



ALLEGATION PROGRAM

ANNUAL TRENDS REPORT

Calendar Year 2022

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

CONTENTS

EXECUTIVE SUMMARY	1
TRENDS IN ALLEGATIONS	3
National Trends	3
Reactor Licensee Trends	4
Materials Licensee Trends	6
Source Trends	7
Allegation Trends for Selected Reactor Sites.....	7
Vogtle Units 3 and 4.....	8
South Texas Units 1 and 2.....	10
Columbia Generating Station	11
Allegation Trends for Selected Materials Licensees.....	12
Allegation Trends for Selected Vendors.....	12
Trends in the Agreement States	12
OVERVIEW OF PROGRAM ACTIVITIES	14
Requests for Information Regarding Discrimination Findings.....	14
Chilling Effect Letters.....	14
Preinvestigation Alternative Dispute Resolution Process.....	14
CONCLUSIONS.....	16
APPENDIX.....	A-1

FIGURES

Figure 1 Allegations Received by Calendar Year	3
Figure 2 Reactor Concerns Nationwide, 2022	4
Figure 3 Allegations by Type of Materials Licensee Nationwide, 2022	6
Figure 4 Allegations by Source Category Nationwide, 2022	7
Figure 5 Vogtle, Units 3 Allegations	9
Figure 6 Vogtle, Units 4 Allegations	9
Figure 7 South Texas Allegations	10
Figure 8 Columbia Allegations	11
Figure 9 NRC and Agreement States	13

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 2022 involving the Allegation Program and related policies. The allegation staff continues to facilitate the agency-sponsored pre-investigation alternative dispute resolution process for discrimination allegations. The NRC believes this pre-investigation process is beneficial to the environment for raising concerns. The pre-investigation 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, 40 percent of the 2022 mediated discrimination concerns had been settled using this process.

During the 5-year period from 2018 through 2022, the NRC received between 170 and 270 allegations per year¹ concerning reactor plants, materials facilities, and their vendors. The total number of allegations in 2022 decreased slightly from the previous year, driven by an increase in allegations associated reactor licensees and decreases in those associated with both materials licensees and vendors.

Each allegation can include multiple concerns. Although not always the case, 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 2022, however, coinciding with the overall decrease in allegations received, the total volume of allegation concerns increased.

Wrongdoing concerns constituted the highest percentage of reactor-related concerns received nationwide. Wrongdoing concerns include those related to falsification and counterfeit, fraudulent, and suspect items. The total volume of concerns in 2022 mirrored that seen in 2021, but unlike the previous year, the number of concerns raised trended down throughout the year. Trends were seen in the security and operations departments involving multiple different sites. The type of concerns raised most often included workers failing to follow procedures, falsifying records, and providing incomplete or inaccurate information to the NRC.

Health physics concerns were the next largest percentage received nationwide and represented to largest increase when compared to similar concerns raised in 2021. Approximately 38 percent were received in the first quarter of the year. More than half of these concerns involved plants in NRC’s Region IV and most of those were from the Columbia Generating Station which experienced an airborne radioactivity event in mid-2021.

Columbia and three other sites were the subject of allegations in numbers that warranted additional analysis.² In preparing this report, the staff reviewed a 5-year history of allegations for

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.”

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>.

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 Unit 3, Vogtle Unit 4, Columbia, and South Texas sites for a more in-depth review. In summary, a review of the number and nature of the allegations associated with the Vogtle and Columbia sites in 2022, and inspections conducted by the NRC, indicates that most workers were not hesitant to raise safety concerns through many of the available reporting avenues. Furthermore, the NRC notes that the licensees are actively monitoring their environments to identify and address any challenges to the environment for raising concerns. Regarding the South Texas site, the NRC is continuing to monitor the licensee's actions to address challenges to the environment and will take additional action as necessary to ensure workers are not hesitant to raise concerns.

Finally, in 2022, the NRC reviewed the effectiveness of 11 Agreement State programs and concluded that they consistently took prompt and appropriate action in response to concerns raised, and generally documented the results of their investigations and closeout actions, which included notifying concerned individuals of the outcomes of the investigations. All the Agreement State programs reviewed in 2022 adequately protected the identity of concerned individuals, in accordance with Agreement State laws, except one, and that state is required to develop and implement corrective actions to address this lapse.

