



ALLEGATION PROGRAM

ANNUAL TRENDS REPORT

Calendar Year 2020

**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 2020 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 the staff prepared this report, about 91 percent of the 2020 mediated discrimination concerns had been settled using this process.

During the 5-year period from 2016 through 2020, the NRC received between 200 and 500 allegations per year¹ concerning reactor plants, materials facilities, and vendors. The total number of allegations in 2020 declined by approximately 10 percent from the previous year, all driven by a reduction in allegations associated with reactor licensees. In considering whether the decline in 2020 was related to the COVID-19 public health emergency (PHE), the staff reviewed data for allegations received from onsite sources and identified no change in the percentage of allegations that came from onsite workers between 2019 and 2020, despite a reduced NRC presence on site. Furthermore, allegations have been on the decline long before the PHE.

Over the course of the last 5 years, the number of allegations decreased by more than half. Six reactor plants ceased operations during this period, and one ceased construction activities. However, their change in status does not explain the magnitude of the declining trend either. Rather, the decline in allegations might suggest more supportive environments for raising concerns at most regulated entities, and NRC inspection observations concerning the environments for raising concerns at most sites support this hypothesis.

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 2020, coinciding with the overall decrease in allegations received, the total volume of allegation concerns decreased as well.

Discrimination concerns constituted the largest percentage of reactor allegations received nationwide. After two years of decline, in 2020 the number of discrimination concerns remained steady compared to the previous year, although the rate of their receipt declined throughout the year. Licensee employees, both current and former, raised just as many discrimination concerns as contractors in 2020. There was not a clear trend in departments where the workers felt discriminated against, although, 32 percent of the concerns were raised by workers at the Vogtle construction site.

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.”

At the time the staff prepared this report, the NRC had not substantiated any of the discrimination concerns raised in 2020; however, approximately 30 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 second largest percentage of nationwide reactor allegations was related to chilled work environment concerns, however the number of concerns dropped significantly from 2019 to 2020. The most often stated behavior that was alleged to cause the workforce to hesitate when raising safety concerns, was that concerns were often dismissed; that is, they were not documented in a condition report after an event, were not addressed once documented, or workers were discouraged from writing condition reports.

The NRC received allegations in numbers that warranted additional analysis, for only one of the sites.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 Vogtle, Units 3 and 4 construction site for a more indepth review. In summary, a review of the number and nature of the allegations associated with the Vogtle construction site in 2020, and inspections conducted by the NRC, indicates that workers were not hesitant to raises safety concerns through many of the available reporting avenues. Furthermore, the NRC notes that the licensee has actively identified and addressed known weaknesses with effective corrective actions and continues to make improvements in many processes used to maintain a healthy SCWE.

Finally, in 2020, the NRC reviewed the effectiveness of six Agreement State programs and concluded that they continue to address concerns promptly, thoroughly document their investigations and closeout actions, protect the concerned individuals' identities, and inform the concerned individuals of the outcomes. In general, the results of the 2020 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.

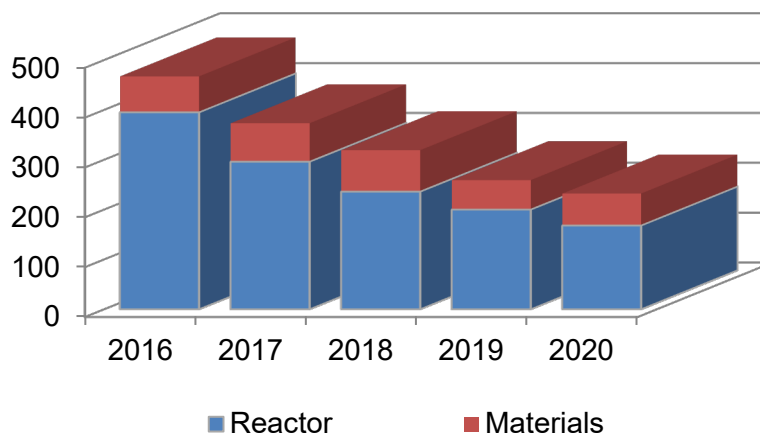
The staff also reviews national trends for reactor and materials allegations, shifts in users of the NRC's Allegation Program, and the effect that the implementation of the program has on the workload in the NRC regional and program offices. The following section discusses these trends.

