

# ALLEGATION PROGRAM ANNUAL TRENDS REPORT

Calendar Year 2010

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

### **CONTENTS**

EXE	:CUTIVE SUMMARY					
OVE	ERVIEW OF SIGNIFICANT PROGRAM ACTIVITIES	3				
	Enhancements to the Allegation Process	3				
	Safety Conscious Work Environment					
TRE	NDS IN ALLEGATIONS	6				
	National Trends	6				
	Reactor Licensee Trends	7				
	Materials Licensee Trends	8				
	Source Trends					
	Allegation Trends for Selected Operating Reactor Sites					
	San Onofre Nuclear Generating Station, Units 2 and 3					
	Palo Verde Nuclear Generating Station, Units 1, 2 and 3					
	Turkey Point Nuclear Generating Station, Units 3 and 4	13				
	Allegation Trends for Selected Non-Operating Reactor Sites					
	Watts Bar Nuclear Plant, Unit 2	14				
	Allegation Trends for Selected Materials Sites					
	Honeywell International	15				
	Allegation Trends for Selected Vendor Sites	16				
	Agreement State Licensee Concerns					
	CONCLUSIONS					
APP	PENDIX	A-1				
	FIGURES					
	FIGURES					
1	Allegations Received by Calendar Year	6				
2	Reactor Issues Nationwide 2010					
3	Materials Licensee Types Nationwide 2010					
4	Allegations by Source Category 2010					
5	San Onofre Allegations					
6	Palo Verde Allegations					
7	Turkey Point Allegations					
8	Watts Bar 2 Allegations					
9	Honeywell Allegations					
10	Agreement States	16				

#### **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) 2010 involving the NRC's Allegation Program and related policies warrants mention in this report.

The agency finalized enhancements to the Allegation Program based on lessons learned regarding the handling of allegations of inattentive security officers at the Peach Bottom Atomic Power Station. In addition, the allegation staff continues to implement the agency-sponsored alternative dispute resolution process (Early-ADR) for discrimination allegations. Thirteen percent of the discrimination cases raised in CY 2010 that were offered Early-ADR reached settlement.

With regard to allegation trends, the trend in the total number of allegations that the NRC received in CY 2010 declined slightly after a notable increase in the last 2 years. The decrease does not appear to be the result of a general industry issue. Each allegation can include multiple concerns, and Regions I and III experienced a decrease in the number of concerns received in CY 2010, thus coinciding with the general decrease in allegations. However, Regions II and IV received more concerns in CY 2010 than they had the previous year. Region IV received approximately 20 percent more concerns in CY 2010, largely because of the activity at one site. Chilling effect concerns, largely at one operating site, made up the largest percentage of concerns received nationwide. Although security concerns continue to decline, the volume of fitness-for-duty and fatigue concerns has steadily increased over the past several years. Lastly, the volume of wrongdoing allegation concerns increased approximately 15 percent in CY 2010. Wrongdoing allegation concerns involved a number of disciplines; the largest volume involved the area of health physics. Similarly, a number of the chilling effect concerns and discrimination claims also involved health physics personnel.

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 safety conscious work environment (SCWE). The staff selected three operating reactor sites (San Onofre Nuclear Generating Station, Units 2 and 3; Palo Verde Nuclear Generating Station, Units 1, 2, and 3; and Turkey Point Nuclear Generating Station, Units 3 and 4), one nonoperating reactor site (Watts Bar Nuclear Plant, Unit 2), and one fuel cycle facility (Honeywell International, Inc.) for a more indepth review. The report discusses allegation trends at each of these sites. In summary, the trends either did not suggest a concern about the environment for raising concerns or may be indicative of a weakening SCWE. In such cases, the NRC has engaged the licensee and is closely monitoring its activities to address weaknesses. Finally, because of concerns about the SCWE, the NRC issued a chilling effect letter to one licensee requesting an action plan to improve the SCWE that specifically addresses how the licensee will improve each avenue for raising concerns. No vendors were the subject of allegations at a level that warranted additional analysis.

\_

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

Finally, in CY 2010, the NRC reviewed the effectiveness of nine Agreement State programs' responses to concerns and concluded that the Agreement States continue to promptly address concerns raised, 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) 2010, the U.S. Nuclear Regulatory Commission (NRC) undertook certain significant activities that affected the agency's Allegation Program and related policies and that warrant discussion in this report. The agency finalized enhancements to the Allegation Program based on lessons learned associated with the handling of allegations of inattentive security officers at the Peach Bottom Atomic Power Station and updated and issued Management Directive (MD) 8.8, "Management of Allegations," dated November 15, 2010. In addition, the allegation staff continues to implement the agency-sponsored alternative dispute resolution (Early-ADR) process for discrimination allegations. At the time this report was prepared, 13 percent of the discrimination cases that were offered Early-ADR in CY 2010 reached settlement. The sections below discuss these areas in detail.