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

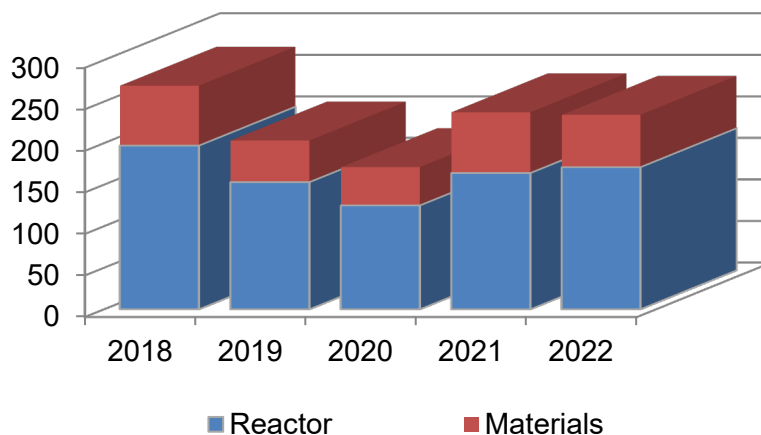
National trends inform the staff about the effect of external factors, plant events, and industry efforts to improve the SCWE at NRC-licensed facilities. The staff can use national trends to help develop budget and planning assumptions to support future agency and Allegation Program needs.

Figure 1 shows that the NRC received between 170 and 270 allegations each year. The total declined between calendar years 2018 and 2020, and that in 2021 the trend reversed, increasing by approximately 40 percent, driven by increases in allegations associated with both reactor and materials licensees and their vendors. In 2022, allegations concerning reactors increased, while those related to materials decreased, resulting in the total volume of allegations declining very slightly.

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 one to three concerns. In most years, including the previous four of this analysis period, 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 2022, however, while the number of allegations declined slightly, the total volume of concerns increased by 13 percent. More specifically, the number of concerns increased in each region except Region I in the northeast, where they declined slightly. The

Figure 1 Allegations Received by Calendar Year

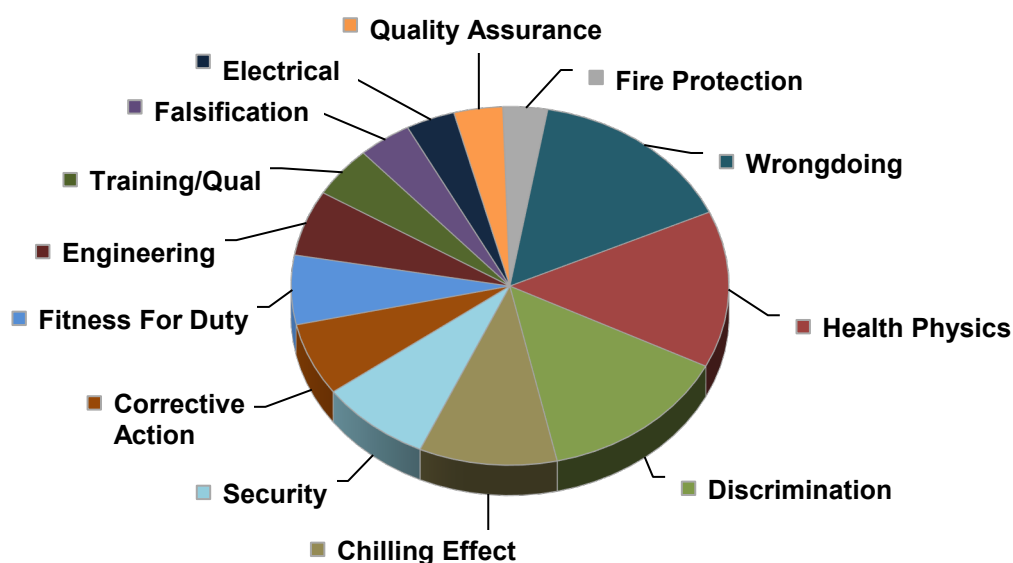


headquarters offices, which address allegations such as those related to decommissioned and operating research and test reactors (RTRs), security Force-on-Force exercises, the inappropriate sale of radioactive material on the internet, and the improper import or export of radioactive material, also received fewer concerns in 2022.

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 2022.³

Figure 2 Reactor Concerns Nationwide, 2022



Wrongdoing concerns constituted the highest percentage of allegations received nationwide. Wrongdoing is defined as a willful violation of regulatory requirements through deliberate action or a violation resulting from careless disregard of regulatory requirements. Such concerns are unique in two ways. First, unlike other concerns in the program which are raised by individuals external to the NRC, potential wrongdoing concerns are sometimes identified by NRC inspectors and are tracked within the allegation program. Second, usually when an issue is raised to the NRC by licensee management acting in their official capacity, such as a licensee manager discussing operational issues with the NRC resident inspector, they are not considered allegations. An exception is made for potential wrongdoing concerns.