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 200 and 500 allegations each year, that the total number of allegations received has declined from calendar years 2016 through 2020, and that the decline has slowed. The total number of allegations in 2020 declined by approximately 10 percent from the previous year, all driven by a reduction in allegations associated with reactor licensees, while the staff saw a slight increase in materials licensee allegations.

Figure 1 Allegations Received by Calendar Year



In considering whether the decline in 2020 was related to the COVID-19 public health emergency (PHE), the staff reviewed data for allegations from onsite sources. During calendar year 2019, 93 percent of the reactor allegations were from onsite sources. That percentage did not change in 2020 despite a reduced NRC presence on site. The NRC's safety hotline and allegation e-mail address are proximately posted on the NRC's public website for use by concerned workers wanting to reach the agency, and these are often the avenues chosen. Furthermore, as is evident in Figure 1 above, allegations have been declining long before the

PHE. It is certainly possible that because licensees' onsite staffing and work was also limited to ensure fewer face-to-face interactions, that the situation allowed for fewer conflicts or opportunities for error that might have otherwise translated into allegations. The data, however, is not conclusive that the decline is related to the PHE in 2020.

Over the course of the last 5 years, the number of allegations decreased by more than half. Six reactor plants ceased operations during this period, and one ceased construction activities. However, their change in status does not explain the magnitude of the declining trend either. Another possible reason for the declining use of the NRC's Allegation Program could 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, low, and even declined in 2020. The decline in allegations might suggest more supportive environments for raising concerns at most regulated entities, and NRC inspection observations concerning the environments for raising concerns at most sites support this hypothesis.

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 2020, coinciding with the overall decrease in allegations received, the total volume of allegation concerns decreased as well, and by a greater percentage than the allegations themselves. More specifically, the number of allegation concerns decreased in all the regional and headquarters offices, except the Office of Nuclear Material Safety and Safeguards.

Reactor Licensee Trends

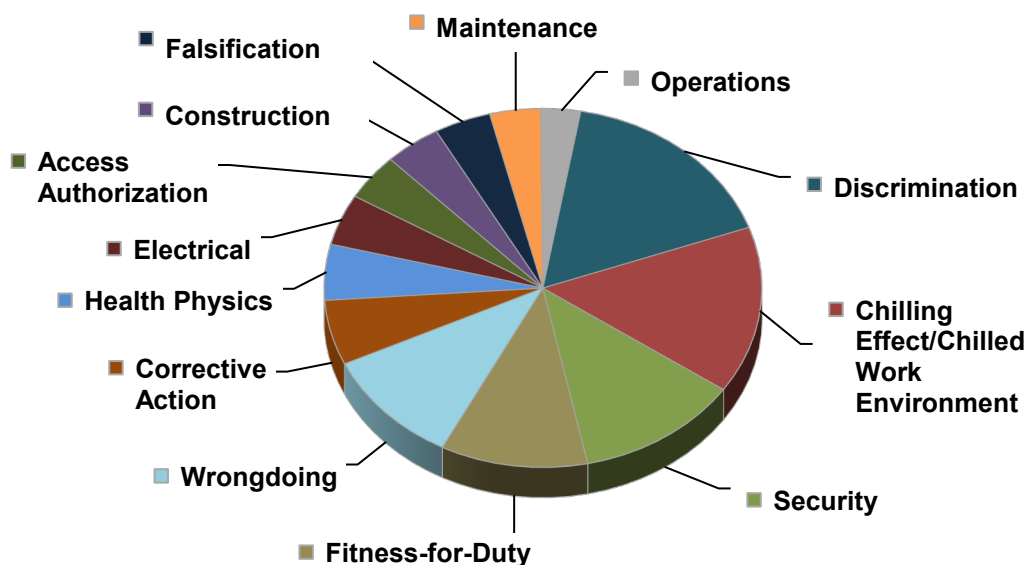
Figure 2 offers insight into areas in which the NRC is allocating resources for the evaluation of reactor-related allegations. The figure shows the 13 functional areas that represent approximately 80 percent of the allegation issues that the program received nationwide in 2020.³