#### **Enhancements to the Allegation Process**

In early CY 2010, the staff finalized its efforts to address lessons learned on the handling of allegations in 2007 of inattentive security officers at Peach Bottom. The NRC enhanced guidance in the following program areas for agency staff responsible for handling allegations:

- allegation terminology
- contact with allegers
- licensee-initiated ADR processes
- allegation requests for information (RFIs)
- NRC assessment of licensees' responses to RFIs
- resident and nonresident inspector knowledge of allegation activity
- allegation closure documentation involving a licensee's response to an RFI
- public discussion of specific allegation-related information
- alleger responses after closure

Allegation Guidance Memorandum 2008-001, "Final Guidance in Response to Lessons Learned from the Allegation Assessment of Inattentive Security Officers at Peach Bottom Atomic Power Station," Revision 1, issued February 2, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100431576), provides background and detailed information on the enhancements made.

The NRC staff documents the policies and procedures that govern the internal NRC functions necessary for the agency to accomplish its regulatory mission in documents called management directives. MD 8.8 outlines the policies of the NRC's Allegation Program. The NRC revised this directive in CY 2010 to incorporate changes in organizational responsibility and format, to streamline the directive and handbook so that they focus on policy matters, and to address Commission direction as prescribed in allegation guidance memoranda issued since the last revision of MD 8.8 issued in February 1999. Substantive changes include the handling of allegations that involve sensitive security-related information, the use of ADR practice with regard to allegations of discrimination, and lessons learned from the handling of allegations related to the inattentiveness of security officers at Peach Bottom. MD 8.8 is available on the NRC's public Web site in the Electronic Reading Room.<sup>2</sup>

\_

See MD 8.8 at <a href="http://adamswebsearch.nrc.gov/idmws/DocContent.dll?library=PU">http://adamswebsearch.nrc.gov/idmws/DocContent.dll?library=PU</a> ADAMS^pbntad01& LogonID=339390e65b995744d282d5f526a5ecc9&id=103480101.

#### **Safety Conscious Work Environment**

The 1996 NRC Policy Statement, "Freedom of Employees in the Nuclear Industry To Raise Safety Concerns without Fear of Retaliation," outlines the agency's expectations that licensees and other employers subject to NRC authority establish and maintain a safety conscious work environment (SCWE). The NRC defines a SCWE as an environment in which (1) employees are encouraged to raise safety concerns to their employers or to the NRC without fear of retaliation, (2) concerns are promptly reviewed, given the proper priority, and appropriately resolved, and (3) timely feedback is provided.

The staff gathers insights into the SCWE at a particular site in several ways, for example, by reviewing the number and nature of allegations concerning that site and by documenting its observations concerning a site's SCWE based on interviews with the licensees' employees and on reviews 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 concerning the licensee's SCWE. Such correspondence is called a "chilling effect letter." The agency also initiates chilling effect letters after a finding of discrimination related to raising safety concerns by the U.S. Department of Labor under Section 211 of the Energy Reorganization Act of 1974, as amended, or by the NRC under the following employee protection regulations:

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations"
- 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material"
- 10 CFR Part 40, "Domestic Licensing of Source Material"
- 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"
- 10 CFR Part 60. "Disposal of High-Level Radioactive Wastes in Geologic Repositories"
- 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste"
- 10 CFR Part 63, "Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada"
- 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material"
- 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste"
- 10 CFR Part 76, "Certification of Gaseous Diffusion Plants"
- 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters under Section 274"

In CY 2010, the NRC issued one chilling effect letter concerning the San Onofre Nuclear Generating Station that outlined the agency's concern that some employees in multiple workgroups at San Onofre had the perception that they were not free to raise safety concerns using all available avenues and that management had not been effective in encouraging employees to use all available avenues without fear of retaliation. In March 2010, the NRC issued the licensee a chilling effect letter asking the licensee to provide an action plan to improve the SCWE at San Onofre and to specifically address how it will improve each avenue for raising concerns. This report discusses this issue in more detail later.

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 allows 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 affords can stem the inherent damage such disputes can inflict on the SCWE more quickly than an investigation can. At any time, either party can exit the ADR process; an NRC investigation remains an option if the alleger still wants to pursue the discrimination matter. However, if 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 61 Early-ADR offers in association with discrimination allegations raised in CY 2010; 23 cases (38 percent) resulted in agreements to mediate. Of those 23 cases, 8 (35 percent) mediated discrimination concerns resulted in the parties reaching a mutually agreeable settlement.

#### 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 those allegations that have the potential to provide insights into the SCWE at a given facility. Such allegations include those submitted by current or former licensee or contractor employees or by 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 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.