Wrongdoing concerns include those related to falsification and counterfeit, fraudulent, and suspect items. These types of wrongdoing allegations are categorized separately in the NRC's database but for the purpose of this trend analysis were appropriately included. Regarding such

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 access authorization, chemistry, civil/structural, construction, cybersecurity, emergency preparedness, employee concerns programs, environmental qualifications, fatigue and overtime, instrumentation and control, licensing, maintenance, mechanical, misadministration, nondestructive examination, operations, other, radwaste, and safety culture.

concerns raised or identified in 2022, most were brought to the allegation program by workers at licensed sites. The total volume of concerns in 2022 mirrored that seen in 2021, but unlike the previous year, the number of concerns raised declined throughout 2022. Trends were seen in the security and operations departments, but those involved multiple sites. The type of concerns raised most often included workers failing to follow procedures, falsifying records, and providing incomplete or inaccurate information to the NRC.

Health physics concerns were the next largest percentage of reactor allegations received nationwide and represented to largest increase when compared to similar concerns raised in 2021. All of the health physics-related allegations were from onsite sources. Approximately 38 percent were received in the first quarter of the year. More than half of these concerns involved plants in NRC's Region IV and most of those were from the Columbia Generating Station which experienced an airborne radioactivity event in mid-2021 that resulted in multiple confirmed uptakes of radioactive materials to workers. An analysis of the allegation trends at the Columbia Generation Station is presented later in this report.

Discrimination concerns were the next largest percentage of reactor allegations received nationwide. Discrimination concerns have increased both of the last two years. In 2022 the concerns were received steadily throughout the year, with the largest number from workers at the Vogtle Units 3 and 4 site. An analysis of the allegation trends at the Vogtle site is presented later in this report, as well. Nationwide trends were noted in the security, maintenance, and quality assurance organizations on site. And, is often the case, more allegations involved the adverse action of individuals being fired from their jobs after engaging in the protected activity of raising nuclear safety concerns internally. Nonetheless, other adverse actions alleged included transfers, counseling, and failures-to-hire, and other protected activities reported included raising concerns externally, refusing to do something unsafe, and participating in an investigation.

At the time the staff prepared this report, the NRC had not substantiated any of the discrimination concerns raised in 2022; however, approximately half of those warranting investigation were still open and were either being investigated or were in the NRC's pre-investigation alternative dispute resolution (ADR) process. Forty percent of the 2022 ADR-mediated discrimination concerns reached a successful settlement. Finally, approximately 23 percent of allegers filing a discrimination concern who were offered either ADR or an investigation withdrew their complaint before the agency reached a conclusion.

Chilling effect and chilled work environment concerns were received steadily throughout the calendar year, but the total volume declined by over 30 percent compared to the previous year. 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. Regarding trends in the data, several chilled work environment concerns were raised by workers at the Vogtle Units 3 and 4 site, but the concerns were from a variety of departments. Of all of the chilled work environment concerns received nationwide, several different departments were named and only a minor trend was noted in the operations and health physics organizations. Licensee employees, both current and former, raised six times as many chilled work environment concerns as contractor employees in 2022. Finally, the most often mentioned cause of the chilled work environment was alleged to be management behaviors such as questioning

employees as to why they wrote a condition report or talked to the NRC, instructing employees not to report concerns, or voicing schedule pressures. And the most often reporting avenues allegeders mentioned that they were hesitant to use to raise concerns were immediate supervisors and managers.

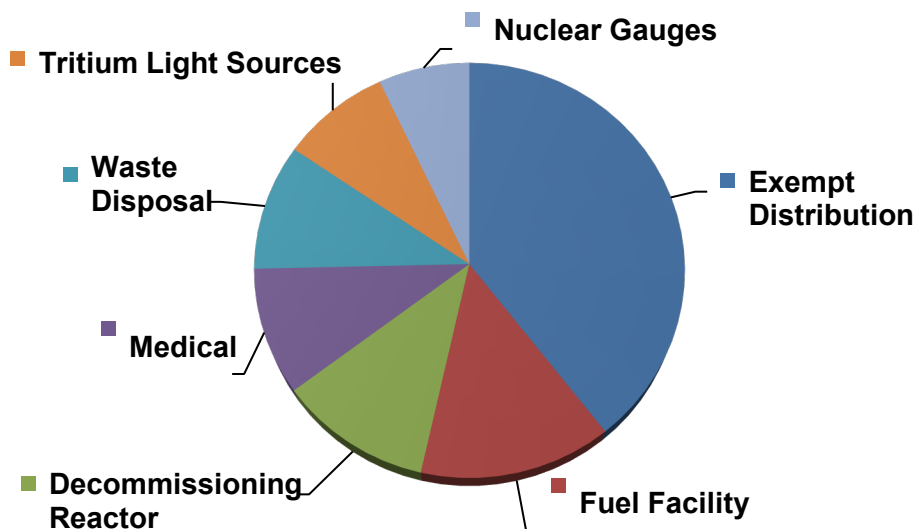
An analysis of security concerns included related concerns received in the access authorization and fitness-for-duty categories as well. Such concerns had been on the decline since 2019 but the trend reversed in 2022 and the NRC saw an increase. Primary subject areas included equipment, inattentiveness, and qualification concerns. Concerns involved many different licensees and sites, but a trend was noted in security concerns at the South Texas plant. An analysis of allegation trends at this site is discussed later in this report.