Figure 2 shows that discrimination concerns constituted the largest percentage of reactor allegations received nationwide. After two years of decline, in 2020 the number of discrimination concerns remained steady compared to the previous year, although the rate of their receipt declined throughout the year. Licensee employees, both current and former, raised just as many discrimination concerns as contractors in 2020. There was not a clear trend in departments where the workers felt discriminated against, although, 32 percent of the concerns were raised by workers at the Vogtle construction site. As suspected, raising a concern to management was the most frequently cited protected activity and termination the most frequently cited adverse action. But other actions were also cited as discriminatory such as transfers and lower performance appraisals.

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, cybersecurity, emergency preparedness, employee concerns programs, engineering, fatigue and overtime, fire protection, HVAC, mechanical, other, procurement, quality assurance, radwaste, safety culture and training/qualification.

At the time the staff prepared this report, the NRC had not substantiated any of the discrimination concerns raised in 2020; however, approximately 30 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. Ninety-one percent of the 2020 ADR-mediated discrimination concerns reached a successful settlement, a success rate higher than that of previous years. Finally, approximately 25 percent of allegers filing a discrimination concern who were offered either ADR or an investigation withdrew their complaint before the agency reached a conclusion.

Figure 2 Reactor Concerns Nationwide, 2020



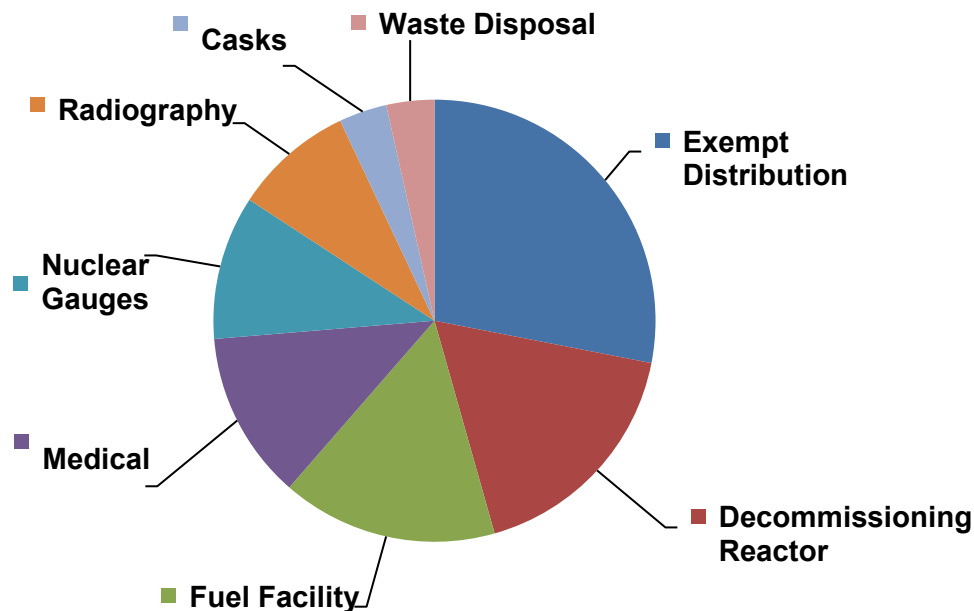
Chilling effect and chilled work environment concerns constituted the next highest percentage of allegations received nationwide. The number of concerns dropped significantly from 2019 to 2020. The NRC uses the term "chilling effect" to describe a condition that occurs when an event, interaction, decision, or policy change results in a perception that the raising of safety concerns to the employer or 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. Licensee employees, both current and former, raised twice as many chilled work environment concerns as contractor employees in 2020. Most frequently the entire site, the maintenance organization or the quality assurance or quality control groups were the environments alleged to be chilled. And the cause of the chill was attributed equally to both supervisor level and senior management. Finally, the most often stated behavior that allegedly chilled the workforce was that concerns were dismissed; that is, not documented in a condition report after an event, not addressed once it was documented, or workers were discouraged from writing condition reports. Disrespectful treatment by management towards workers that raised concerns was also cited often as the reason employees hesitated to raise safety concerns. One quarter of the concerns were about the work environment at the Vogtle construction site.

