



ALLEGATION PROGRAM

ANNUAL TRENDS REPORT

Calendar Year 2018

**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 January 29, 2016, 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, this report discusses staff activity in calendar year 2018 involving the Allegation Program and related policies. The allegation staff continues to facilitate the agency-sponsored preinvestigation alternative dispute resolution process for discrimination allegations. The NRC believes this preinvestigation process is beneficial to the environment for raising concerns. The preinvestigation alternative dispute resolution process gives an individual and his or her employer (or former employer) the opportunity to resolve an allegation of discrimination through mediation, potentially avoiding lengthy litigation or an NRC investigation, or both. At the time this report was prepared, the NRC had settled about 67 percent of the 2018 mediated discrimination concerns.

During the 5-year period from 2014 through 2018, the NRC received between 300 and 600 allegations per year¹ concerning reactor plants, materials facilities, and vendors. Over the course of this 5-year period, the number of allegations decreased by approximately 27 percent. Three reactor plants ceased operations during this period and one ceased construction activities. The three plants that ceased operations received very few allegations before they changed status and, therefore, had little impact on the declining trend in allegations. Although the one site that ceased construction activities did receive a significant number of allegations before its change in status in mid-2017, its change in status does not explain the magnitude of the declining trend, as the plant's contribution to the decline between 2017 and 2018 accounted for less than 30 percent of the total. The decline, therefore, might also suggest more supportive environments for raising concerns at most regulated entities.

Each allegation can include multiple concerns. Although not always the case, over the 5-year analysis period, the trend in the total number of concerns has paralleled the trend in total allegations (i.e., as the number of allegations has increased or decreased, the number of concerns has increased or decreased correspondingly). In 2018, coinciding with the overall decrease in allegations received, the total volume of allegation concerns decreased as well. More specifically, the number of allegation concerns decreased in all the regional offices, except Region IV.

The chilling effect and chilled work environment concerns constituted the largest percentage of reactor allegations received nationwide. The number of concerns remained steady from 2017 to 2018, after experiencing a 56-percent drop from 2016. The most often mentioned behaviors that individuals alleged in 2018 that caused the chilling effect involved supervisors berating employees for raising concerns or a perception that management did not address concerns employees had raised, both allegedly causing a hesitation to raise concerns promptly. As of the time this report was prepared, the NRC had substantiated approximately 12 percent of chilled work environment concerns.

The second largest percentage of nationwide reactor allegations was related to discrimination concerns. The volume of such concerns, however, decreased by more than 30 percent compared to 2017. Unlike in the previous two years, licensee employees, both current and

¹ Management Directive 8.8 defines an allegation as "a declaration, statement, or assertion of impropriety or inadequacy associated with NRC-regulated activities, the validity of which has not been established."

former, made the majority of the claims. The most often mentioned retaliatory adverse action taken was termination; however, a number of complaints alleged unfavorable performance appraisals and suspensions. Adverse actions were perceived to have been taken primarily in response to raising concerns, but some individuals felt their employer discriminated against them for participating in either a licensee or NRC investigation of a concern.

For some in the regulated community, the NRC received allegations in numbers that warranted additional analysis.² 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 environment for raising concerns. Because a large volume of allegations from onsite sources might indicate a chilled work environment, the staff selected the following three operating reactor sites and one fuel facility for more indepth review:

- Watts Bar Nuclear Plant, Units 1 and 2
- Grand Gulf Nuclear Station
- Wolf Creek Generating Station
- Nuclear Fuel Services, Inc.

This report discusses allegation trends at these sites. In summary, the trends suggest a concern about the environment for raising concerns at two of the four sites. At the Watts Bar site, the NRC concluded that the licensee was not adequately monitoring, acknowledging, or acting upon department-specific changes in the safety conscious work environment (SCWE), as evidenced by agency findings of a chilled work environment in the radiation protection department. Furthermore, the NRC determined that a cross-cutting issue exists in the SCWE for Watts Bar because the NRC documented four consecutive occurrences of this theme. The Wolf Creek site continues to address previous findings of a chilled work environment and a cross-cutting theme in SCWE identified in the last quarter of 2017 related to chilled work environments in both the security and maintenance support groups. The licensees at these facilities are taking actions to address the weaknesses, and the NRC is closely monitoring the ongoing activities.

Finally, in 2018, the NRC reviewed the effectiveness of nine Agreement State responses to concerns and concluded that the Agreement States continue to address concerns promptly, thoroughly document their investigations and closeout actions, protect the concerned individuals' identities, and, in all but two cases, inform the concerned individuals of the outcomes. In general, the results of the 2018 Integrated Materials Performance Evaluation Program reviews demonstrate that the Agreement States continue to treat responses to concerns from external sources as a high priority in protecting public health and safety.

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

TRENDS IN ALLEGATIONS

The U.S. Nuclear Regulatory Commission (NRC) monitors allegations to discern trends or marked increases that might prompt the agency to question a licensee about the causes of such changes. 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 offer insights into the environment for raising concerns (i.e., safety-conscious work environment (SCWE)) at a given facility. Such allegations include those that current or former licensee employees, contractor employees, or anonymous sources submitted that may indicate a hesitance to raise safety concerns internally. For power reactor facilities, the staff analyzes recent allegation activity in support of the Reactor Oversight Process end-of-cycle assessments. In addition, the staff might analyze a particular site or licensee whenever allegations or inspection findings indicate that such an analysis is warranted.

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

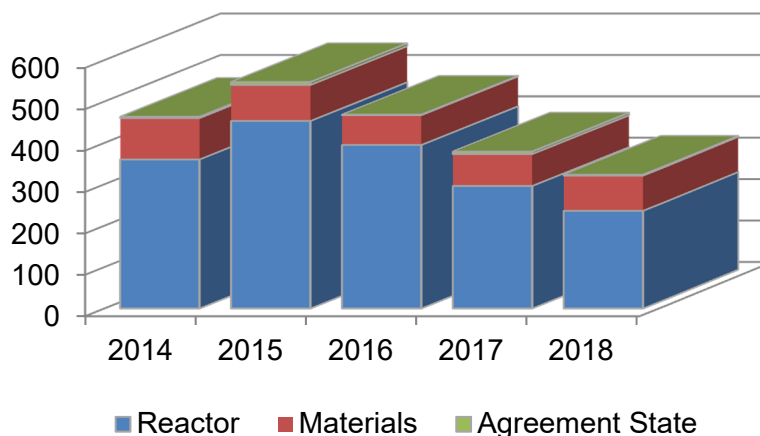
National Trends

National trends inform the staff about the effect of external factors, plant events, and industry efforts to improve the SCWE at NRC-licensed facilities. The staff can use national trends to help develop budget and planning assumptions to support future agency and Allegation Program needs.