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 13 percent fewer materials-related allegations in 2022 than in 2021. For several years, the number of allegations related to fuel cycle facilities has constituted the highest percentage of materials-related allegations. In the past three years, however, the NRC received more allegations concerning exempt distribution products. Such products include

Figure 3 Allegations by Type of Materials Licensee Nationwide, 2022

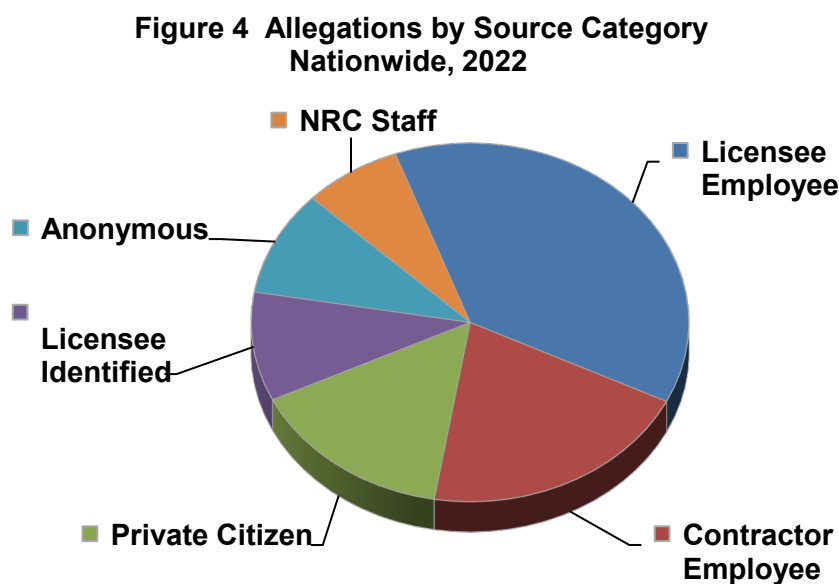


⁴ The agency received few concerns about the materials licensee types not shown in Figure 3, which represent the remaining 10 percent of the issues received. These licensee types include casks, general licensee, radiography, teletherapy, and others.

silicon chips, self-illuminous products, gunsights, and smoke detectors. These products are required 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. One reason more exempt distribution concerns were received is likely due to consumers' continuing increased focus on the sale of radioactive products on the Internet.

Source Trends

Figure 4 shows a breakdown of 95 percent⁵ of the sources for reactors and materials allegations received in 2022. 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 increased slightly in each category in 2022. In fact, the only categories to decline were private citizen and licensee identified concerns.



As discussed earlier, 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 increased slightly 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

⁵ The other 5% of the sources for reactors and materials allegations received in 2022 are federal/state/local government employee, special interest group, and state agency.

sites. The NRC received the listed allegations during the 5-year period from January 2018 through December 2022. The list 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 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 in-depth 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 performing significant engineering projects) typically generate more allegations, the data must be normalized to ensure that the NRC does not disproportionately choose such 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

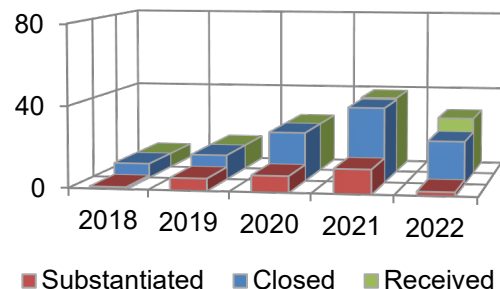
The staff recognizes, and takes into consideration when applying the above criteria, that during times of significant site activity, the site population might increase substantially.

For 2022, 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. There were four sites that met the above thresholds for further review: Vogtle Unit 3, Vogtle Unit 4, South Texas Units 1 and 2, and Columbia Generating Station.

Vogtle Units 3 and 4

On August 3, 2022, the NRC made the 10 CFR 52.103(g) finding (ADAMS Accession Number ML20290A282) confirming that the licensee had met the acceptance criteria in the combined license and was authorized to load fuel and start operation of Vogtle Unit 3. Up until that date allegations for both units were analyzed for trends as a site, rather than individually. Because Unit 3 is now under an operational focused inspection program, versus the continued construction focus for Unit 4, it is appropriate to analyze allegations associated with each unit separately.