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 with great variation in the activities they perform. 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 90 percent of allegation concerns that the NRC received nationwide.⁴

The NRC received about 9-percent more materials-related allegations in 2020 than in 2019. For several years, the number of allegations related to fuel cycle facilities has constituted the highest percentage of materials-related allegations. In 2020, however, the NRC received more allegations concerning exempt distribution products. Such products include silicon chips, gunsights, and smoke detectors. These products are to be distributed by persons who have a specific license from the Commission authorizing such distribution to persons exempt from the requirements for an NRC license. The NRC saw a 45 percent increase in such concerns.

Figure 3 Allegations by Type of Materials Licensee Nationwide, 2020



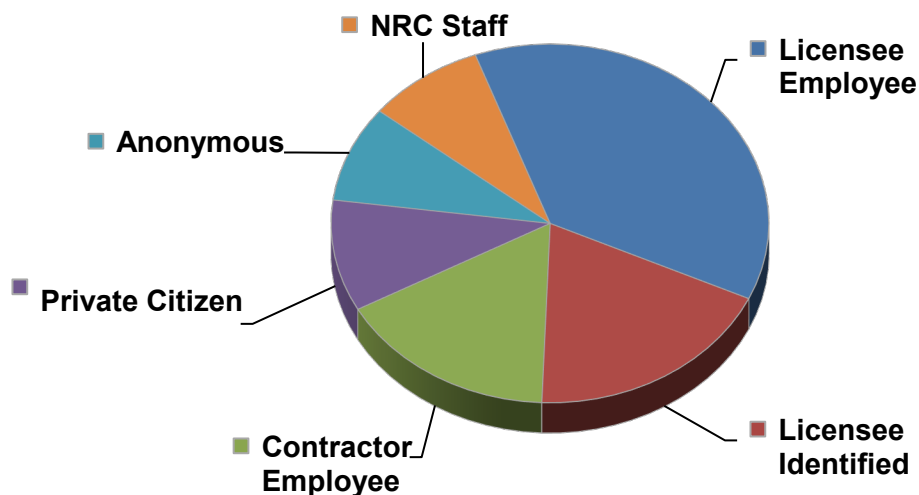
A slightly smaller increase was seen in concerns about decommissioning reactors, while the number of allegations associated with the nations fuel facilities declined slightly.

⁴ The agency received few concerns about the materials licensee types not shown in Figure 3, which represent the remaining 10 percent of the issues received. These licensee types include general licensee, high level waste, research and development, and transportation.

Source Trends

Figure 4. shows a breakdown of 96 percent⁵ of the sources for reactors and materials allegations received in 2020. Similar to what was seen in 2019, the number of concerns received from persons wishing to remain anonymous dropped notably as a source of allegations in 2020. The number of allegations from contractor employees also declined significantly after remaining steady from 2018 to 2019. 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 allegations from these sources declined by about 7 percent in 2020. While the number of concerns from most sources decreased, reflecting the overall decrease in allegations received, the NRC Allegation Program received a slight increase in licensee identified concerns.

**Figure 4 Allegations by Source Category
Nationwide, 2020**



Licensee identified issues are potential wrongdoing concerns, brought to the NRC by a licensee representative acting in his or her official capacity, to keep the NRC informed of their investigation. The agency staff assigns an allegation process tracking number to track the evaluation progress related to the alleged wrongdoing issue. Similarly, the source category “NRC Staff” indicates an NRC staff member who suspects that a regulatory requirement has been willfully violated, thus prompting the NRC Office of Investigations to investigate. The volume of NRC staff concerns remained steady compared to the previous year.

