and 2

In the midcycle Reactor Oversight Program (ROP) assessment letter for CY 2010 (ADAMS Accession No. ML102440462), the NRC concluded that the SCWE theme highlighted in the 2008–2009 timeframe no longer existed at the Susquehanna Steam Electric Station (SSES).

Furthermore, the CEL issued in January 2009 no longer would be considered for plant assessment purposes. The 2010 ROP midcycle assessment letter also indicated that the NRC would continue to monitor the licensee's activities to address SCWE issues at Susquehanna through the Baseline Inspection Program. The rate of receipt of allegations from onsite sources at Susquehanna in 2009 and 2010 showed a steadily

decreasing trend as a result of the improvements the licensee made to address SCWE issues and monitor improvement in the SCWE. For CY 2011, however, there was a substantial increase in the number of allegations received from onsite sources compared to the previous year. Several factors appear to have contributed to the notable increase in CY 2011. These include significant outage activity and influx of onsite outage support contractors, numerous senior-level management changes, and the launch of a new performance improvement initiative, the Responsible Behavior Program. This program is associated, in part, with efforts to raise standards, increase accountability, and improve human performance.

FIGURE 6 - SUSQUEHANNA 1 & 2 ALLEGATIONS



An analysis of the subject matter of the technical allegation concerns received in CY 2011 about SSES does not indicate a trend in any specific functional area or concern type. However, several concerns continue to be raised about the effectiveness of the Corrective Action Program, and the quality of related root cause and apparent cause analyses, which has been an area of interest at SSES for several years. Some chilling effect concerns continued to be raised in CY 2011, as they were to a similar degree in CY 2010. For the first 10 months of CY 2011, the chilling effect concerns were not focused in a specific functional area. However, from the end of October through the end of 2011, most of the chilling effect concerns received involved the operations department and appear to be related to the implementation of the new Responsible Behavior Program in that department.

The number of discrimination concerns that the NRC received in 2011 regarding SSES was similar to the number received each year over the past five years, except for 2008, the year before the issuance of the CEL, when eight discrimination concerns were received. None of the discrimination concerns received from 2007–2011 have been substantiated. The discrimination concerns received over the past few years do not indicate a trend from a particular department.

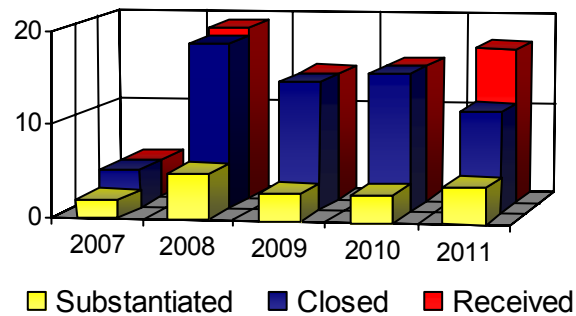
The SSES Employee Concerns Program experienced a similar substantive increase in the overall number of contacts in CY 2011 versus CY 2010 (about a 20 percent increase). Program staff attribute the increase primarily to the factors noted above. The most recent independent SCWE survey of the site, completed in March 2011, noted overall improvements in the SCWE and the general work environment.

The volume of outage activities at SSES in CY 2011, the number of senior-level manager changes that occurred throughout the year, and the licensee's implementation of its new Responsible Behavior Program were significant factors in the allegations that the NRC received regarding SSES in CY 2011. As such, the number and nature of allegations received do not appear to be indicative of a SCWE concern at the site. The NRC will maintain its oversight of the SCWE at SSES through normal inspection activities.

Turkey Point Units 3 and 4

The volume of allegations that the NRC received from onsite sources regarding the Turkey Point site in CY 2011 was consistent with the volume received over the previous 3 years. After peaking in the second quarter of the year, the rate of allegations received declined over the remainder of CY 2011. An analysis of the sources and subject matter of the allegations received in CY 2011 shows no SCWE-related trends. Concerns received involved a variety of functional organizations and were provided by both contractor and licensee employees. A quarter of the allegations were received from anonymous sources in 2011, which was smaller than the percentage received in CY 2010. Some chilling effect concerns were received in CY 2011, but none were substantiated. The number of discrimination concerns received increased slightly in CY 2011 after a steady decline the previous two years. One discrimination concern remains under review by the NRC. None of the discrimination concerns that the NRC has investigated over the past five years have been substantiated.