Figure 1 shows that the NRC received between 300 and 600 allegations each year and that there has been a declining trend in the total number of allegations received from calendar year 2014 through calendar year 2018. The lower number of reactor-related allegations in 2014 increased in 2015,

in large part because of concerns raised about construction site activities associated with new reactors, but then it declined again over each of the following three years. Over the course of this 5-year period, the number of allegations decreased by approximately 27 percent. Three reactor plants ceased operations during this period, and one ceased construction activities. The plants that ceased operations were the subject of very few allegations before they changed status and, therefore, had little impact on the declining trend in allegations. Although the one site that ceased construction activities did receive a significant number of allegations before its change in status in mid-2017, its change in status does not explain the magnitude of the declining trend, as this site's contribution to the decline between 2017 and 2018 accounted for less than 30 percent of the total. Another possible reason for declining use of the NRC's Allegation Program could

Figure 1 Allegations Received by Calendar Year



relate to its perceived viability. One way the agency assesses the continued viability of the Allegation Program is by reviewing trends in “responses after closure” (RACs). A RAC is alleged feedback on the closure of his or her allegation that indicates the NRC’s response was insufficient, inaccurate, or otherwise unacceptable. The percentage of allegations during the 5-year analysis period that were the subject of a RAC remained steady and low. Therefore, the decline in allegations might suggest more supportive environments for raising concerns at most regulated entities.

Under the authority granted in Section 274b of the Atomic Energy Act of 1954, as amended, the NRC may relinquish its authority to regulate certain byproduct material, source material, 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. When individuals contact the NRC with concerns about Agreement State licensees, the NRC staff explains the Agreement State program to the individual. Most of these individuals are willing to contact, and be contacted directly by, Agreement State personnel about their concerns. The NRC staff does not process the concern as an allegation but rather provides the concern to the Regional State Agreements Officer for referral to the Agreement State. If an individual wishes to remain anonymous to the Agreement State, past NRC guidance was for the staff to process such concerns as allegations and request a response from the State. The State’s response would then be the basis of the NRC’s closure letter for the concerned individual. As documented in Allegation Guidance Memorandum (AGM) 2018-001, “Allegation Program Efficiencies,” dated April 23, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18085A081), the practice of the NRC acting as intermediary between a concerned individual wishing to remain anonymous and the Agreement State was eliminated to achieve program efficiencies. The NRC staff still refers the concern to the Agreement State in accordance with the agreement, without divulging the concerned individual’s identity, but the staff informs the individual that he or she must contact the Agreement State directly if a response is desired. The two Agreement State allegations depicted in Figure 1 were received before the issuance of the AGM. This modified guidance does not apply to concerns about Agreement State program oversight, which the NRC Office of Nuclear Material Safety and Safeguards will continue to process outside of the Allegation Program.

Because each allegation can include multiple concerns, the staff effort to prepare an appropriate response is based on the number of concerns received. Typically, each allegation represents two to three concerns. During the 5-year analysis period, the trend in the total number of concerns has paralleled the trend in total allegations (i.e., as the number of allegations has increased or decreased, the number of concerns has increased or decreased correspondingly). In 2018, coinciding with the overall decrease in allegations received, the total volume of allegation concerns decreased as well. More specifically, the number of allegation concerns decreased in all the regional and headquarters offices, except Region IV, the Office of Nuclear Security and Incident Response, and the Office of International Programs.

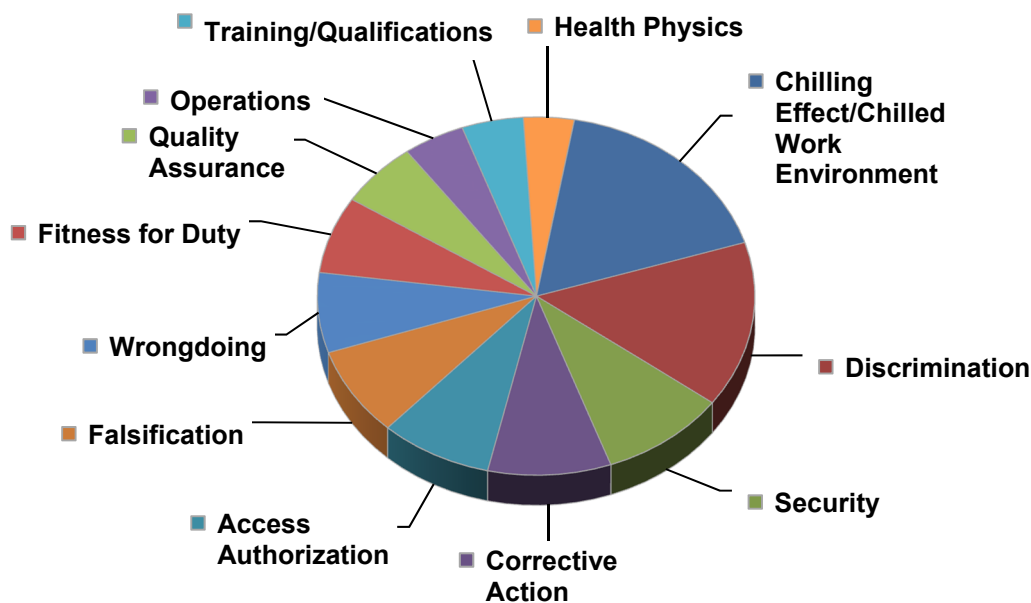
Reactor Licensee Trends

Figure 2 offers insight into areas in which the NRC is allocating resources for the evaluation of reactor-related allegations. The figure shows the 12 functional areas that represent approximately 80 percent of the allegation issues that the program received nationwide in 2018.³

³ The agency received few allegations about concerns in areas not shown in Figure 2, which represent the remaining 20 percent of the issues received. These areas include chemistry, civil and structural,

Figure 2 shows that the chilling effect and chilled work environment concerns constituted the largest percentage of reactor allegations received nationwide. The number of concerns remained steady from 2017 to 2018, after experiencing a 56-percent drop between 2016 and 2017. 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. A chilled work environment is a condition in which the chilling effect is not isolated (e.g., multiple individuals, functional groups, shift crews, or levels of workers within the organization are affected). A chilled work environment is often referred to as a condition that is the opposite of a SCWE. Half of all concerns of this nature were received from licensee employees; contractor and anonymous alлегers raised 30 and 20 percent, respectively. More than two-thirds of the concerns were received in the second and third quarters of 2018. Security and health physics departments received more concerns about the environment for raising concerns than other reactor organizations. Most of the alleged chilled work environments in the security department were raised at multiple reactor sites in Regions II and IV, while the majority of concerns involving the health physics department work environments involved one Region II reactor site; the Watts Bar site. The most often mentioned behaviors individuals alleged that caused the chilling effect involved supervisors berating employees for raising concerns or a perception that management did not address employees’ concerns. At the time this report was prepared, the NRC had substantiated approximately 12 percent of chilled work environment concerns.

