

# ENFORCEMENT PROGRAM ANNUAL REPORT

Calendar Year 2020

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

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# **Executive Summary**

The U.S. Nuclear Regulatory Commission (NRC) effectively carried out the agency's Enforcement Policy (policy) and Program in calendar year (CY) 2020. NRC regional and Headquarters offices continued to focus on appropriate and consistent enforcement of the agency's regulations.

In CY 2020, the NRC issued 61 escalated enforcement actions under traditional enforcement, the Reactor Oversight Process (ROP), and the Construction Reactor Oversight Process. Of these actions, 15 involved notices of violation (NOVs) with civil penalties (CPs) (14 proposed totaling \$1,586,413 and one imposed for \$606,942), 37 escalated NOVs without a proposed CP, and 9 orders without CPs.

The total number of escalated enforcement actions in CY 2020 across all regulatory oversight programs increased from the total number reported in CY 2019; however, the total number remains smaller than the 5-year average (2016–2020). Operating reactors and nuclear materials users continue to account for most escalated enforcement actions. Not since CY 2015 has the number of operating reactors escalated enforcement actions (32) exceeded that for nuclear materials users escalated enforcement actions (29). Section I of this annual report provides additional information on these trends.

Operating reactors and nuclear materials users also accounted for all non-escalated enforcement actions—that is, NOVs and non-cited violations (NCVs) associated with Green significance determination process findings under the ROP, and severity level (SL) IV NOVs and NCVs under traditional enforcement, respectively. The total number of non-escalated enforcement actions in CY 2020 for both operating reactors and nuclear materials users continued the declining trend seen in previous years.

#### Noteworthy Program Accomplishments

On January 15, 2020, the Office of Enforcement (OE) revised the policy to incorporate the adjusted civil monetary penalties for 2020, in accordance with the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015.

Throughout the year, OE issued seven changes to Revision 11 of the Enforcement Manual (manual). These changes included the removal of multiple enforcement guidance memoranda (EGM) (from Appendix A) whose period of application had expired. These changes were necessary to reflect current enforcement practices and to provide clarifying guidance where needed based on stakeholder feedback. The manual contains procedures the NRC staff uses to develop and process enforcement actions; the staff typically revises the manual at least annually.

Throughout the year, OE issued three EGM, one of which was related to the Coronavirus Disease (COVID-19) and contained three specific attachments. EGM provide temporary inspection staff guidance for the disposition of non-compliance issues.

#### Significant Cases

In CY 2020, the agency processed several significant cases that required extensive coordination and cooperation with stakeholders:

- (1) The NRC issued an SL II NOV, two SL III NOVs, and an SL III problem and proposed a combined CP of \$903,471 to the Tennessee Valley Authority (TVA) for (1) failing to ensure that shift operations were conducted in a safe and conservative manner, failing to stop when unsure and proceed in a deliberate and controlled manner, not validating available information, allowing production to override safety, and proceeding in the face of uncertainty, (2) an employee failing to provide complete and accurate information during an interview with the NRC Office of Investigations, (3) changing a step in the Watts Bar Nuclear Plant startup procedure by using an improper change process, and (4) operators failing to follow approved plant procedures and failing to make control room log entries to accurately depict events during the loss of pressurizer level control. TVA responded to these violations and the NRC is still reviewing this matter.
- (2) The NRC issued an SL I problem with two violations, an SL II problem with two violations, and an order imposing a CP for \$606,942 to the TVA for failing to implement Title 10 of the *Code of Federal Regulations* (10 CFR) 50.7, "Employee protection." A former Sequoyah employee engaged in protected activity by raising concerns about a chilled work environment, filing complaints with the Employee Concerns Program, and raising concerns about the response to two NCVs. This employee was placed on paid administrative leave and later resigned. Also, a former corporate employee engaged in protected activity by raising concerns of a chilled work environment. This employee was placed on administrative leave and was later terminated. Both actions were based, at least in part, on the former employees engaging in protected activity. TVA requested the order be set for hearing and subsequently, an Atomic Safety and Licensing Board (Board) was established to preside over the proceeding. As of the end of CY 2020, the Board was still reviewing this matter.
- (3) The NRC issued an order prohibiting involvement in NRC-licensed activities for a period of 5 years to the former Vice President of Regulatory Affairs at the TVA, for a violation involving deliberate misconduct that caused the TVA to be in violation of 10 CFR 50.7. The individual submitted a motion to set aside the immediate effectiveness of the order. The Board granted the motion and referred the ruling to the Commission. As of the end of CY 2020, the Commission was still reviewing this matter.
- (4) The NRC issued a confirmatory order to Reed College to formalize commitments made as a result of an alternative dispute resolution mediation session. The NRC identified multiple apparent violations, including failure to provide information to the Commission that was complete and accurate in all material respects and failure to follow a Reed College license condition.
- (5) The NRC issued an order prohibiting involvement in NRC-licensed activities for a period of 3 years to the Director, Reed Research Reactor, Reed College, for willfully providing information to the NRC that was not complete and accurate in all material respects.