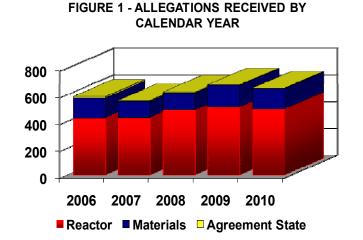
The staff also conducts reviews to identify national trends for reactor and materials allegations that it received, shifts in users of the Allegation Program, and the effect of the implementation of the Allegation Program on the workload in the regions and program offices. The following section discusses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

#### **National Trends**

National trends are of interest because they can provide the staff with general information about the effect of external factors, plant events, and industry efforts to improve the SCWE at NRC-licensed facilities. In addition, they can be useful in developing budget and planning assumptions to support future

agency and Allegation Program needs. Figure 1 shows that the trend in the total number of allegations that the NRC received in CY 2010 declined slightly after a notable increase in the prior 2 years. The decrease does not appear to be the result of a general industry issue.

The number of allegations processed by the NRC that involve 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 such 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 1 year<sup>2</sup> has paralleled the trend in total allegations (e.g., if the number of allegations decreased, the number of concerns decreased as well). In CY 2010, the number of allegations and concerns decreased in Regions I and III but increased in Regions II and IV. Region IV received approximately 20 percent more concerns in CY 2010 largely because of the activity at one site.

#### Reactor Licensee Trends

To provide further insight into areas in which the NRC is allocating resources on the followup of reactor-related allegations, Figure 2 depicts the 16 functional areas that represent approximately 80 percent of the issues received nationwide in CY 2010.<sup>3</sup>

#### ■ Fatigue/Overtime ■ Safety Culture 3% 3% **Access** ■ Falsification Authorization 4% 3% Engineering **Chilling Effect** 4% 12% Quality Assurance Discrimination 4% 11% Operations -Security 5% 11% ■ Training/Quals 5% ■ Fitness for Duty Health Physics 9% 5% □ Wrongdoing ■ Maintenance -■ Corrective Action 6% Security ■ Chilling Effect Discrimination □ Wrongdoing ■ Corrective Action ■ Fitness for Duty ■ Maintenance ☐ Health Physics Training/Qualifications

FIGURE 2 - REACTOR ISSUES NATIONWIDE 2010

Figure 2 indicates that chilling effect issues comprised the largest percentage of allegation concerns received in CY 2010. 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 majority of the chilling effect concerns were received from one operating reactor site in Region IV. In early 2010, the NRC issued this licensee a chilling effect letter requesting that it provide an action plan to improve the SCWE at the site and to specifically address how it will improve each avenue for raising concerns.

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.

The agency received few concerns in the areas that are not depicted in Figure 2, which represent the remaining 20 percent of the issues received. These areas include chemistry, civil/structural, construction, cyber security, electrical, emergency preparedness, employee concerns programs, environmental, fire protection, inservice testing, instrumentation and control, licensing, mechanical, nondestructive examination, radioactive waste, safeguards, and other areas.

The actual number of security concerns continues to decrease. Conversely, the volume of fitness-for-duty and fatigue concerns has steadily increased over the past several years. In late 2009, licensees began implementing the new work hour limits in Subpart I, "Managing Fatigue," of 10 CFR Part 26, "Fitness for Duty Programs." In fall CY 2010, the industry submitted a petition for rulemaking to address what it believes may be unintended consequences and confusion associated with the new rule.

Lastly, the volume of wrongdoing allegation concerns increased approximately 15 percent in CY 2010. 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 area of health physics. Similarly, a number of the chilling effect concerns and discrimination claims also involved health physics personnel.

#### 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 because the activities that these licensees perform vary greatly. To provide insights into the 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.<sup>4</sup>

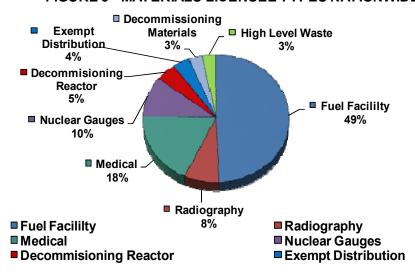


FIGURE 3 - MATERIALS LICENSEE TYPES NATIONWIDE 2010

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, general licensee, irradiators, nuclear pharmacies, special nuclear material, test/research reactor, well logging, and other types.

Since CY 2004, the number of allegations related to fuel cycle facilities constituted the highest percentage (30–50 percent) of the allegation concerns that the NRC received in the materials area. The medical area has for a number of years comprised the second highest percentage of materials-related allegation concerns at about 20 percent per year. After dropping in CY 2009, the volume of allegations concerning the medical facilities rose again in CY 2010.

#### Source Trends

Figure 4 provides a breakdown of 99 percent of the sources for reactors and materials allegations received in CY 2010.<sup>5</sup> The data indicate that the distribution of source categories remained consistent between CY 2006 and CY 2010—that is, employees of licensees (or former employees) and contractors (or former contractors) continue to be the primary sources of allegations. It follows that the percentage of reactors and materials allegations from other sources has also remained largely unchanged over the review period.

In considering those allegation sources previously mentioned as having 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 2006 has notably remained consistently around 75 percent.