Figure 2 Reactor Concerns Nationwide, 2018



construction, cybersecurity, electrical, emergency preparedness, employee concerns programs (ECPs), engineering, fatigue and overtime, fire protection, industrial safety, inservice testing, instrumentation and control, licensing, maintenance, mechanical, radwaste, and safety culture.

Discrimination concerns constituted the next highest percentage of allegations received nationwide; however, the volume of such concerns decreased by more than 30 percent compared to 2017. A review of all discrimination concerns received in 2018 found trends in both the source and site. Unlike in the previous two years, licensee employees, both current and former, made the majority of the claims—more than two-thirds. Workers at one operating reactor site represented approximately 27 percent of the discrimination concerns raised. The most often mentioned retaliatory adverse action taken was termination; however, a number of complaints alleged unfavorable performance appraisals and suspensions. Adverse actions were primarily perceived to have been taken for raising concerns, but some individuals felt their employer discriminated against them for participating in either a licensee or NRC investigation of a concern. At the time this report was prepared, the NRC had not substantiated any of the discrimination concerns raised in 2018; however, approximately 65 percent of those warranting investigation were still open and were either being investigated or were in the NRC's preinvestigation alternative dispute resolution (ADR) process. The NRC settled about 67 percent of the 2018 ADR-mediated discrimination concerns; a success rate similar to previous years. Approximately 4 percent of allegeders filing a discrimination concern who were offered either ADR or an investigation withdrew their complaint before the agency reached a conclusion.

Concerns related to security at reactor sites increased about 30 percent in 2018. Although the security-related allegations involved multiple sites, the majority involved Region IV plants. The largest percentage of concerns, 23 percent, was related to procedural noncompliance. About 70 percent were received from onsite sources.

Not surprisingly, all of the allegations about the licensees' corrective action programs were received from onsite sources. Concerns were related primarily to issues not being properly addressed. As noted above, such concerns were also often noted as the cause of a chilling effect at the site.

The NRC also analyzed concerns about access authorization but did not identify any specific trends, other than that the source of the concerns was primarily from individuals on site. Among the variety of different issues raised were inadequate records management, inadequate appeals processes, and requirements for foreign nationals. Concerns related to access authorization significantly increased from previous years.

In 2018, licensee management brought about 25 percent of the wrongdoing-related concerns to the NRC's attention. As discussed later in this report, a licensee representative, acting in his or her official capacity, will sometimes report to the NRC potential wrongdoing he or she is evaluating. The agency staff assigns an allegation process tracking number to track the evaluation progress related to the alleged wrongdoing issue. These concerns involved multiple reactor sites; the largest percentage of wrongdoing concerns was related to persons willfully failing to follow procedures.

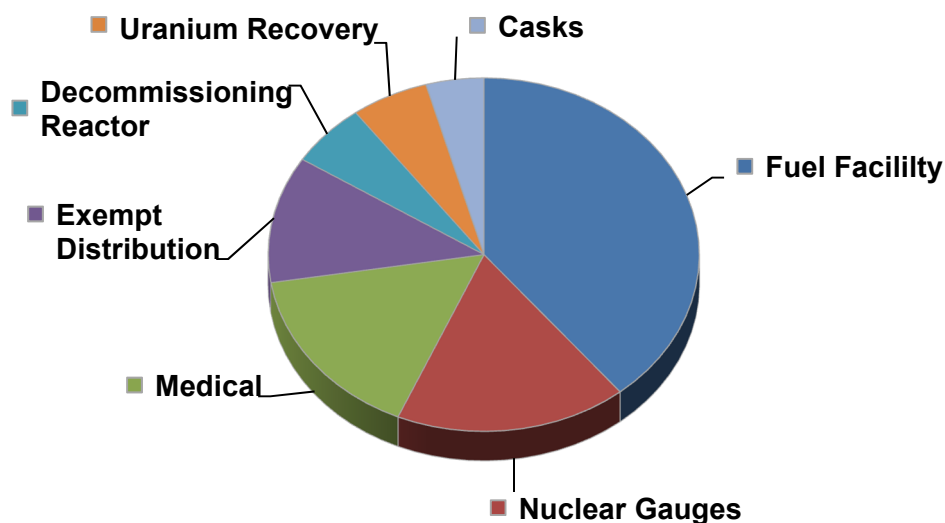
Materials Licensee Trends

A comparison of the types of materials issues in received allegations does not produce meaningful results because there are many different types of materials licensees and the activities they perform vary greatly. To offer insights into areas in which the NRC focused its attention on materials-related allegations, Figure 3 presents the eight types of materials

licensees that accounted for about 80 percent of allegation concerns that the NRC received nationwide.⁴

The NRC received about 10 percent more materials-related allegations in 2018 than in 2017, which also saw an increase from 2016. For several years, the number of allegations related to fuel cycle facilities has constituted the highest percentage of materials-related allegations. Therefore, overall fluctuations in the receipt rate of materials-related allegations are primarily related to changes involving one or more fuel cycle facilities.

Figure 3 Allegations by Type of Materials Licensee Nationwide, 2018



In 2018, although most of the materials licensees were the subject of fewer allegations, the number of allegations concerning fuel facilities increased by approximately 50 percent, in large part, because of one facility discussed later in this report.