# <u>Contents</u>

Ex	ecı	tive Summary	. 1
Co	nte	nts	. 3
I.	Pr	ogram Overview	. 6
	Α.	Mission and Authority	. 6
	В.	Assessment of Escalated Enforcement Actions	. 8
		1. Escalated Enforcement Trends	10
		2. Civil Penalty Actions	13
		3. Notices of Violation Without Civil Penalties	15
		4. Enforcement Program Timeliness	17
		5. Alternative Dispute Resolution	19
	C.	Non-escalated Enforcement	21
II.	En	forcement Case Work	26
	Α.	Significant Enforcement Actions	26
В.	He	aring Activities	27
	C.	Enforcement Orders	27
	D.	Enforcement Actions Supported by the Office of Investigations	27
	Ε.	Actions Involving Individuals and Non-licensee Organizations	28
	F.	Enforcement Action Involving Discrimination	28
	G.	Use of Judgment and Discretion in Determining Appropriate Enforcement Sanctions	
		1. Discretion Involving Temporary or Interim Enforcement Guidance	28
		2. Discretion Involving Violations Identified Because of Previous	
		Enforcement Actions	
		3. Discretion Involving Special Circumstances	
		4. Discretion in Determining the Amount of a Civil Penalty	30
		5. Discretion Involving No Significance Determination Process Performance Deficiency	31
		6. Notices of Enforcement Discretion	31
	Н.	Withdrawn Actions	32
III.	Or	going Activities	33
	Α.	Enforcement Policy and Guidance	33
		1. Enforcement Policy Revisions	33
		2. Enforcement Manual Guidance	33

B. Enforcement Program Initiatives	35
1. Program Enhancements	35
2. Knowledge Management	37
C. Regional Accomplishments	37
D. Calendar Year 2021 Focus Areas	38

# <u>Tables</u>

Table 1	Escalated Enforcement Actions by Region and Program Office (CY 2020	
Table 2	Escalated Enforcement Action Trends	11
Table 3	Escalated Enforcement Actions by Type of Licensee, Non-licensee, or Individual (CY 2016–CY 2020)	13
Table 4	CP Information (Number of Escalated Enforcement Actions and Total CP Amounts)	14

# <u>Figures</u>

Figure 1	How the NRC regulates	. 6
Figure 2	Escalated enforcement by type of action (CY 2020)	. 8
Figure 3	Escalated enforcement by business line (CY 2020)	. 9
Figure 4	Escalated enforcement actions issued (CY 2016–CY 2020)	11
Figure 5	Escalated enforcement by business line (CY 2016–CY 2020)	12
Figure 6	Proposed CPs by business line (CY 2016–CY 2020)	15
Figure 7	Escalated enforcement associated with ROP SDP findings at operating reactors	16
Figure 8	Non-OI-related case timeliness (CY 2016–CY 2020)	18
Figure 9	OI-related case timeliness (CY 2016–CY 2020)	18
Figure 10	) ADR cases opened (CY 2015–CY 2019)	20
Figure 11	I Calendar days from ADR offer to issuance of CO	21
Figure 12	2 Operating reactors non-escalated enforcement (CY 2016–CY 2020)	22
Figure 13	3 Non-escalated enforcement per operating reactor by region (CY 2016–CY 2020).	23
Figure 14	4 Materials users non-escalated enforcement (CY 2016–CY 2020)	24

# **Appendices**

Appendix A—Summary of Cases Involving Civil PenaltiesA	<b>\1</b>
Appendix B—Summary of Escalated Notices of Violation Without Civil Penalties	31
Appendix C—Summary of OrdersC	21
Appendix D—Summary of Escalated Enforcement Actions Against Individuals	)1
Appendix E—Summary of Escalated Enforcement Actions Against Non-licenseesE	<b>Ξ1</b>

# I. Program Overview

# A. Mission and Authority

The U.S. Nuclear Regulatory Commission (NRC) regulates the civilian uses of nuclear materials in the United States to protect public health and safety, the environment, and the common defense and security. The agency accomplishes its mission through licensing of nuclear facilities and the possession, use, and disposal of nuclear materials; the development and implementation of requirements governing licensed activities: and inspection and enforcement activities to ensure compliance with these requirements (Figure 1).