**FIGURE 7 - TURKEY POINT 3 & 4
ALLEGATIONS**



The site population increased significantly in CY 2010 and continued to increase in CY 2011 because of extended power uprate activities. The substantial site population increase has affected the volume of concerns that both the NRC and the site Employee Concerns Program have received. Based on discussions with the licensee, contractors raised most of the concerns in that program. The majority of SCWE-related concerns that the Employee Concerns Program received in CY 2011 involved discrimination or chilling effect concerns, one of which was substantiated by the licensee and corrective actions were taken. A new manager was assigned to the Turkey Point program in CY 2011 and considerable effort was expended on outreach activities to introduce the individual to the site workforce.

The most recent NRC inspections, including a problem identification and resolution inspection conducted in May 2010 (ADAMS Accession No. ML101830300), and recent surveys conducted by the licensee indicate that the workforce is more knowledgeable of the various avenues available to them for raising nuclear safety concerns. The workforce feels personally supported by the supervisors for raising concerns and knows of no one who was treated negatively for raising concerns or challenging unsafe acts.

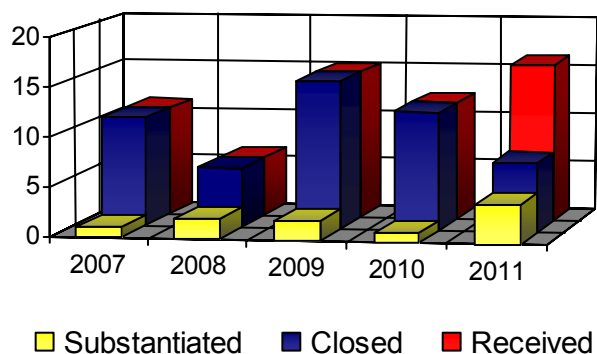
Given the substantial increase in the site population beginning in late CY 2010 for Turkey Point extended power uprate activities, the number and nature of allegations received regarding the

site in CY 2011 are not indicative of a SCWE concern at the site. The NRC will maintain its oversight of the SCWE at Turkey Point 3 and 4 through normal inspection activities.

Saint Lucie Units 1 and 2

The NRC has received allegations related to the Saint Lucie site at a consistent and relatively high rate since CY 2007, except for CY 2008, when the number received was reduced. The number of allegations received from onsite sources increased from CY 2010 to CY 2011. However, an analysis of the subject matter of the allegations received in CY 2011 does not indicate a trend in any specific functional area or concern type. A significant concentration of allegations was received from onsite sources in the November–December 2011 timeframe. Most of the concerns received in that timeframe were related to contractor activities associated with the Saint Lucie Unit 1 extended power uprate outage that began in November 2011. The remaining allegations from onsite sources were received during the first half of CY 2011. No allegations were received in a 4-month period between early July 2011 and early November 2011. Concentrations of allegations received from a particular onsite source were evenly spread among licensee employees, contractors, and anonymous allegers. There were few chilling effect concerns raised in CY 2011 from various sources and none were substantiated.

FIGURE 8 - SAINT LUCIE 1 & 2 ALLEGATIONS



The NRC received a relatively high number of discrimination concerns related to the Saint Lucie site from CY 2007 through CY 2011 compared to the rest of the industry (only three other reactor facilities received more in this timeframe). To date, however, none of those discrimination concerns have been substantiated. It is noted that most discrimination concerns received from CY 2007 through CY 2011 were submitted by contractors.

The most recent NRC problem identification and resolution inspection at Saint Lucie 1 and 2 was completed in March 2010 (ADAMS Accession No. ML101100013). The inspectors noted no reluctance on the part of site workers to raise safety concerns and workers were aware of the various avenues available for raising safety concerns.

Given the substantial increase in the site population beginning in late CY 2010 for the Saint Lucie extended power uprate outage (a more than two-fold increase), the number and nature of allegations received regarding Saint Lucie in CY 2011 are not indicative of a SCWE problem at the site. The NRC will maintain its oversight of the SCWE at Saint Lucie 1 and 2 through normal inspection activities.

Indian Point Units 2 and 3

The volume of allegations that the NRC received from onsite sources concerning Indian Point 2 and 3 in CY 2011 represented a significant increase from CY 2010. Many of the concerns involved training related to equipment modifications or technical issues in the security area. In addition, insights from the allegation process and inspections indicate that some security officers are dissatisfied with the effectiveness of the Corrective Action Program to address security equipment issues. Very few concerns were received about a chilled work environment and none were substantiated.

The trend in discrimination allegations increased slightly in CY 2011 after a steady decline the last three years. None of the discrimination concerns received in the past 5 years have been substantiated; however, one received in CY 2011 remains under review.