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 2016 through December 2020. The list includes only allegations from onsite sources (i.e., those that

⁵ The other 4% of the sources for reactors and materials allegations received in 2020 are federal agency, news media, special interest group, and state agency.

might indicate the health of the SCWE). Onsite sources include current or former licensee employees, current or former contractor employees, and anonymous alлегers. 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 conducts a more indepth SCWE review of any site with larger numbers of onsite allegations. Because sites with a larger population of employees and contractors (such as three-unit reactor sites or sites under construction) 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 on 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 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.

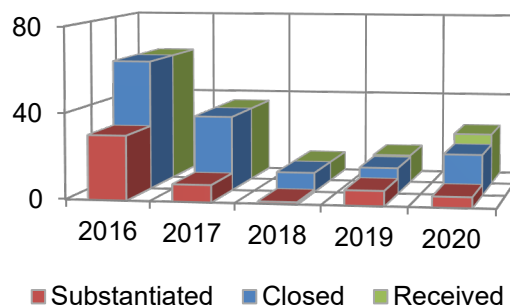
For 2020, the median number of allegations per operating reactor site was two. However, comparing the number of allegations received at each site to such a low median would not identify meaningful anomalies. Therefore, in accordance with program guidance, the staff used a median of three in the above algorithm. The only site that met the above thresholds for further review was the reactor site under construction, Vogtle Units 3 and 4, with 24 allegations from onsite sources.

Vogtle Units 3 and 4

As Figure 5 shows, the number of allegations the NRC received from onsite sources about this reactor site under construction in 2020 increased for the second consecutive year. However, the rate of receipt declined. Twice as many allegations were received in the first half of 2020, then were received in the second. Allegation sources, not surprisingly, continue to be concentrated in the contractor and former contractor categories. Three alлегers came to the NRC anonymously. Two concerns alleging a chilled work environment in a contractor's department were substantiated and corrective actions taken by the licensee. Both concerns were raised in late spring or early summer. Most of the chilling effect concerns were raised in the first half of the year.

As with allegations in general, the site's

Figure 5 Allegations at Vogtle 3 & 4



subset of discrimination allegation concerns also trended upward as compared to the previous two years, although all concerns were received in the first half of the year. Of the 11 discrimination concerns submitted to the NRC in 2020, only one is still open. Three discrimination concerns were settled by the parties under the NRC's Pre-investigation ADR process, and two were withdrawn by the alleged prior to the NRC initiating an investigation. Four of the discrimination concerns were not investigated because the alleged did not establish a prima facie showing of potential discrimination. For clarification, to consider a matter of potential discrimination under Title 10 of the *Code of Federal Regulations*, an alleged must present a certain pattern of facts, called a prima facie showing. Specifically, the allegation must initially establish that an employee has engaged in a protected activity, that an adverse personnel action was taken against the employee, that management knew that the employee had engaged in the protected activity, and that the protected activity was, in part, a reason for the adverse personnel action. Two discrimination concerns concerning the Vogtle site under construction have been substantiated by the NRC in the past five years and were the subject of a fleet-wide Confirmatory Order (CO) (EA-18-130; EA-18-171; Agencywide Documents Access and Management System (ADAMS) Accession No. ML19249B612).

In December 2020, the NRC completed a follow-up inspection of the CO and an inspection of the licensee's SCWE at Vogtle Units 3 and 4 (ADAMS Accession No. ML21025A145). The inspection included review of 1) process revisions, including to the Employee Concerns Program, Employee Adverse Action Review Process, and Contractor Discipline Review Process; 2) training in the areas of employee protections and deliberate misconduct for management, new licensee supervisors, and a revised General Employee Training module to include specific reference to the same; 3) communications to both the workforce, as well as the broader industry about lessons learned and employee protections; 4) SCWE Policy updates to reflect lessons learned; and 5) an August 2020 licensee SCWE Assessment. Except for a severity level IV violation for failing to complete all required training required by the CO, the inspection team found the actions the licensee had taken to address the CO commitments acceptable.

The inspection team also assessed the licensee's maintenance of the SCWE. Several interviews were conducted, and licensee documents reviewed, including ECP files and Nuclear Safety Culture Monitoring Panel meeting minutes. The team found that all interviewees expressed a willingness to raise nuclear safety concerns through a variety of reporting avenues.