Figure 5 Allegations at Vogtle 3

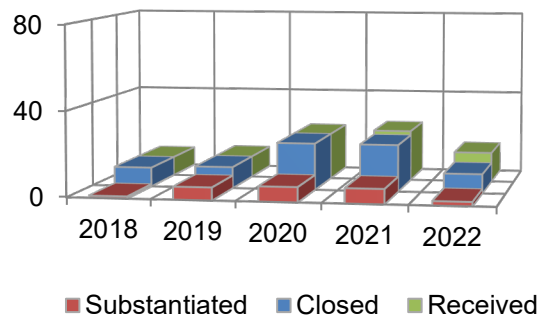


As Figure 5 shows, the number of allegations received by NRC from onsite sources regarding Vogtle Unit 3 in 2022 decreased from the number received in 2021. The rate of receipt, however, increased throughout the year. Allegations were received from both contractors and licensee employees at a near equal volume. Two allegers came to the NRC anonymously, which is similar to last year. More concerns were received involving the quality assurance and electrical disciplines, than other areas. Most of the quality assurance concerns were received in the first half of the year, while the electrical concerns were received in the second. Eight concerns were received alleging a chilled work environment. None were substantiated, but evaluations into the concerns resulted in some actions by the licensee to strengthen the SCWE. The Unit 3 chilling effect concerns were raised in each quarter.

Unlike general allegation activity, Unit 3's subset of discrimination allegation concerns did not decline. More were received in the first half of the year. Of the nine discrimination concerns that made a prima facie showing in 2022, three are still open, five were withdrawn by the allegor, and one was settled in pre-investigation ADR. For clarification, to consider a matter of potential discrimination under Title 10 of the *Code of Federal Regulations*, an allegor 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.

As shown in Figure 6, fewer allegations were received from onsite sources regarding Vogtle Unit 4 compared to Unit 3 and when compared to the two previous years at Unit 4. The rate of receipt, however, stayed steady throughout the first three quarters of the year before declining in the last. More allegations were received from contractors than licensee employees and none were received anonymously for Vogtle Unit 4. Discipline trends mirrored those in Unit 3, except for the electrical discipline. Four concerns were received alleging a chilled work environment, but none were substantiated. All of the Unit 4 chilling effect concerns were raised in the first half of the year. Unlike general allegation activity, the site's subset of discrimination allegation concerns did not decline significantly. Six of the discrimination concerns noted as associated with Vogtle Unit 3 also applied to Unit 4. Of those, three are still open and three were withdrawn by the allegor.

Figure 6 Allegations at Vogtle 4



One discrimination concern has been substantiated by the NRC in the past 5 years and was the subject of a fleet-wide Confirmatory Order (CO) (EA-18-130; EA-18-171; ML19249B612), which included a second 2016 substantiated discrimination concern. On November 10, 2022, the NRC issued an integrated Inspection Report for Vogtle Units 3 and 4 (ADAMS Accession No. ML22314A070). The inspection included an assessment of the SCWE, Employee Concerns Program (ECP) activities, including work environment assessments, and commitments associated with the CO and related corrective actions. The team interviewed individuals from across multiple disciplines and determined that the majority of the staff is willing to raise safety and quality concerns through multiple avenues without fear of retaliation and feel that they are empowered to stop work when they identify issues. The NRC also determined that many of the

previous issues related to chilled work environments have been addressed and corrected. Negative observations and weaknesses identified by the inspection team, associated with both the ECP and certain disciplines, were captured by the licensee in their corrective action program.

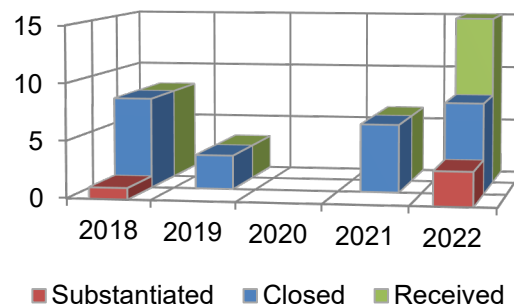
Based on discussions with licensee representatives, there were between 6000-7000 badged workers on the Vogtle Units 3 and 4 site in 2022, fewer than in 2021 by approximately 28%. The de-staffing took place almost exclusively in the contractor shops as construction ended on Unit 3 and the number of ECP contacts, investigations and work environment assessments also declined notably.

In summary, the volume of allegations at both Vogtle Unit 3 and Unit 4 declined in 2022. An inspection of the environment for raising concerns at the sites was conducted by the staff in July, and although it identified some areas in need of improvement, it also found that most of the staff is willing to raise safety and quality concerns through multiple avenues without fear of retaliation. The NRC will maintain its oversight of the SCWE at Vogtle Units 3 and 4 through normal inspection activities.