Source Trends

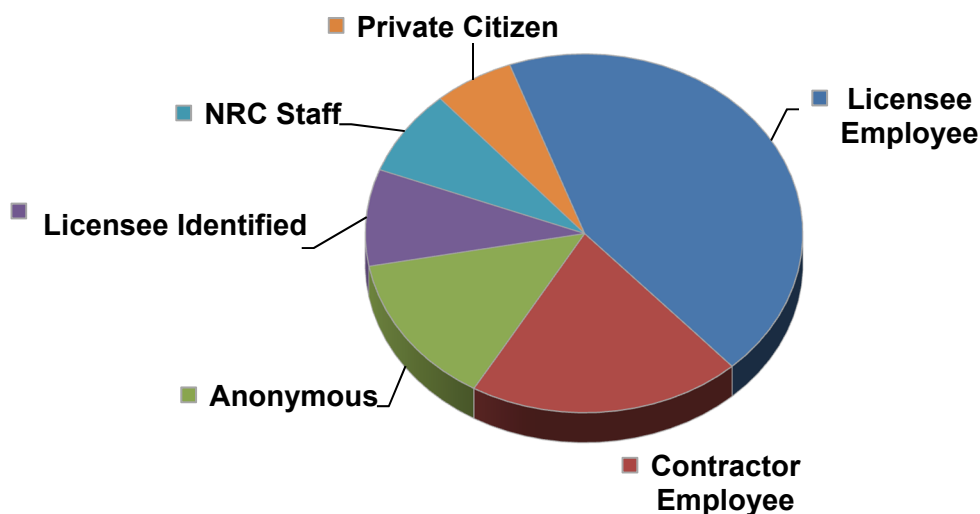
Figure 4 shows a breakdown of 99 percent of the sources for reactors and materials allegations received in 2018.⁵ The data indicate that the distribution of source categories remained consistent from 2014 through 2018. That is, employees of licensees (or former employees) and contractors (or former contractors) continued to be the primary sources of allegations. Persons wishing to remain anonymous continued to be the third largest source of allegations, and the number of anonymous allegers increased slightly. In considering those allegation sources with the potential to offer insights into the SCWE at a given facility (i.e., allegations that current or former licensee, contractor employees, or anonymous sources submitted), the percentage of

⁴ The agency received few concerns about the materials licensee types not shown in Figure 3, which represent the remaining 20 percent of the issues received. These licensee types include decommissioning materials, high-level waste, irradiators, nuclear pharmacies, offsite contractor, research and development, special nuclear material, and tritium light sources.

⁵ The NRC received few concerns from the 3 percent of sources not shown in Figure 4. These sources include news media, State agencies, special interest groups, and other Federal agencies.

allegations from these sources has consistently remained around 75 percent annually. While the number of concerns from most of these sources decreased, reflecting the overall decrease in allegations received, the NRC Allegation Program received about 20 percent more allegations from licensee employees in 2018 than in the previous year. This increase was largely because of one operating reactor site discussed later in this report.

**Figure 4 Allegations by Source Category
Nationwide, 2018**



Two of the source categories in Figure 4 deserve some explanation. The source category “NRC Staff” indicates an NRC staff member who suspects that a regulatory requirement has been violated deliberately or because of careless disregard, thus prompting an investigation by the NRC Office of Investigations. The volume of NRC staff concerns slightly increased in 2018. The source category “Licensee Identified” indicates 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 track the evaluation progress related to the alleged wrongdoing issue. Licensee-identified wrongdoing concerns decreased in 2018 from 2017 by about 24 percent.

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 offers statistics on allegations for all operating and nonoperating reactor sites. The NRC received the listed allegations during the 5-year period from January 2014 through December 2018 and includes only allegations from onsite sources (i.e., those that might indicate the health of the SCWE). Onsite sources include current or former licensee employees, current or former contractor employees, and anonymous allegers. For the purpose of this analysis, the NRC assumed that anonymous allegations were from onsite personnel.

Because a large volume of allegations from onsite sources might indicate a SCWE at risk, the staff conducted a more indepth SCWE review of certain sites with larger numbers of onsite allegations. Because sites with a larger population of employees and contractors (such as three-unit reactor sites) typically generate more allegations, the data must be normalized to

ensure that the NRC does not disproportionately choose larger sites for further analysis. The NRC used the following algorithm, which is based the median number of allegations received at operating reactor sites over the calendar year, considers the varying workforce size at different sites, and then determines what sites warrant the additional review:

- one-unit reactor sites (or any site with fewer than 800 persons) with an onsite allegation volume greater than 2.25 times the median
- two-unit reactor sites (or any site with 800 to 1,000 persons) with an onsite allegation volume greater than 3 times the median
- three-unit reactor sites (or any site with more than 1,000 persons) with an onsite allegation volume greater than 4.5 times the median

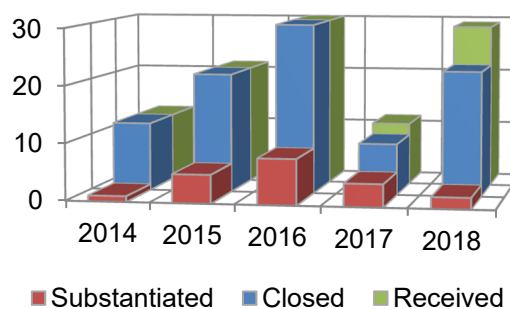
The staff recognizes, and takes into consideration when applying the above criteria, that during times of significant site activity, the site population might increase substantially.

For 2018, the median number of allegations per operating reactor site was two. However, comparing the number of allegations received at each site to such a low median would not identify meaningful anomalies. Therefore, in accordance with program guidance, the staff used a median of three in the above algorithm and identified the following reactor sites for additional review: Watts Bar Nuclear Plant, Units 1 and 2 (Watts Bar) (29 allegations), Grand Gulf Nuclear Station (Grand Gulf) (11 allegations), and Wolf Creek Generating Station (Wolf Creek) (8 allegations). The following sections discuss the staff's analyses of the SCWE at these reactor sites.

Watts Bar Units 1 and 2

As Figure 5 shows, the number of allegations the NRC received from onsite sources about Watts Bar Units 1 and 2 in 2018 increased significantly after decreasing in 2017. The rate of receipt throughout the year was steady, with a spike in the second quarter. Licensee employees, rather than contractors, made most of the allegations, and the majority of the concerns dealt with discrimination and a chilled work environment. Trends were evident in both the radiation protection and operations departments. The trend in discrimination concerns mirrored those of other concerns, in that the number of discrimination concerns increased in 2018 after decreasing the previous year. The NRC received 12 discrimination concerns in 2018. One was still open and in the NRC's investigation process at the time this analysis was prepared. Two of the discrimination concerns were resolved using the NRC's preinvestigation ADR process. The NRC has not substantiated any discrimination concerns in the past 5 years, although some claims have been successfully mediated and reached settlement using the NRC's preinvestigation ADR process.