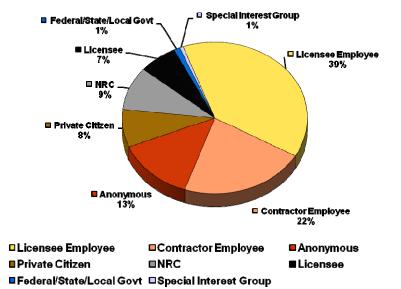


FIGURE 4 - ALLEGATIONS BY SOURCE CATEGORY 2010

In comparing the sources of materials allegations to those of reactor allegations over the past 5 years, licensee (or former licensee) employees are consistently the largest source. For reactor allegations, contractor (or former contractor) employees, anonymous allegers, and private citizens, in that order, are the next largest sources. Private citizens are the second most frequent source of materials-related allegations, followed by anonymous allegers and contractor (or former contractor) employees. This trend is understandable because materials licensees employ fewer contract personnel and because their activities involve more direct interaction with the public.

The NRC received few concerns from the news media, which represented only 1 percent of the sources.

Two of the source categories deserve some explanation. The source category "NRC" designates an NRC staff member who suspects that a regulatory requirement has been violated 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" denotes that a licensee representative, acting in his or her official capacity, has reported a potential wrongdoing matter to the NRC. The agency staff assigns an allegation process tracking number to such items so that the progress of the evaluation of the wrongdoing issue may be tracked.

#### **Allegation Trends for Selected Operating Reactor Sites**

Trending the number and nature of allegations concerning individual reactor sites, individually and in the aggregate, is one method that the NRC staff uses to monitor the SCWE at reactor sites. The appendix to this report provides statistics on allegations concerning all operating reactor sites. The NRC received the listed allegations during the 5-year period between January 2006 and December 2010 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 allegers. For the purpose of this analysis, the NRC assumed that anonymous allegations come from onsite personnel.

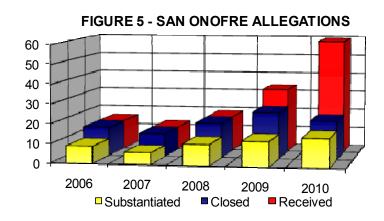
In determining which operating reactor sites should receive a more indepth review, the staff applied the criterion that the number of onsite allegations exceeds three times the median value for operating reactor sites.

In CY 2010, the median number of onsite allegations per operating reactor site was four. San Onofre, Units 2 and 3 (59); Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (18); and Turkey Point Nuclear Generating Station, Units 3 and 4 (15), are the three operating reactor sites that met this criterion. The sections below discuss each of these sites.

#### San Onofre Nuclear Generating Station, Units 2 and 3

During 2010, the NRC received 59 allegations from onsite sources concerning San Onofre, Units 2 and 3; this number of allegations represents another significant increase in allegations received and the highest volume received of all NRC licensees. More than 40 percent of the

allegations were received in the fourth quarter, primarily from contract staff; this is consistent with a period of significant contractor activity at the site during the Unit 3 steam generator replacement outage. Although contractor concerns increased, allegation traffic from Southern California Edison employees trended downward during the review period. SCWE-related trends are evident, including a notable number of



discrimination, chilling effect, and corrective-action-related and anonymous concerns. The allegations were not localized to particular departments; instead, they involved a wide range of disciplines. The number of discrimination concerns received continued to increase with 13 received in CY 2010.

In 2009, the NRC asked the licensee to perform an independent assessment of the safety culture. Although the licensee reported that the safety culture was sufficient at San Onofre to support safe plant operations, it also identified a number of corrective actions to improve the site's safety culture. The NRC performed inspections to review the licensee's efforts, and in early 2010, it conducted a number of focus group interview sessions involving hundreds of licensee personnel, as documented in the NRC inspection report dated March 2, 2010 (ADAMS Accession No. ML100601207). The interviewees represented various functional organizations and included both contractors and licensee staff. From the interviews, the NRC concluded that some employees in multiple workgroups at San Onofre perceived that they were not free to raise safety concerns using all available avenues and that management had not been effective in encouraging employees to use all available avenues without fear of retaliation.

In early March 2010, the NRC issued the licensee a chilling effect letter (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 will improve each avenue for raising concerns. In response to the chilling effect letter, the licensee initiated a number of actions to improve the SCWE, including (1) supervisor and workforce training on SCWE behavior expectations and on available avenues 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. Of particular note is the licensee's commitment to establish an SCWE review board and disciplinary review process for assessing disciplinary actions before their implementation to assess their legality and potential adverse impact on the SCWE. The licensee presented the status of these efforts to the NRC at a public meeting on September 16, 2010. In early 2011, the NRC conducted an inspection of the licensee's actions and found that interviewed workers felt free to raise safety concerns using all available avenues and that management encouraged them to do so. Lastly, the NRC closed the substantive crosscutting issue in a problem identification and resolution inspection in early 2011, indicating that the sustained improvement in that area will likely improve the SCWE.