South Texas Units 1 and 2

As Figure 7 shows, the number of allegations the NRC received from onsite sources about this reactor site increased significantly from the number received in 2021. The rate of receipt, however, decreased in the second half of the year. Allegations were received from both contractors and licensee employees at a similar volume. Six alлегers came to the NRC anonymously, also an increase compared to the previous year. More concerns were received involving security-related issues (i.e., security, access authorization, and fitness-for-duty) than other disciplines. Most of those were received in the first quarter of the year, but one or two related concerns were also received in the other three quarters. Two concerns were received alleging a chilled work environment. Neither was substantiated. The chilling effect concerns were raised in the first and third quarter of the year.

Figure 7 Allegations at South Texas



Contrary to the general allegation activity, the site's subset of discrimination allegation concerns decreased, with only one received in the calendar year. That concern was received in the last quarter of the year and, at the time this report was prepared, was still open.

On August 05, 2022, the NRC completed a Problem Identification and Resolution inspection at the site (ADAMS Accession No. ML22210A099 non-public) which included an assessment of the SCWE. The team interviewed dozens of individuals from across multiple disciplines and determined that generally the licensee maintained a safety conscious work environment where individuals felt free to raise concerns without fear of retaliation. However, the team identified that multiple individuals in the Security department indicated a strong hesitancy in bringing up concerns to some members of management at the site. Nonetheless, security personnel interviewed indicated that they would not hesitate to raise concerns through several other

avenues available onsite. The team also noted that multiple individuals in the security department described low morale concerns, that if not addressed, could erode the individuals' willingness to bring up nuclear safety or security concerns in the future. Based on discussions with licensee representatives, both the NRC and the licensee saw trends in the security department. The licensee has initiated actions in that department to improve the environment to raise concerns.

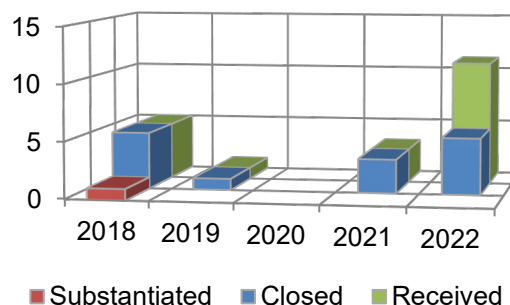
In summary, there was a notable increase in allegations at the South Texas site in 2022 and especially in security-related concerns. The licensee is monitoring the work environment in the Security organization and has taken some actions. The NRC continues to monitor activity in this department and will inspect the licensee's actions.

Columbia Generating Station

As Figure 8 shows, the number of allegations the NRC received from onsite sources about this reactor site increased significantly from the number received in the previous four years.

The rate of receipt remained steady throughout the year. Allegations were received from both contractors and licensee employees in similar numbers. Two alлегers came to the NRC anonymously where none were received from that category the previous year. More concerns were received involving the health physics organization than other disciplines, primarily in the first and third quarters. Two concerns were received in the second half of the year alleging a chilled work environment, but neither was substantiated.

Figure 8 Allegations at Columbia



The site's subset of discrimination allegation concerns also increased. There was one such concern raised in 2022 that made a prima facie showing and none the previous year. That concern was still open when this report was prepared.

The most recent problem identification and resolution inspection at the site was completed in mid-2021 (ADAMS Accession No. ML21236A264). The team concluded that the environment for raising concerns was healthy at that time. Although the observations made during that inspection don't speak to the environment in subsequent months, a contamination event that occurred around the same time as the inspection, does provide some insight into the number of allegations the NRC received in 2022. On May 28, 2021, the licensee failed to implement and follow its written procedures, associated Radiological Work Permit, and ALARA Plan instructions for job tasks associated with the Reactor Water Cleanup Heat Exchanger piping. These failures to follow procedural instructions resulted in an airborne radioactivity event with multiple confirmed uptakes of radioactive materials to workers, including two uptakes resulting in doses greater than 700 millirem committed effective dose equivalent. On January 13, 2022, the NRC notified the licensee that our inspection of the event identified a preliminary White finding (i.e., a finding with low-to-moderate safety significance that may require additional NRC inspections), with three associated apparent violations (ADAMS Accession No. ML21347A988). A pre-decisional enforcement conference was held in March 2022 and final disposition of the finding and violations is pending.

Based on discussions with licensee representatives, like the NRC, they saw trends in the health physics discipline. Actions are ongoing to address morale issues in that department and improve the environment for raising concerns.