Informal discussions with site Employee Concerns Program management indicated a similar trend in the receipt of security-related concerns. The licensee is initiating actions to address the increasing numbers of concerns in the security organization. The NRC will continue to complete baseline inspections to ensure the reliability of security equipment and processes.

The number and nature of allegations received regarding Indian Point 2 and 3 in CY 2011 are not indicative of a SCWE problem at the site. The NRC will maintain its oversight of the SCWE at Indian Point 2 and 3 through normal inspection activities and will maintain a focus on the corrective action process and other avenues for reporting concerns with regard to usage by the security workforce.

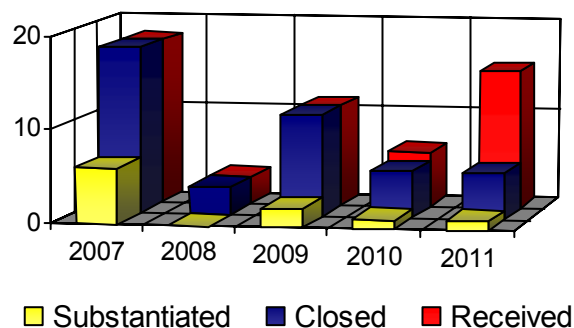
Allegation Trends for Selected Materials Licensees

The NRC Web site posts allegation statistics for certain fuel cycle facilities (see the appendix to this report). Because of the small number of allegations and the smaller work force sizes associated with the overwhelming majority of other smaller materials licensees, the potential for a licensee or contractor to identify an allegor is increased. For this reason, tables of statistics on allegations about materials licensees other than fuel cycle facilities have not been provided publicly or included in this report. None of the materials licensees or fuel cycle facilities received a sufficient number of allegations to discern a trend or pattern or to provide insights into the SCWE. Therefore, this report does not include more in-depth reviews of specific materials licensees.

Allegation Trends for Selected Vendors

Because none of the vendors received a sufficient number of allegations to discern a trend or pattern or to provide insights into the work environment, this report does not include more in-depth reviews of specific vendors. The report also does not provide statistics by contractor or vendor because publishing the number of allegations could identify an allegor.

FIGURE 9 - INDIAN POINT 2 & 3 ALLEGATIONS



concerned individuals. In all cases, the review teams concluded that the States consistently took prompt and appropriate action in response to concerns raised. In all cases, the review teams noted that the States documented the results of their investigations and closeout actions, which included notifying concerned individuals of the outcomes of the investigations when the individuals' identities were known. The review team determined that the States reviewed in CY 2011 adequately protected the identity of any concerned individual who requested anonymity. In general, the results of the CY 2011 IMPEP reviews demonstrate that the Agreement States continue to rank response to concerns from external sources as a high priority in protecting public health and safety.

CONCLUSIONS

There has been a declining trend in the total number of allegations received from CY 2009 through CY 2011. The decreases do not appear to be the result of a general industry issue or other external factor, since the reasons for the substantive changes in the numbers of allegations received regarding these facilities were based on plant-specific matters. The total volume of specific allegation concerns received decreased in three of the four regional offices, the Office of Nuclear Reactor Regulation, and the Office of Federal and State Materials and Environmental Management Programs. Region I experienced a substantial increase in the number of concerns received; however, there were no apparent trends in concerns coming from particular facilities, types of facilities, or as the result of an event. The largest percentage of concerns received nationwide were discrimination concerns, which increased slightly from the number received in CY 2010. The total number of chilling effect concerns; however, decreased considerably in CY 2011. While the number of security-related concerns also remained at a high level, most of the security concerns raised involved only a small number of reactor sites.

The analyses of allegations have provided insights into the SCWE at several facilities. The staff has taken action to engage licensees about their work environment when warranted and will continue to monitor these sites with interest.

The agency's Early ADR process resulted in 14 cases in which discrimination allegations were settled successfully between the parties before the start of an NRC investigation. The staff believes that voluntary dispute resolution by the parties using the communication opportunities afforded in Early ADR can stem the inherent damage such disputes have on the SCWE more quickly than an investigation.

Finally, the NRC developed enhanced guidance for the staff responsible for handling allegations in the areas of late-filed allegations and processing CELs, and updated information tools that the public used while engaged in the allegation process. In addition, the NRC's Office of Nuclear Regulatory Research identified correlations in CY 2011 suggesting that sites with lower safety culture survey scores were more likely to have higher numbers of allegations in the following year, and sites with lower scores on the "questioning attitude" factor of the safety culture survey were more likely to have higher counts of allegations in the same year and the following year.