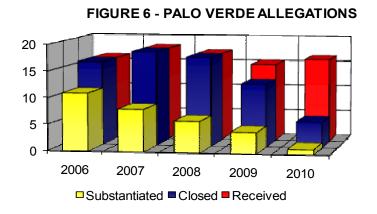
The NRC will maintain its oversight of the SCWE at San Onofre through normal inspection activities. The staff will look for evidence that the actions taken are effective and sustainable.

#### Palo Verde Nuclear Generating Station, Units 1, 2, and 3

Palo Verde is sustaining improvements achieved in the SCWE since the issuance of the confirmatory action letter (CAL) in February 2008 that documented the followup efforts that the licensee committed to accomplish after the CY 2007 "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs or One Red Input" inspection (ADAMS Accession No. ML080460653). In March 2009, after the last of numerous CAL followup inspections, the NRC closed the CAL based on the licensee's improved safety performance and reasonable assurance that the performance improvements were sustainable (ADAMS Accession No. ML090790023). Substantive crosscutting issues in human performance and problem identification and resolution were also closed at that time. Palo Verde has remained in the licensee response column of the NRC Action Matrix since that time.

The number of allegations received from onsite sources at Palo Verde for each of the last 5 years has been consistent and is at a level that requires additional discussion in this report. Notwithstanding, the NRC acknowledges that the size of the facility and the amount of significant site activity that occurs on an annual basis (usually, two refueling outages are conducted annually) contribute to the number of allegations that it receives on Palo Verde.

CY 2010 was no exception, including refueling outages for Palo Verde, Units 1 and 3, both involving reactor vessel head replacement. The agency received allegations from onsite sources consistently throughout CY 2010, with concentrations consistent with periods of significant activity at the site (a Unit 1 refueling outage in spring 2010 and a Unit 3 refueling outage in fall 2010). Concentrations of allegations received from a particular onsite source were evenly spread among licensee employees, former licensee employees, and



contractors. Almost all of the contractor allegations were received in a relatively short time frame during the spring 2010 (Unit 1) refueling and vessel head replacement outage. One chilling effect allegation concern was substantiated in early 2010 concerning one department and fall 2009 outage activities; however, the NRC acknowledged that Palo Verde took effective corrective actions related to this matter. The number of discrimination concerns received in CY 2010 was relatively high (8) and was similar to the number received in CY 2009.

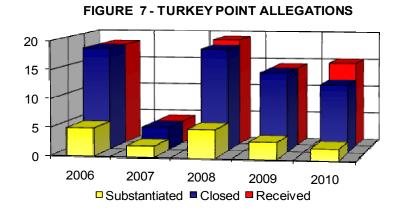
The results of the NRC problem identification and resolution inspection completed in February 2009 demonstrated an overall willingness on the part of the workers at Palo Verde to raise safety concerns (ADAMS Accession No. ML090790431). Most of the workers interviewed indicated that the SCWE and safety culture in general at the Palo Verde site have significantly improved. Much of the improvement was attributed to the new management team and its commitment to improved performance. Workers understood the various ways to raise concerns, although some employees were not aware of the employee concerns program. Those workers who were aware of the employee concerns program found that it was a viable option to raise concerns. The workers indicated that the improvements in the corrective action program were driving overall performance improvement. The staff of the employee concerns program made a concerted effort in CY 2009 and CY 2010 to advertise the program and increase workforce familiarity with the program staff.

The NRC performed another problem identification and resolution inspection in fall 2010. The inspection team conducted several focus group discussions with approximately 70 licensee personnel. Most personnel indicated that the SCWE was healthy. The NRC noted observations concerning one work group, and the licensee will further evaluate these observations. The NRC will maintain its oversight of the SCWE in this work group and at Palo Verde in general through normal inspection activities.

#### Turkey Point Nuclear Generating Station, Units 3 and 4

The volume of onsite allegations received concerning the Turkey Point site (15) represents the third highest volume for reactor sites in CY 2010 and has been fairly steady over the last 3 years. Furthermore, the concerns in this review period were received at a steady rate over all four quarters of the year. An analysis of the sources and subject matter of the allegations

received in CY 2010 indicates an SCWE-related trend with contractors. A handful of chilling effect concerns were received, but none of these were substantiated. The trend in discrimination allegations continues to decrease with no such concerns raised in CY 2010 and with no substantiated discrimination concerns raised in the past 5-year review period.