In summary, although there was a notable increase in allegations at Columbia Generating Station in 2022 and especially in health physics concerns, the NRC does not believe this to be an indication of a weakening SCWE. There was a significant contamination event in 2021 and the increase in allegations coincides with the NRC's inspection findings and pre-decisional enforcement conference for that event. The NRC will maintain oversight of the SCWE at Columbia through normal inspection activities and allegation evaluation.

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 alleger. Therefore, this report does not include statistics on allegations about materials licensees other than fuel cycle facilities. None of the fuel cycle facilities received enough allegations to discern a trend or pattern to provide insights into the SCWE. Therefore, this report does not include more in-depth 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 in-depth reviews of specific vendors.

Trends in the Agreement States

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.

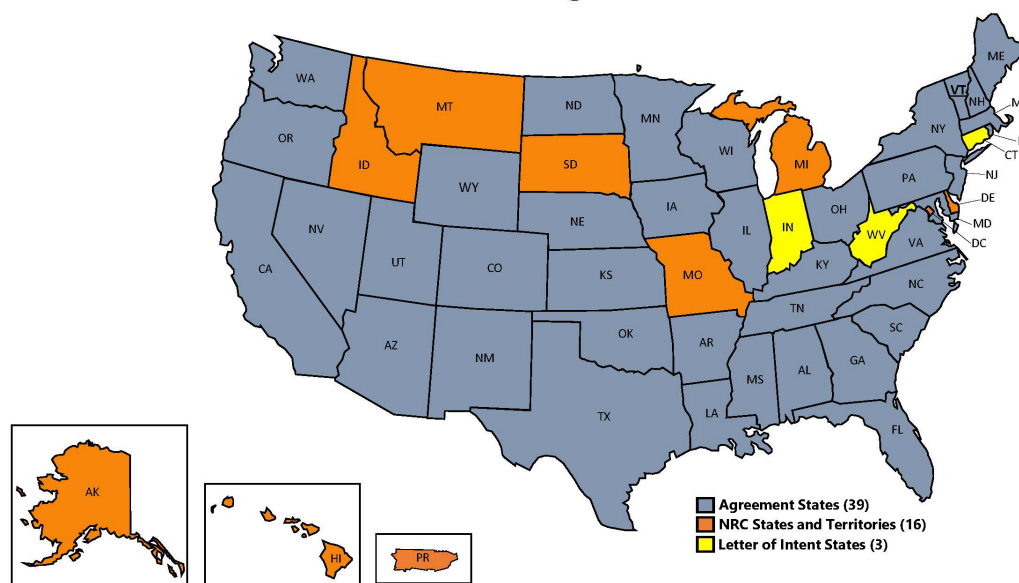
Before becoming Agreement States, States must first demonstrate that their regulatory programs are adequate to protect public health and safety and are compatible with the NRC's program, and the NRC has a statutory responsibility to periodically review the actions of the Agreement States to ensure that 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 9 shows the 39 Agreement States.

Figure 9

NRC and Agreement States



In calendar year 2022, the NRC and its Agreement State partners completed routine IMPEP reviews of 11 Agreement State programs. During the year, these 11 Agreement State programs received a total of 256 allegations. The IMPEP review teams evaluated the effectiveness of the Agreement State programs' responses to concerns by reviewing the casework for, and documentation of, 68 of the 256 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 generally 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 IMPEP review teams determined that all the Agreement State programs reviewed in 2022 adequately protected the identity of concerned individuals, in accordance with Agreement State laws, except one. For this case, the IMPEP team found the Technical Quality of Incident and Allegation Activities performance indicator unsatisfactory and required the Agreement State program to develop and implement corrective actions to address this lapse. In general, the results of the 2022 IMPEP reviews demonstrate that the Agreement State programs 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 2022 in areas closely related to the Allegation Program and SCWE policy, including statistics associated with the agency-sponsored pre-investigation 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 problem identification and resolution 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 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 may 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. If the finding is widely known, such as being discussed in press publications, a public letter requesting such information from the licensee 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 2022.

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. No CELs were issued in 2022.

Pre-investigation 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. Pre-investigation 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 pre-investigation 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 alleegeer 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 post-investigation ADR. 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 pre-investigation ADR program.

At the time the staff prepared this report, five of the pre-investigation ADR offers the NRC made in association with discrimination allegations raised in 2022 resulted in agreements to mediate. Of those five cases, two resulted in the parties reaching a mutually agreeable settlement. Two remaining cases are still being mediated and one failed and an investigation was opened.

CONCLUSIONS

The number of allegations has been trending down for many years, but the trend slowed in 2020 and reversed in 2021. Furthermore, the numbers stayed high in 2022. Nearly a quarter of the reactor allegation concerns dealt Vogtle Units 3 and 4, and social media postings about the online sale of radioactive materials contributed significantly to the materials-related allegations.