Figure 5 Watts Bar, Units 1 and 2, Allegations



The NRC received 14 allegation concerns in 2018 asserting a chilled work environment or chilling effect. This is a significant increase from the three concerns received in 2017. After receiving a number of chilled work environment concerns in the second quarter involving the radiation protection department, the NRC conducted an inspection in June 2018 (ADAMS Accession No. ML18229A153), substantiating the concerns. The inspectors also determined that corrective actions as a result of the chilling effect letter (CEL) the NRC issued, dated March 23, 2016 (ADAMS Accession No. ML16083A479), were having a positive effect on the chilled work environment within the operations department and provided sitewide monitoring of the safety culture. However, there were continued challenges related to the identification and evaluation of department-specific work environment trends. Therefore, despite improvements in the operations department, the NRC kept the CEL open. Closure of the CEL is contingent upon an NRC determination that the licensee has made reasonable progress toward addressing the underlying issues that led to the issuance of the CEL.

The licensee's Employee Concerns Program (ECP) indicated it received five concerns warranting investigation in 2018. This is a low number compared to other sites and the NRC's allegation numbers. This licensee, Tennessee Valley Authority (TVA), is unique, however, in that it has an Office of the Inspector General, to which workers can also take concerns. Overall, the ECP had more than 100 contacts in 2018, which is similar to levels in previous years. Most of the activity involved rapid resolutions or referrals to other programs. According to discussions with TVA ECP personnel, the program saw discipline trends similar to those the NRC observed in allegations. The licensee is continuing to increase communications and employee interviews to assess the SCWE.

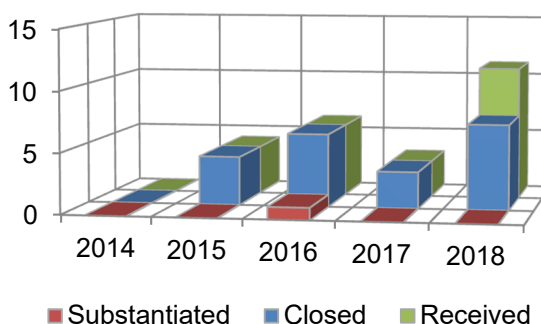
In summary, a review of the number and nature of the allegations associated with the Watts Bar site in 2018 indicates that, while Watts Bar has been able to make improvements in the one department, the addition of a chilled work environment in another is an indication that the licensee is not adequately monitoring, acknowledging, or acting upon department-specific changes in SCWE. Therefore, the NRC has determined that a cross-cutting issue exists in the SCWE area for Watts Bar because the NRC has documented four consecutive occurrences of this cross-cutting theme. The NRC may close the SCWE cross-cutting issue and CEL if the staff has confidence in the licensee's scope of efforts or progress in addressing the inadequacies identified. The NRC continues to monitor these efforts at Watts Bar.

Grand Gulf

As Figure 6 shows, the number of allegations the NRC received from onsite sources about the Grand Gulf site in 2018 increased from 2017. However, the rate of receipt decreased throughout the year, with no allegation concerns received in the third and fourth quarters. With the exception of 2017, the trend in allegations has increased since 2014. Licensee employees, rather than contractors, raised the majority of the allegations. The NRC received three anonymous allegations, all in the second quarter and all involving the same reactor department. In general, when analyzing all concerns received, the NRC staff noted a slight upward trend in those involving in the security organization. The trend in discrimination concerns also increased in 2018. The NRC received three discrimination concerns in calendar year 2018. One was settled in the NRC's preinvestigation ADR process, one was still open and in process at the time this analysis was prepared, and the other was investigated and closed but not substantiated. The NRC has not substantiated any discrimination concerns through investigation in the previous four years, although some claims have been successfully mediated and reached settlement using the NRC's preinvestigation ADR process.

The NRC did not receive any allegation concerns in 2018 asserting a chilled work environment or chilling effect. The NRC conducted the most recent Biennial Problem Identification & Resolution inspection (PI&R) in late 2018 and included an evaluation of the licensee's SCWE. PI&R inspection activities occurred on site October 22–November 8, 2018 (ADAMS Accession No. ML18351A276). Based on document reviews, including ECP case files and interviews with more than 40 workers in 6 focus groups, including representatives from a variety of departments, the inspection team concluded that employees are generally willing to raise concerns through the several means available. The environment for raising concerns in one department was found to have some weaknesses, which were associated with schedule pressure. The NRC shared this information with the licensee for action.

Figure 6 Grand Gulf Allegations



On March 12, 2018, the NRC issued a confirmatory order (ADAMS Accession No. ML18072A191), resulting from apparent willful misconduct violations of NRC requirements involving deliberate compromise of examinations by a training proctor, failure to perform required rounds to check equipment and plant conditions, and workers deliberately providing inaccurate documentation indicating they had done so. An inspection report dated November 20, 2017 (ADAMS Accession No. ML17325A002), describes the three apparent violations of NRC requirements. The licensee initiated fleetwide corrective actions involving communications, training, and improved causal evaluations designed to prevent future willful misconduct. Furthermore, the licensee committed to conduct more-frequent surveys; the licensee conducted an organizational health index survey in July 2018 and will conduct another survey in 2019. The NRC continues to monitor these activities to assess their effectiveness.

Grand Gulf's ECP confirmed that it conducted only two full investigations in 2018. The number of all ECP intakes in 2018, including rapid resolutions, referrals, and concerns increased slightly compared to the previous year, with most raised during the second quarter, coinciding with an outage. After the licensee noticed the increasing trend in allegations during the second quarter of 2018, it supplemented ECP staff on site so the ECP coordinator could spend more time in the field to improve visibility. Lastly, a number of management changes occurred in 2018, which sometimes can contribute to an increased volume in allegations as rapport is established.

In summary, a review of the number and nature of the allegations associated with the Grand Gulf site in 2018 does not indicate a concern with the environment for raising concerns. Although the NRC received an increased number of technical and discrimination allegations, they were received at a declining rate throughout the year and none was received after the lengthy outage in the April–July timeframe. The licensee recognized the slight trend the NRC noticed in the security department and took action to address the concerns. Furthermore, the licensee, recognizing the increase in allegations, took actions to improve the visibility of its ECP, which may have contributed to the decrease in allegations in the second half of the year. Nonetheless, given the issuance of the confirmatory order and the number of management changes in 2018, the NRC will closely monitor the environment for raising concerns.

Wolf Creek

As Figure 7 shows, the number of allegations the NRC received about the Wolf Creek site from onsite sources in 2018 doubled compared to those received in 2017. Almost 40 percent of the allegations received in 2018 were from current licensee employees; the rest were from contractors and anonymous submissions. The concerns varied among the 12 disciplines, with no clear trend. Allegations were received evenly throughout the first three quarters of 2018; the NRC did not receive any allegations during the fourth quarter of the year.