After the NRC engaged the licensee in early 2008 with regard to concerns about the work environment at Turkey

Point, the licensee conducted independent assessments of the SCWE and, more broadly, the nuclear safety culture, and it initiated a number of actions to address identified weaknesses. The licensee met with the NRC in public meetings in April 2010 and January 2011 to report on the progress of those initiatives, including the nuclear safety culture and SCWE training for executives, the establishment of a nuclear safety culture oversight committee for corporate and site nuclear safety teams to monitor emergent issues and trends that have the potential to impact the SCWE or the nuclear safety culture, and three different assessments in March, June, and July 2010 that provided some insight into the nuclear safety culture. The results indicate continued challenges with regard to the perceived effectiveness of the corrective action program and employee concerns program, management's allocation of resources, and outage processes; however, the results also indicated a notable improvement in all three areas. Of particular note are the actions that the licensee took to improve the effectiveness of the site's employee concerns program. To address survey findings that showed a weak familiarity with and low levels of confidence in the employee concerns program, the office was relocated inside the protected area, and the employee concerns program managers conducted extensive outreach to site organizations. These actions increased the use of the program by worksite staff. The licensee also improved the process by including more face-to-face discussions with concerned individuals, particularly upon closure of their issues, and effectiveness reviews 3 months after closure. The licensee is apparently focusing on the sustainability of these initiatives by institutionalizing changes to its processes and procedures and ensuring alignment within the leadership team.

NRC inspections, including an 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, feels personally supported by the supervisors for doing so, and knows

of no one who was treated negatively for raising concerns or challenging unsafe acts.

The NRC will maintain its oversight of the SCWE at Turkey Point through normal inspection activities that particularly concern developing initiatives to improve the nuclear safety culture and the licensee's monitoring efforts.

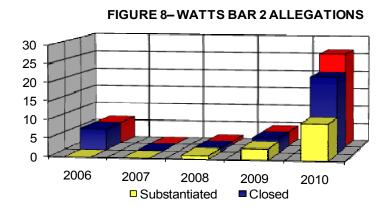
#### **Allegation Trends for Selected Non-Operating Reactor Sites**

The NRC Web site also posts allegation statistics for certain non-operating reactor sites, including sites that are either under construction or were formally licensed to operate but are now permanently shut down (see the appendix to this report).

#### Watts Bar Nuclear Plant, Unit 2

The volume of onsite allegations received concerning the Watts Bar Nuclear Plant, Unit 2, site represented the highest volume of allegations for non-operating reactor sites and was second only to San Onofre, Units 2 and 3, in CY 2010. The concerns in this review period were received at a steady rate over the first three quarters of the year, but the concerns declined in the fourth quarter. An analysis of the sources and subject matter of the allegations indicates an SCWE-related trend with contractor concerns about chilling effects and ineffective corrective actions. The number of discrimination allegations also increased.

The licensee, the Tennessee Valley Authority (TVA), reported that more than 1,500 workers were added on site in the last 2 years, with several hundred in 2010 alone, to prepare the plant for operations expected in 2012. Not unexpectedly, TVA and its primary contractors have also seen a significant increase in concerns reported to their employee concerns program offices, including concerns similar to those received by the NRC.



In late 2009, the NRC reached a settlement with the licensee in two cases involving apparent violations of the NRC's employee protection rule at the utility's Browns Ferry Nuclear Plant. A confirmatory order outlined the settlement agreement that the parties reached through the NRC's ADR process (ADAMS Accession No. ML093510993). TVA agreed to take a number of fleetwide actions, including the implementation of a process to review proposed adverse employment actions before they are taken to ensure compliance with the employee protection rule and the NRC's SCWE policy. The utility also agreed to improve communications and training on employees' rights to raise concerns without fear of retaliation. The NRC acknowledged that TVA had taken numerous actions to address the issues underlying the apparent violations before the parties reached a settlement agreement. In recognition of the actions that TVA agreed to undertake, including a requirement to perform two additional independent safety culture surveys before the end of 2013, the NRC agreed not to propose a civil penalty or to issue a notice of violation or other enforcement action in either case.<sup>6</sup>

\_

The postinvestigation ADR process uses a neutral mediator with no decisionmaking authority to assist the

During this review period, the NRC inspected the licensee's compliance with the confirmatory order and found that it is implementing the required actions on schedule. Furthermore, the agency did not identify any issues or concerns with the products under development; therefore, the staff is optimistic that the licensee will provide effective tools to improve the SCWE at Browns Ferry and other plants in the fleet, including Watts Bar, Unit 2.

The NRC will maintain its oversight of the SCWE at Watts Bar, Unit 2, through normal inspection activities. The staff will look for evidence that the actions taken are effective and sustainable.

#### **Allegation Trends for Selected Materials Sites**

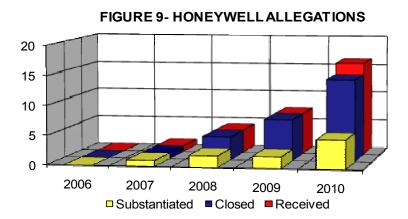
Finally, the NRC Web site also posts allegation statistics for certain fuel cycle facilities (see the appendix to this report). Because of the small number of allegations involving other smaller materials licensees and because of the potential for a licensee or contractor to identify an alleger, the NRC does not publicly provide or include in this report allegation statistics for materials licensees other than those for fuel cycle facilities.