Based on discussions with licensee representatives, there were approximately 12,300 badged workers on the Vogtle Units 3 and 4 site at the beginning of the calendar year and 11,100 at the end. To address the concerns related to the COVID-19 public health emergency, on-site staff was kept at a minimum for much of spring, and a temporary reduction in contractor workers was taken at that time. Many, however, were rehired and by late November most of the workforce was back on site, albeit in shifts to minimize personal contact. The ECP minimized field work but continued to receive concerns by phone and regularly checked drop boxes during their time off site. Both the NRC and the licensee saw trends in the same disciplines, but as NRC allegations rose, ECP concerns dropped slightly.

In summary, there was a notable increase in allegations at Vogtle Units 3 and 4 in 2020 and especially in the areas of chilled work environment and discrimination concerns. There was also a decline in ECP contacts during the same time period, which sometimes indicates a weakening SCWE. Nonetheless, the NRC's inspection of the work environment late in the calendar year found that workers were not hesitant to raise safety concerns through many of the available reporting avenues. Furthermore, the inspection team noted that the licensee has actively

identified and addressed known weaknesses with effective corrective actions and continues to make improvements in many processes used to maintain a healthy SCWE. The licensee and NRC recognize the changes the workforce is likely to experience as the units get closer to commercial operation and the NRC will maintain its oversight of the SCWE at Vogtle Units 3 and 4 through normal and CO follow-up inspection activities to ensure the 2020 improvements are sustainable.

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 most 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. None of the fuel cycle facilities received a sufficient number of allegations to discern a trend or pattern to provide insights into the SCWE. Therefore, this report does not include more indepth reviews of specific fuel cycle facilities.

Allegation Trends for Selected Vendors

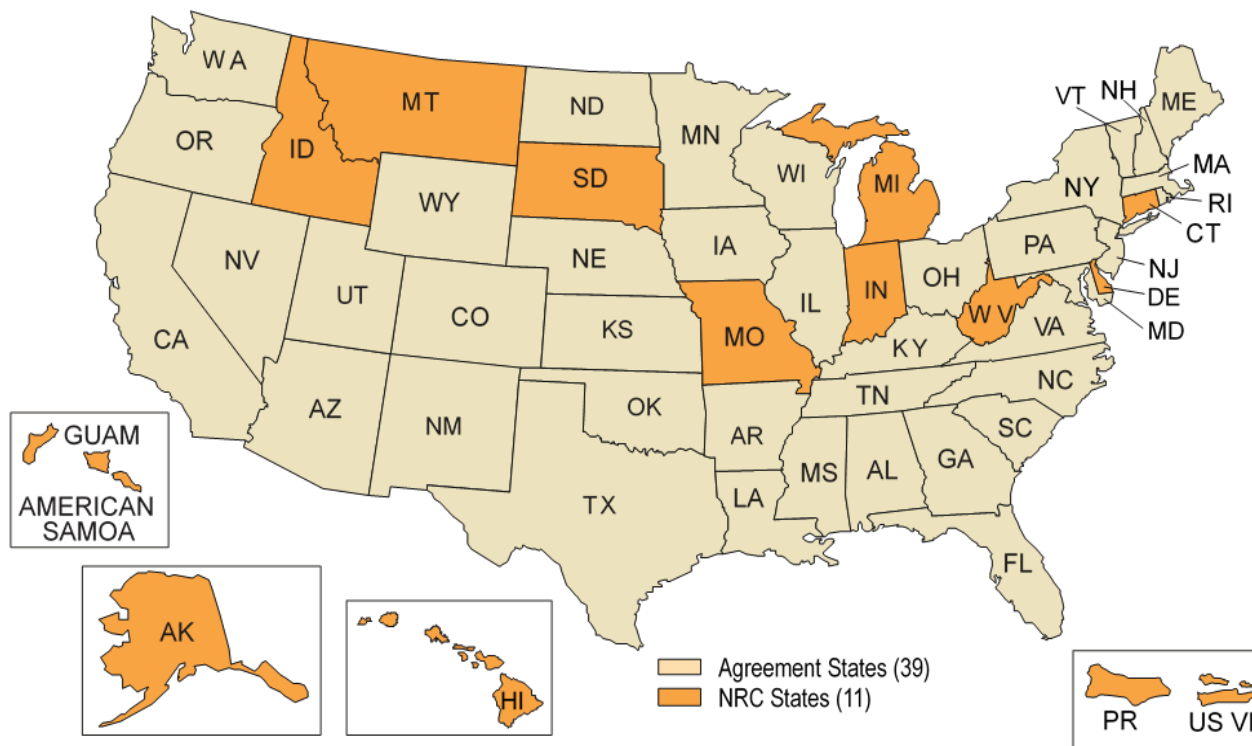
Neither this report nor the NRC Web site offers statistics by contractor or vendor for reasons similar to those outlined above for selected materials licensees. None of the vendors received a sufficient number of allegations to discern a trend or pattern or to provide insights into the SCWE. Therefore,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