The NRC received one discrimination concern about Wolf Creek in 2018, which was successfully settled in the NRC's preinvestigation ADR process. From 2014 through 2017, the number of discrimination concerns the NRC received trended downward. Of these, some were settled in the NRC's preinvestigation ADR program and one received in 2016 resulted in a violation of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.7, "Employee Protection" (ADAMS Accession No. ML18333A043). The NRC received two chilled work environment concerns in 2018, but neither was substantiated.

From a plant performance perspective, the NRC identified a cross-cutting theme in SCWE during the last quarter of 2017 related to inconsistent implementation of the SCWE policy that was not isolated. The NRC completed the most recent PI&R inspection

(ADAMS Accession

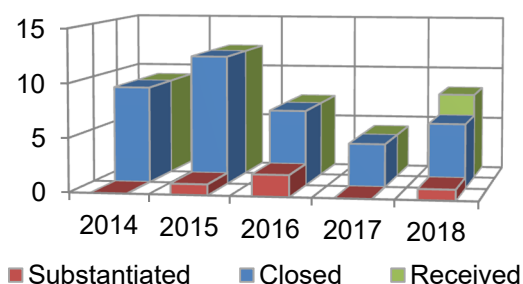
No. ML18218A265) in June 2018 and found evidence of continued SCWE challenges in the maintenance support group. The inspection team concluded that few actions were taken to address the SCWE cross-cutting theme or planned to evaluate improvement.

Additionally, the team found a lack of tracking mechanisms or effectiveness reviews for actions taken to improve

the work environment in challenged groups, which appears to have hindered timely resolution.

The NRC is scheduled to inspect the licensee's progress in addressing these weaknesses in the fourth quarter of 2019. Based on interviews with 50 individuals in eight focus groups from various disciplines, however, employees appeared willing to raise nuclear safety concerns through several means available.

Figure 7 Wolf Creek Allegations



Discussions with the licensee staff about employee concerns received in Wolf Creek's ECP identified 18 concerns for evaluation in 2018, one of which was anonymous. This is a slight increase from 2017. The ECP conducted safety culture surveys in February and September 2018, which indicated a need for improvement in some departments. Wolf Creek plans to conduct another survey in mid-2019. In the summer of 2018, all levels of leadership received SCWE training. Additionally, in November and December 2018, leaders attended a 1-day dynamic learning activity to provide practical experience on how to deal with chilled work environment concerns.

In summary, the number and nature of allegations received from onsite sources at Wolf Creek in 2018 indicate SCWE challenges, specifically, the December 2018 Severity Level II violation of 10 CFR 50.7, when a contract employee was subjected to adverse action after engaging in a protected activity, and the SCWE cross-cutting theme related to inconsistent implementation of

SCWE policy. The licensee has initiated corrective actions addressing the chilled work environment issues at Wolf Creek, and the NRC continues to monitor its progress.

Allegation Trends for Selected Materials Licensees

The NRC posts allegation statistics for certain fuel cycle facilities on its public Web site (see the appendix to this report). Because of the small number of allegations and the smaller workforce sizes associated with the overwhelming majority of materials licensees, a licensee or contractor has a higher chance of identifying an allegor. Therefore, this report does not include statistics on allegations about materials licensees, other than fuel cycle facilities, nor are such statistics available to the general public. One of the fuel cycle facilities received a sufficient number of allegations to discern a trend and provide insights into the SCWE. The following material discusses that facility.

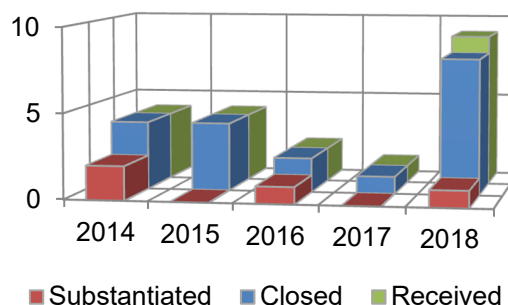
Nuclear Fuel Services

As Figure 8 shows, the number of allegations the NRC received about Nuclear Fuel Services, Inc. (NFS), from onsite sources in 2018 represents a significant increase from the previous year, and a reversal of the downward trend since 2014. Almost 45 percent of the allegations received in 2018 were from contractor employees. Although seven different disciplines were represented, there were slight trends in both security, which went through contract negotiations and eventual management changes during the year, and safeguards. Allegations were received fairly evenly throughout the first, second, and fourth quarters of 2018. The NRC did not receive any allegations during the third quarter of the year.

The NRC received one discrimination concern about NFS in 2018, which the Office of Investigations is currently investigating. From 2014 through 2017, the agency received no discrimination concerns. Three allegation concerns were raised in 2018, all about the security department, alleging a chilled work environment. In response the concerns, NRC inspectors conducted a safety culture inspection specifically focused on the protective security force in April 2018, which did not reveal a chilled work environment among security guard personnel. However, some had lingering perceptions that a recently disciplined employee may have been treated unfairly after raising concerns.

During 2018, the licensee's ECP opened and investigated 14 concerns, according to its discussions with the NRC staff. This is a decrease from the number of concerns the ECP received in 2017. The ECP received one chilling effect concern that was not substantiated. The ECP did not receive any issues that concerned discrimination related to someone engaging in protected activity. The ECP conducted a survey in June 2018, which indicated a healthy safety culture at NFS. Nonetheless, NFS developed a safety culture improvement group to develop and implement improvement activities and initiatives including reinforcing values in communications, respect, and responsiveness.

Figure 8 NFS Allegations



In summary, the number and nature of allegations the NRC received from onsite sources at NFS in 2018 does not indicate significant challenges to the environment for raising concerns. However, an April 2018 NRC safety culture inspection indicated there were some lingering perceptions that the agency will continue to monitor.