#### Honeywell International, Inc.

The number of allegations received from onsite sources at Honeywell International, Inc. in CY 2010 represents a significant increase over prior years. The increase in allegations is directly associated with a union lockout that occurred in June 2010. Allegations were received mostly from licensee employees, with the large majority coming from union members who are

currently locked out of the facility. The NRC has not received any discrimination concerns about Honeywell in the past 5 years.

The union issues challenge the impact of performance improvement and safety culture initiatives, as Honeywell presented to the NRC in August 2009. Site management will have difficulty ensuring the



achievement of the objectives of these plans in the midst of the current union unrest. Although the licensee has little or no problems with the SCWE in regard to the current replacement workforce, the improvement initiatives did not target that workforce. The reintroduction of the union workforce, if and when that is to occur, will challenge the licensee to reengage the union workforce on the previously introduced performance improvement efforts and to reestablish worker trust in management to resolve concerns internally.

NRC and its license holders in resolving differences on enforcement actions. The ADR process is often more effective than traditional enforcement in developing broad, long-term corrective actions; it therefore produces a greater benefit for employee and public safety than a one-time fine or other enforcement action would.

The NRC will maintain its oversight of the SCWE at Honeywell through normal inspection activities.

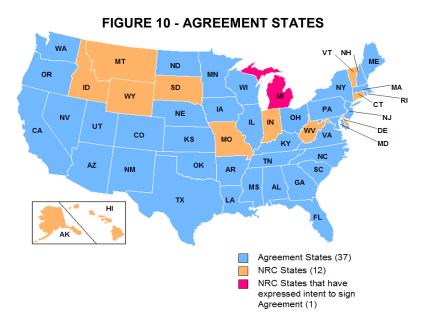
#### **Allegation Trends for Selected Vendors**

This report does not include more indepth reviews of specific 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. The report also does not provide statistics by contractor or vendor because publishing the number of allegations could identify an alleger.

#### **Agreement State Licensee Concerns**

Under the authority granted in Section 274b of the Atomic Energy Act of 1954, as amended (the Act), the NRC may relinquish its authority to regulate certain byproduct, source, and limited quantities of special nuclear material to a State government through a mutual agreement. A State that has entered into this agreement with the NRC is called an Agreement State. Before entering into this agreement, States must first demonstrate that their regulatory programs are adequate to protect public health and safety and are compatible with the NRC's program. Figure 10 depicts the current 37 Agreement States.

The NRC has a statutory responsibility to periodically review the actions of the Agreement States to ensure that they maintain programs that are adequate to protect public health and safety and are compatible with the agency's program. This authority is granted under Section 274j of the Act. The NRC uses the Integrated Materials Performance Evaluation Program (IMPEP) to satisfy its statutory responsibility. More information on the NRC's Agreement State program or IMPEP is available on the NRC's Office of Federal and State Materials and Environmental Management Programs Web site at <a href="http://nrc-stp.ornl.gov/">http://nrc-stp.ornl.gov/</a>.



In CY 2010, the NRC conducted routine IMPEP reviews of nine Agreement State programs. The review teams evaluated the effectiveness of the Agreement State programs' responses to concerns from external sources by reviewing the casework and documentation for 71 cases cumulatively received by all of the programs reviewed. The NRC referred 11 of the 71 cases

reviewed to the Agreement State programs; the States received the other concerns directly from 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, including notifications to the concerned individuals of the outcomes of the investigations when the individuals' identities were known. The review team determined that the States that were reviewed in CY 2010 adequately protect the identity of any concerned individuals that request anonymity. In general, the results of the CY 2010 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**

In CY 2010, the total number of allegations received declined after 2 years of notable increases. The decline does not appear to be the result of a general industry issue or other external factor. Chilling effect concerns were the largest percentage of concerns received nationwide, largely because of one operating site, whereas security concerns continue to decline. Fitness-for-duty and fatigue concerns have steadily increased over the past several years. In late 2009, licensees began to implement the new work hour limits in Subpart I of 10 CFR Part 26. In fall CY 2010, the industry submitted a petition for rulemaking to address what it believes may be unintended consequences and confusion associated with the new rule. Finally, the NRC observed a trend involving wrongdoing, discrimination, and chilling effect concerns associated with health physics organizations.

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

To ensure that Agreement States maintain a program that is adequate to protect public health and safety and that is compatible with the NRC's program, the agency periodically reviews the actions of the Agreement States. The results of these reviews in CY 2010 demonstrate that the Agreement States continue to rank response to concerns from external sources as a high priority in protecting public health and safety.

Finally, the agency finalized enhancements to the allegation program based on lessons learned associated with the handling of allegations of inattentive security officers at Peach Bottom and updated and issued MD 8.8.