Trends in the Agreement States—Calendar Year 2020

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, the NRC staff still refers the concern to the Agreement State in accordance with the agreement, but without divulging the concerned individual's identity. The NRC Office of Nuclear Material Safety and Safeguards addresses concerns about Agreement State program oversight outside of the Allegation Program.

Before becoming Agreement States, 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 this 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 6. shows the 39 Agreement States.

Figure 6 NRC and Agreement States



In calendar year 2020, the NRC and its Agreement State partners completed routine IMPEP reviews of six Agreement State programs. During the year, these six Agreement State programs received a total of 102 allegations, including 22 allegations referred to the programs by the NRC. The IMPEP review teams evaluated the effectiveness of the Agreement State programs' responses to concerns by reviewing the casework for, and documentation of, 36 of the 102 cases received by the Agreement State programs. The IMPEP teams concluded that the Agreement State programs consistently took prompt and appropriate action in response to concerns raised. The review teams noted that the States collectively documented the results of their investigations and closeout actions, which included notifying concerned individuals of the outcomes of the investigations when the individuals' identities were known. The review team determined that all the Agreement States reviewed in 2020 adequately protected the identity of any concerned individual who requested anonymity. The IMPEP teams also found no evidence that the Agreement States inappropriately released a concerned individual's identity. In general, the results of the 2020 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 2020 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 the NRC's employee protection regulations are based. In such cases, while the NRC is considering enforcement action, 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. No such letters of this nature were issued in 2020.

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 Chilling Effect Letter (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.

The NRC CEL issued to TVA in 2016 concerning the operations department at the Watts Bar site and expanded in 2018 to include the radiation protection department was closed in early 2021 (ADAMS Accession No. ML21048A200). The NRC staff reviewed TVA's corrective actions to address the work environment issues during multiple inspections between 2016 and 2020 and determined all closure criteria was satisfied.

In March 2020, the NRC staff issued a CEL to the Armed Forces Radiobiology Research Institute (AFRRI) (ADAMS Accession No. ML20070K841). AFRRI has a Research and Test Reactor license and materials licenses. The NRC initially identified this issue during an inspection conducted in the August 2018 (ADAMS Accession No. ML18260A111). In a follow-up inspection in the spring of 2019, the staff found the corrective actions taken by AFRRI management were not effective. At that time, AFRRI told the NRC inspectors that they had engaged a contractor to conduct a safety culture assessment. That survey, also proved to be ineffective both because the population responding to it was too low to provide meaningful results, and the survey questions focused on industrial, rather than nuclear, safety. The NRC at

that time concluded that a CEL was appropriate. AFRRI's response to the CEL outlined a number of actions to improve the work environment, including communications, policies, reporting tools, metrics, and surveys to monitor progress. The NRC will conduct future inspections to assess the effectiveness and sustainability of these actions.

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. The NRC provides more information on that process on the agency'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 of or subsequent enforcement for a 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 the staff prepared this report, 11 of the preinvestigation ADR offers the NRC made in association with discrimination allegations raised in 2020 resulted in agreements to mediate. Of those 11 cases, 10 resulted in the parties reaching a mutually agreeable settlement. The remaining one case is still being mediated.