Allegation Trends for Selected Vendors

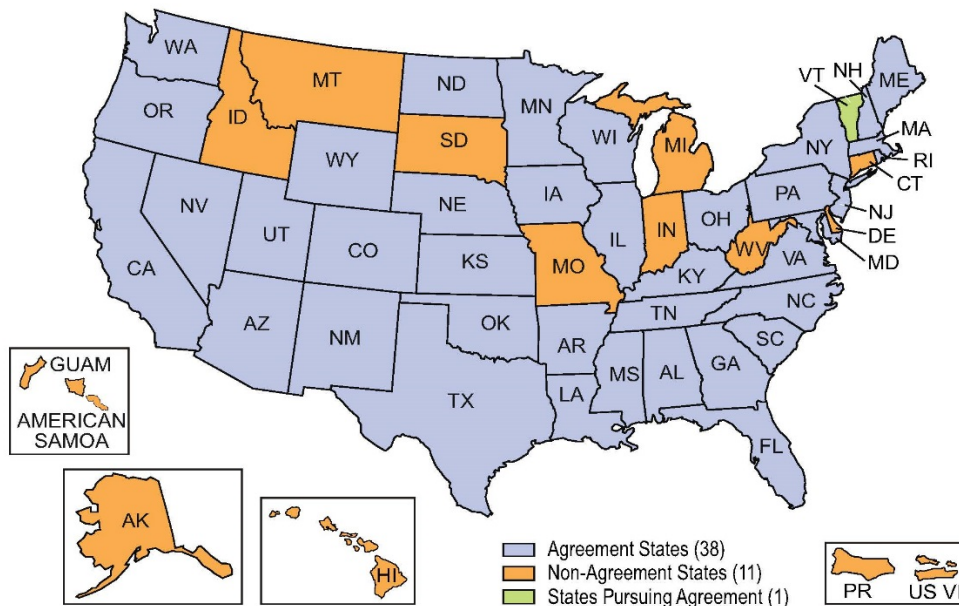
Neither this report nor the NRC Web site offers statistics by contractor or vendor for reasons similar to those outlined above for selected materials licensees. None of the vendors received a sufficient number of allegations to discern a trend or pattern or to provide insights into the SCWE. Therefore, this report does not include more indepth reviews of specific vendors.

Trends in the Agreement States—Calendar Year 2018

As explained earlier in this report, the NRC may relinquish its authority to regulate certain byproduct material, source material, 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, and the NRC has a statutory responsibility to periodically review the actions of the Agreement States to ensure that they adequately maintain their programs.

The NRC uses the Integrated Materials Performance Evaluation Program (IMPEP) to satisfy its statutory responsibility. More information on the NRC’s Agreement State program and IMPEP is available on the Web site for the NRC’s Office of Nuclear Material Safety and Safeguards at <https://scp.nrc.gov>. Figure 9 shows the 38 Agreement States.

Figure 9 NRC and Agreement States



In calendar year 2018, the NRC and its Agreement State partners completed routine IMPEP reviews of nine Agreement State programs. The IMPEP teams evaluated the effectiveness of

the Agreement State programs' responses to concerns from external sources by reviewing the casework and documentation for 86 cases cumulatively received by all of the programs reviewed. The NRC referred 46 of the 86 cases to the Agreement State programs; the States received the other concerns directly from concerned individuals. The IMPEP teams concluded that the Agreement State programs consistently took prompt and appropriate action in response to concerns raised. In all but two 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 two isolated exceptions involved cases with incomplete documentation or issues with notifying the concerned individual of the results of the program's investigations. The review team determined that all the Agreement States reviewed in 2018 adequately protected the identity of any concerned individual who requested anonymity. The IMPEP teams found no evidence that the Agreement States inappropriately released a concerned individual's identity. In general, the results of the 2018 IMPEP reviews demonstrate that the Agreement States continue to treat responses to concerns from external sources as a high priority in protecting public health and safety.

OVERVIEW OF PROGRAM ACTIVITIES

The sections below discuss activities that took place in calendar year 2018 in areas closely related to the Allegation Program and SCWE policy, including statistics associated with the agency-sponsored preinvestigation ADR program. The staff gathers insights of the SCWE at a particular site in several ways (e.g., by reviewing the number and nature of allegations concerning a particular site and through documented observations based on interviews with the licensees' workers and the review of pertinent documents during the baseline PI&R inspections). If the staff discerns that a work environment is chilled (i.e., not conducive to raising safety concerns) or there is a finding of discrimination that has the potential to chill the work environment, the NRC may request, in writing, information about the licensee's SCWE.

Requests for Information about Discrimination Findings

The U.S. Department of Labor (DOL) or a Federal authority other than the NRC (e.g., U. S. Circuit Court) periodically substantiates a discrimination concern under Section 211 of the Energy Reorganization Act of 1974, on which NRC's employee protection regulations are based. In such cases, while NRC enforcement action is being considered, the staff typically will issue a request for additional information to the regulated entity. Such requests inform the licensee or contractor of the NRC's knowledge of the finding and interest in understanding the licensee's or contractor's position, including any actions that have been taken or are planned to assess and mitigate the potential chilling effect that the finding might cause. It also informs the workforce of the NRC's interest in the state of the environment for raising concerns at the site. At the time that the NRC issues such requests, the NRC normally has neither confirmed that enforcement is necessary nor that the work environment is chilled. Rather, information is acknowledged or, if necessary, sought to help inform the NRC's potential evaluation efforts going forward. The NRC issued one such letter of this nature in 2018.

The NRC had received a complaint in 2015 from a former contractor at construction site for the Vogtle Electric Generating Plant, Units 3 and 4, alleging discrimination for raising safety concerns. In mid-2016 the agency completed its investigation and did not substantiate the concern. However, because the NRC does not have the authority to offer personal remedies, such as requiring licensees to reinstate workers or pay compensatory damages, the agency directs any employee who believes that they have been discriminated against for engaging in protected activities to seek redress through an administrative proceeding before the Occupational Safety and Health Administration (OSHA), in accordance with Section 211 of the Energy Reorganization Act. In late 2015, the OSHA office in Atlanta, GA, received the same complaint from the same former contractor at the Vogtle construction site, conducted an investigation, and, contrary to the NRC's conclusion, found that there was reasonable cause to believe that the contractor, WECTEC Global Project Services, Incorporated, had discriminated against the complainant. The NRC engaged the licensee in early 2018 after OSHA's finding was made public and confirmed that the licensee was monitoring the SCWE at the Vogtle facility to ensure that the initial OSHA finding was not having an adverse impact on the willingness of licensee employees, contractors, and subcontractors to raise safety and compliance concerns. The licensee identified no degradation of the SCWE at that time. The contractor has objected to OSHA's initial findings and is seeking further review through DOL's administrative hearing process, which the NRC continues to monitor.

Chilling Effect Letters

When the NRC concludes that a licensee or contractor's work environment is chilled and corrective actions are warranted, the agency will typically issue a CEL. A CEL is intended to ensure that the licensee is taking appropriate actions to foster a workplace environment that encourages employees and contractors to raise safety concerns and to feel free to do so without fear of retaliation.