#### **APPENDIX**

## ALLEGATION STATISTICS FOR OPERATING REACTORS, NONOPERATING REACTORS, AND FUEL CYCLE FACILITIES

Tables 1, 2, and 3 list the number of allegations for operating reactors, nonoperating reactors, and fuel cycle facilities received from onsite sources from 2006 through 2010.

**Table 1 Operating Reactor Allegations Received from Onsite Sources** 

SITE	2006	2007	2008	2009	2010
Arkansas, Units 1 and 2	4	8	6	3	4
Beaver Valley, Units 1 and 2	3	1	3	1	2
Braidwood, Units 1 and 2	6	5	3	3	4
Browns Ferry, Units 1, 2, and 3	17	11	18	8	12
Brunswick, Units 1 and 2	1	3	2	5	1
Byron, Units 1 and 2	3	9	8	9	6
Callaway	3	17	2	2	3
Calvert Cliffs, Units 1 and 2	2	1			3
Catawba, Units 1 and 2		2	3	2	2
Clinton	3	1	1	4	4
Columbia Plant	3	3	1	9	4
Comanche Peak, Units 1 and 2	3	4	5	1	2
Cook, Units 1 and 2	7	3	5	5	3
Cooper	3	2	3	2	5
Crystal River	5	4	2	4	3
Davis-Besse		4	1		2
Diablo Canyon, Units 1 and 2	2	2	13	15	12
Dresden, Units 2 and 3	7		8	5	1
Duane Arnold	1	1	2	1	1
Farley, Units 1 and 2	4	5	5	6	7
Fermi	3	10	3	3	3
Fitzpatrick	3	1	2	3	2
Fort Calhoun	6		1	3	5
Ginna	2	2	4	2	4
Grand Gulf	4	8	4	2	5
Harris	14	14	1	2	5
Hatch, Units 1 and 2	1	6	7	5	8
Indian Point, Units 2 and 3	15	19	3	12	6
Kewaunee	4	1		3	
Lasalle, Units 1 and 2	1	5	1		1
Limerick, Units 1 and 2	4	1	3	14	2
Mcguire, Units 1 and 2			3	3	6
Millstone, Units 2 and 3	9	5	8	5	4
Monticello	2	1	2	2	

SITE	2006	2007	2008	2009	2010
Nine Mile Point, Units 1 and 2	5	6	1		1
North Anna, Units 1 and 2	1	3	1	1	2
Oconee, Units 1, 2, and 3	2	2	1	1	10
Oyster Creek	4	2	6	14	4
Palisades	6	5	6	8	3
Palo Verde, Units 1, 2, and 3	16	18	17	15	18
Peach Bottom, Units 2 and 3	6	8	3	8	4
Perry	1	1	6	9	2
Pilgrim	6	7	8	2	5
Point Beach, Units 1 and 2	2	1	5	4	8
Prairie Island, Units 1 and 2	6	6	5	14	7
Quad Cities, Units 1 and 2	1	4	4	2	
River Bend	3	2	8	5	7
Robinson	1		1		4
Salem/Hope Creek	14	16	11	7	6
San Onofre, Units 2 and 3	15	12	18	33	59
Seabrook	4	4	10	2	1
Sequoyah, Units 1 and 2	11	13	19	6	6
South Texas, Units 1 and 2	8	6	8	12	6
St. Lucie, Units 1 and 2	15	11	6	15	12
Summer	3		2	3	1
Surry, Units 1 and 2		1	2	2	6
Susquehanna, Units 1 and 2	19	13	32	15	12
Three Mile Island	1	1	2	9	1
Turkey Point, Units 3 and 4	18	4	19	14	15
Vermont Yankee	4	3	1	2	3
Vogtle, Units 1 and 2	5	7	1	2	4
Waterford	2	2	4	3	4
Watts Bar, Unit 1	6	3	9	3	2
Wolf Creek	1	1	7	6	2

**Table 2 Nonoperating Reactor Allegations Received from Onsite Sources** 

SITE	2006	2007	2008	2009	2010
Fort St. Vrain			1		
Haddam Neck	1				
Humboldt Bay	1			6	4
Millstone, Unit 1	1				
Peach Bottom, Unit 1	1				
Rancho Seco, Unit 1	1	1			
San Onofre, Unit 1			2	1	2
Watts Bar, Unit 2	6		1	4	26
Yankee-Rowe		1			
Zion					1

Table 3 Fuel Cycle Facility Allegations Received from Onsite Sources

SITE	2006	2007	2008	2009	2010
American Centrifuge Plant		2			
BWX Technologies, Inc.	3	1		2	1
Framatone-Richhand	1				
Global Nuclear Fuel		1	1	6	6
Honeywell International, Inc.		1	4	7	16
Louisiana Energy Services	1	1	11	29	6
Nuclear Fuel Services, Inc.	1	3	3	5	10
Paducah	3	5	3	4	4
Portsmouth	6	2	1		
Shaw Areva Mox Services		2	1	1	
Westinghouse	2	2	4	2	
Yucca Mountain			1	5	2