CONCLUSIONS

The total number of allegation concerns received from 2016 through 2020 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. Although possible, a review of the data cannot confirm that the COVID-19 PHE had a significant impact on the decline.

The analysis of allegations provided insights into the SCWE at the Vogtle construction site. Although allegations associated with this site increased in 2020, the NRC's inspections found that the licensee appropriately identified and addressed chilled work environment concerns raised by the workforce. The NRC will continue to monitor the situation as construction is completed and operations begin.

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. In 2020, at least 90 percent reached 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 and licensees' focus on the SCWE 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	2016	2017	2018	2019	2020
Arkansas 1 & 2	7	4	6	4	2
Beaver Valley 1 & 2			1		
Braidwood 1 & 2	2	4	3		1
Browns Ferry 1, 2, & 3	10	6	3	19	4
Brunswick 1 & 2	2	3	6	1	4
Byron 1 & 2	1		1	2	1
Callaway	2	5	2	1	1
Calvert Cliffs 1 & 2		4	2	3	
Catawba 1 & 2			1	1	5
Clinton		1	2	1	2
Columbia Plant	4	3	5	1	
Comanche Peak 1 & 2	5	1	1	1	
Cook 1 & 2	2	4			
Cooper	1		1	1	
Davis-Besse	3	1	2		2
Diablo Canyon 1 & 2	3	2		4	
Dresden 2 & 3	2	1	2	3	1
Farley 1 & 2	4	4	5		2
Fermi	2	2	6		3
Fitzpatrick				1	
Ginna	2	1			1
Grand Gulf	6	3	11	2	1
Harris	2	5	2	2	1
Hatch 1 & 2	4	2	2	3	4
Indian Point 2 & 3	6	1	1	4	5
Lasalle 1 & 2	3		2		1
Limerick 1 & 2		1			
McGuire 1 & 2	1	1	1	1	
Millstone 2 & 3	8	8	2	2	3
Monticello					2
Nine Mile Point 1 & 2	2	2	4	1	1
North Anna 1 & 2		3	1	3	1
Oconee 1, 2, & 3	5	1		1	5
Palisades	1	4	2	2	2
Palo Verde 1, 2, & 3	12	1	6	3	1
Peach Bottom 2 & 3	1			1	1

Site	2016	2017	2018	2019	2020
Perry		1		2	
Point Beach 1 & 2	2	1			
Prairie Island 1 & 2	2			1	
Quad Cities 1 & 2	2	2	1		1
River Bend	4	3		2	2
Robinson	2	2	4	1	3
Salem/Hope Creek	9	7	7	5	1
Seabrook	1	1			
Sequoyah 1 & 2	17	7	6	9	1
South Texas 1 & 2	8	9	8	3	
St Lucie 1 & 2	4	5	1	5	3
Summer	3	2	3	5	
Surry 1 & 2	1	2	1	1	
Susquehanna 1 & 2	2	6	4	1	1
Turkey Point 3 & 4	8	3	5	3	5
Vogle 1 & 2	3	3	2	3	2
Waterford	6	3	1	1	2
Watts Bar 1 & 2	30	11	29	21	6
Wolf Creek	7	4	8	2	3

NONOPERATING REACTOR ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2016	2017	2018	2019	2020
Duane Arnold	1				
Fort Calhoun	3	2	1		
Humboldt Bay			1		
La Crosse	1				
Oyster Creek	1	3	2		4
Pilgrim	10	8			2
San Onofre 2 & 3			4	2	
Summer 2 & 3	14	8			
Three Mile Island		2		1	0
Vermont Yankee	1	1	1		
Vogtle 3 & 4	61	35	9	13	24
Yankee Rowe				1	

FUEL CYCLE FACILITY ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2016	2017	2018	2019	2020
Areva Richland					2
BWXT	3	2	1	1	1
CB&I Areva MOX	3	1			
Global Nuclear	4	4	6		1
Honeywell	4	2	1	1	
Louisiana Energy Services	1	1	2	1	
Nuclear Fuel Services	2	1	9	2	1
Westinghouse	1	2	1	4	