As discussed earlier in this report, in mid-2018, NRC inspectors found that the radiation protection department's work environment at the Watts Bar site was chilled. The inspectors also determined that corrective actions the licensee took as a result of the March 23, 2016 CEL (ADAMS Accession No. ML16083A479) were having a positive effect on the chilled work environment within the operations department (the original subject of the CEL). However, there were continued challenges related to the identification and evaluation of department-specific work environment trends. Therefore, despite improvements in the operations department, the CEL remains open, and the NRC expanded it to include the radiation protection department.

Preinvestigation Alternative Dispute Resolution Process

The NRC's ADR program includes the opportunity to use voluntary dispute resolution early in the allegation process for cases of alleged discrimination before the NRC investigates the allegation. Preinvestigation ADR gives parties extra 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 preinvestigation ADR process supplies, 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, at which point an NRC investigation remains an option if the alleged is still interested in pursuing the discrimination matter.

Should such an investigation and resulting enforcement panel conclude that enforcement is warranted, the NRC and licensee may engage in what the agency refers to as "enforcement ADR," formally referred to as postinvestigation ADR. More information on that process can be found on the NRC's public Web site, <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr/post-investigation.html>. If, however, the parties reach a settlement during ADR, the staff will not pursue an investigation or subsequent enforcement about the discrimination finding. The NRC also considers settlements resulting from licensee-initiated mediation as equivalent to settlements reached under the preinvestigation ADR program.

At the time this report was prepared, 12 of the preinvestigation ADR offers the NRC made in association with discrimination allegations raised in 2018 resulted in agreements to mediate. Of those 12 cases, 8 resulted in the parties reaching a mutually agreeable settlement. The remaining four cases are either still being processed or were referred to the NRC's Office of Investigations because the parties did not reach a settlement.

CONCLUSIONS

The total number of allegation concerns received from 2014 through 2018 declined over the 5-year period. The decline may be the result of a number of factors, including plant shutdowns and continuing efforts by the regulated industry to develop and maintain more supportive environments for raising concerns using onsite reporting avenues.

The analyses of allegations have supplied insights into the SCWE at several facilities. The NRC has taken action to engage licensees about their work environments when warranted, and the staff will continue to monitor these sites with interest and all other regulated entities through normal processes.

To date, the agency's preinvestigation ADR process has resulted in a number of discrimination allegations being settled between the parties before the start of an NRC investigation. Typically, between 50 and 75 percent of cases mediated reach settlement. The staff believes that voluntary dispute resolution by the parties, using the communication opportunities afforded by preinvestigation ADR, can stem the inherent damage such disputes can inflict on the SCWE more quickly than an investigation could.

The agency's focus on the SCWEs at the regulated entities is likely contributing to the maintenance and improvement of the industry's environments for raising concerns and should continue.

APPENDIX

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

OPERATING REACTOR ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2014	2015	2016	2017	2018
Arkansas 1 & 2	2	10	7	4	6
Beaver Valley 1 & 2	5	1	0	0	1
Braidwood 1 & 2	0	2	2	4	3
Browns Ferry 1, 2, & 3	11	6	10	6	3
Brunswick 1 & 2	0	2	2	3	6
Byron 1 & 2	0	2	1	0	1
Callaway	3	5	2	5	2
Calvert Cliffs 1 & 2	2	1	0	4	2
Catawba 1 & 2	5	3	0	0	2
Clinton	0	1	0	1	2
Columbia Plant	1	3	4	3	5
Comanche Peak 1 & 2	5	3	5	1	1
Cook 1 & 2	4	5	2	4	0
Cooper	2	1	1	0	1
Davis-Besse	5	1	3	1	2
Diablo Canyon 1 & 2	1	4	3	2	0
Dresden 2 & 3	7	3	2	1	2
Duane Arnold	4	1	1	1	0
Farley 1 & 2	3	2	4	4	5
Fermi	0	9	2	2	6
Fitzpatrick	1	1	0	0	0
Ginna	1	0	2	1	0
Grand Gulf	0	4	6	3	11
Harris	2	6	2	5	2
Hatch 1 & 2	5	5	4	2	2
Indian Point 2 & 3	6	2	6	1	1
Lasalle 1 & 2	1	1	3	0	2
Limerick 1 & 2	3	1	0	1	0
McGuire 1 & 2	1	5	1	1	1
Millstone 2 & 3	6	4	8	8	2
Monticello	3	0	0	0	0
Nine Mile Point 1 & 2	1	0	2	2	4
North Anna 1 & 2	0	3	0	3	1
Oconee 1, 2, & 3	5	7	5	1	0
Palisades	8	3	1	4	2
Palo Verde 1, 2, & 3	12	15	12	1	6

Site	2014	2015	2016	2017	2018
Peach Bottom 2 & 3	2	2	1	0	0
Perry	1	2	0	1	0
Pilgrim	5	10	10	8	0
Point Beach 1 & 2	4	2	2	1	0
Prairie Island 1 & 2	8	2	2	0	0
Quad Cities 1 & 2	1	4	2	2	1
River Bend	2	3	4	3	0
Robinson	0	0	2	2	4
Salem/Hope Creek	8	14	9	7	7
Seabrook	2	1	1	1	0
Sequoyah 1 & 2	7	7	17	7	6
South Texas 1 & 2	4	7	8	9	8
St Lucie 1 & 2	4	6	4	5	1
Summer	4	4	3	2	3
Surry 1 & 2	1	2	1	2	1
Susquehanna 1 & 2	14	3	2	6	4
Three Mile Island	3	0	0	2	0
Turkey Point 3 & 4	2	8	8	3	5
Vogle 1 & 2	3	5	3	3	2
Waterford	3	2	6	3	1
Watts Bar 1 & 2	12	21	30	11	29
Wolf Creek	9	12	7	4	8

NONOPERATING REACTOR ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2014	2015	2016	2017	2018
Fort Calhoun	4	6	3	2	1
Humboldt Bay	0	1	0	0	1
La Crosse	0	0	1	0	0
Oyster Creek	2	3	1	1	2
San Onofre 2 & 3	3	0	0	0	4
Summer 2 & 3	12	30	14	8	0
Vermont Yankee	1	0	1	2	1
Vogtle 3 & 4	16	40	61	35	9
Zion	1	0	0	0	0

FUEL CYCLE FACILITY ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2014	2015	2016	2017	2018
Areva Richland	1	0	0	0	0
BWXT	2	0	3	2	1
CB&I Areva MOX	1	2	3	1	0
Global Nuclear	1	3	4	4	6
Honeywell	10	5	4	2	1
Louisiana Energy Services	5	4	1	1	2
Nuclear Fuel Services	4	3	2	1	9
Paducah	1	0	0	0	0
Westinghouse	0	1	1	2	1