The analysis of allegations provided insights into the SCWE at the Vogtle units, as well as the Columbia Generating Station and South Texas sites. Both Vogtle Unit 3 and Unit 4 allegations declined in 2022 and improvements were noted during inspections of the sites' environments for raising concerns. Although allegations associated with Columbia Generating Station increased in 2022, the concerns can be attributed to an event in mid-2021 that impacted morale and the licensee has taken actions to address the situation. Finally, South Texas allegations also increased. The licensee continues to address the SCWE in the security department and the NRC is closely following the situation to ensure that the actions taken are being effective.

To date, the agency's pre-investigation 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 2022, at least 40 percent had reached settlement at the time this report was being prepared. The staff believes that voluntary dispute resolution by the parties, using the communication opportunities afforded by pre-investigation 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	2018	2019	2020	2021	2022
ARKANSAS 1 & 2	6	4	2	4	5
BEAVER VALLEY 1 & 2	1			2	2
BRAIDWOOD 1 & 2	3		1	2	2
BROWNS FERRY 1, 2 & 3	3	19	4	3	1
BRUNSWICK 1 & 2	6	1	4		
BYRON 1 & 2	1	2	1		1
CALLAWAY	2	1	1	1	2
CALVERT CLIFFS 1 & 2	2	3		2	
CATAWBA 1 & 2	2	1	5	2	
CLINTON	2	1	2	1	2
COLUMBIA PLANT	5	1		3	11
COMANCHE PEAK 1 & 2	1	1		2	1
COOK 1 & 2				1	3
COOPER	1	1			2
DAVIS-BESSE	2		2		3
DIABLO CANYON 1 & 2		4		2	3
DRESDEN 2 & 3	2	3	1	1	1
FARLEY 1 & 2	5		2	3	1
FERMI	6		3	1	2
FITZPATRICK		1		1	1
GINNA		1		3	
GRAND GULF	11	2	1	2	3
HARRIS	2	2	1		1
HATCH 1 & 2	2	3	4	3	2
LASALLE 1 & 2	2		1	1	
LIMERICK 1 & 2				1	
MCGUIRE 1 & 2	1	1		1	
MILLSTONE 2 & 3	2	2	3	4	3
MONTICELLO			2	1	
NINE MILE POINT 1 & 2	4	1	1		1
NORTH ANNA 1 & 2	1	3	1		1
OCONEE 1, 2, & 3		1	5	1	3
PALISADES	2	2	2		1
PALO VERDE 1, 2, & 3	6	3	1	3	7
PEACH BOTTOM 2 & 3		1	1		
PERRY		2		1	1

Site	2018	2019	2020	2021	2022
POINT BEACH 1 & 2					1
PRAIRIE ISLAND 1 & 2		1			1
QUAD CITIES 1 & 2	1		1	2	1
RIVER BEND		2	2	2	1
ROBINSON	4	1	3		
SALEM/HOPE CREEK	7	5	1	9	4
SEABROOK				1	
SEQUOYAH 1 & 2	6	9	1		3
SOUTH TEXAS 1 & 2	8	3		6	15
ST LUCIE 1 & 2	1	5	3	2	5
SUMMER	3	5		2	3
SURRY 1 & 2	1	1			1
SUSQUEHANNA 1 & 2	4	1	1	3	4
TURKEY POINT 3 & 4	5	3	5	5	3
VOGTLE 1 & 2	2	3	2	1	7
VOGTLE 3	7	12	24	38	28
WATERFORD	1	1	2	1	3
WATTS BAR 1 & 2	29	21	6	7	6
WOLF CREEK	8	2	3	1	3

NONOPERATING REACTOR ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2018	2019	2020	2021	2022
CRYSTAL RIVER				2	1
FORT CALHOUN					2
HUMBOLDT BAY	1				
INDIAN POINT 1, 2 & 3	2	9	10		
OYSTER CREEK	2		4	3	
PILGRIM			2		1
SAN ONOFRE 1, 2 & 3	4	2			1
THREE MILE ISLAND 1 & 2		1			
VERMONT YANKEE	1				
VOGTLE 4	9	10	22	24	14
YANKEE-ROWE		1			1

FUEL CYCLE FACILITY ALLEGATIONS RECEIVED FROM ONSITE SOURCES

Site	2018	2019	2020	2021	2022
AREVA RICHLAND			2		
BWXT	1	1	1	1	
GLOBAL NUCLEAR FUEL	6		1	1	
HONEYWELL	1				1
LOUISIANA ENERGY SERVICES	2	1		2	2
NUCLEAR FUEL SERVICES	9	2	1	4	4
WESTINGHOUSE	1	4			