APPENDIX

**ALLEGATION STATISTICS
OPERATING REACTORS AND FUEL CYCLE FACILITIES**

OPERATING REACTOR ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2007	2008	2009	2010	2011
ARKANSAS 1 & 2	8	6	3	4	3
BEAVER VALLEY 1 & 2	1	3	1	2	1
BRAIDWOOD 1 & 2	5	3	3	4	2
BROWNS FERRY 1, 2 & 3	11	18	8	12	11
BRUNSWICK 1 & 2	3	2	5	1	3
BYRON 1 & 2	9	8	9	6	3
CALLAWAY	17	2	2	3	1
CALVERT CLIFFS 1 & 2	1			3	1
CATAWBA 1 & 2	2	3	2	2	3
CLINTON	1	1	4	4	1
COLUMBIA PLANT	3	1	9	4	5
COMANCHE PEAK 1 & 2	4	5	1	2	3
COOK 1 & 2	3	5	5	3	5
COOPER	2	3	2	5	5
CRYSTAL RIVER	4	2	4	4	1
DAVIS-BESSE	4	1		2	4
DIABLO CANYON 1 & 2	2	13	15	12	9
DRESDEN 2 & 3		8	5	1	2
DUANE ARNOLD	1	2	1	1	1
FARLEY 1 & 2	5	5	6	7	12
FERMI	10	3	3	3	3
FITZPATRICK	1	2	3	2	2
FORT CALHOUN		1	4	5	4
GINNA	2	4	2	4	10
GRAND GULF	8	4	2	5	3
HARRIS	14	1	2	5	3
HATCH 1 & 2	6	7	5	8	4
INDIAN POINT 2 & 3	18	3	11	6	15
KEWAUNEE	1		3		1
LASALLE 1 & 2	5	1		1	2
LIMERICK 1 & 2	1	3	14	2	3
MCGUIRE 1 & 2		3	3	6	5
MILLSTONE 2 & 3	5	8	5	4	11
MONTICELLO	1	2	2		3
NINE MILE POINT 1 & 2	6	1		1	5
NORTH ANNA 1 & 2	3	1	1	2	1
OCONEE 1, 2, & 3	2	1	1	11	4
OYSTER CREEK	2	6	14	4	
PALISADES	5	6	8	3	5
PALO VERDE 1, 2, & 3	18	17	15	16	8
PEACH BOTTOM 2 & 3	8	3	8	4	3
PERRY	1	6	9	2	5
PILGRIM	7	8	1	5	5
POINT BEACH 1 & 2	1	5	4	8	6
PRAIRIE ISLAND 1 & 2	6	5	14	7	7

Site	2007	2008	2009	2010	2011
QUAD CITIES 1 & 2	4	4	2		1
RIVER BEND	2	8	5	7	
ROBINSON		1		4	6
SALEM/HOPE CREEK	16	11	7	6	4
SAN ONOFRE 2 & 3	12	18	33	57	23
SEABROOK	4	10	2	1	7
SEQUOYAH 1 & 2	13	19	6	6	
SOUTH TEXAS 1 & 2	6	8	12	5	5
ST LUCIE 1 & 2	11	6	15	12	16
SUMMER		2	3	1	5
SURRY 1 & 2	1	2	2	6	4
SUSQUEHANNA 1 & 2	13	32	15	12	22
THREE MILE ISLAND	1	2	9	1	3
TURKEY POINT 3 & 4	4	19	14	15	17
VERMONT YANKEE	3	1	2	3	2
VOGTLE 1 & 2	7	1	2	4	12
WATERFORD	2	4	3	4	2
WATTS BAR 1	3	9	3	2	5
WOLF CREEK	1	7	6	2	4

FUEL CYCLE FACILITY ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2007	2008	2009	2010	2011
AMERICAN CENTRIFUGE PLANT	2				1
BWX TECHNOLOGIES, INC.	1		2	1	
GLOBAL NUCLEAR FUEL	1	1	6	6	5
HONEYWELL	1	4	7	16	3
LOUISIANA ENERGY SERVICES	1	11	29	6	12
NUCLEAR FUEL SERVICES, INC.	3	3	5	10	4
PADUCAH	5	3	4	5	6
PORTSMOUTH	2	1			
SHAW AREVA MOX SERVICES	2	1	1		4
WESTINGHOUSE	2	4	2		1
YUCCA MOUNTAIN		1	5	2	