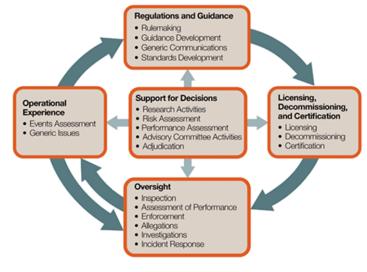


Figure 1 How the NRC regulates

The NRC conducts various types of

inspections and investigations designed to ensure that the activities it licenses are conducted in strict compliance with the Commission's regulations, the terms of the licenses, and other requirements.

The sources of the NRC's enforcement authority are the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and the Energy Policy Act of 2005. These statutes give the NRC broad authority with respect to its Enforcement Program. The Energy Policy Act of 2005 also expanded the definition of byproduct material, placing additional byproduct material under the NRC's jurisdiction, including both naturally occurring and accelerator-produced radioactive materials. The agency carries out its broad enforcement authority through Title 10 of the *Code of Federal Regulations* (10 CFR) Part 2, "Agency Rules of Practice and Procedure," Subpart B, "Procedure for Imposing Requirements by Order, or for Modification, Suspension, or Revocation of a License, or for Imposing Civil Penalties." Congress also provides the statutory framework for the Federal Government to use alternative dispute resolution (ADR) in conjunction with its enforcement authority through the Administrative Dispute Resolution Act of 1996.

The NRC Enforcement Policy (policy) establishes the general principles governing the agency's Enforcement Program and specifies a process for implementing its enforcement authority in response to violations of NRC requirements. This statement of policy is based on the NRC's view that compliance with its requirements plays a critical role in ensuring safety, maintaining security, and protecting the environment. The policy applies to all NRC licensees, to various categories of non-licensees, and to individual employees of licensed and non-licensed firms involved in NRC-regulated activities.

The NRC enforces compliance as necessary. Enforcement actions serve as a deterrent, emphasize the importance of compliance with regulatory requirements, and encourage the

prompt identification and comprehensive correction of violations. In addition, because violations occur in a variety of activities and vary in significance, the policy contains graduated sanctions informed by risk and regulatory significance.

Enforcement authority includes using notices of violation (NOVs); civil penalties (CPs); demands for information; and orders to modify, suspend, or revoke a license. The NRC staff may exercise discretion in determining appropriate enforcement sanctions. Most violations are identified through inspections and investigations and are normally assigned a severity level (SL) ranging from SL IV for those of more than minor concern, to SL I for the most significant violation.

The Reactor Oversight Process (ROP) supplements the enforcement process for operating nuclear reactors. The NRC has implemented a similar process to assess findings at new reactor construction sites. Under the ROP, violations are not normally assigned an SL but instead are assigned "significance" by assessing their associated inspection findings through the ROP. Under the ROP, the NRC determines the risk significance of inspection findings using the significance determination process (SDP), which in turn assigns the colors of Green, White, Yellow, or Red with increasing risk significance. Findings under the ROP may also include licensee failures to meet self-imposed standards. In such cases, ROP findings may or may not involve a violation of a regulatory requirement. Violations and findings assigned a greater-than-Green color are considered escalated enforcement actions.

Although the ROP applies to most violations at operating power reactors, some aspects of violations (e.g., willfulness and individual actions) cannot be addressed solely through the SDP; such violations require the NRC to follow the traditional enforcement process. The NRC uses traditional enforcement for violations that result in actual safety or security consequences, affect the ability of the NRC to perform its regulatory oversight function, or involve willfulness.

In addition, although ROP findings are not normally subject to CPs, the NRC does consider CPs for any violation that involves actual consequences. SL IV violations and violations associated with Green ROP findings are normally dispositioned as non-cited violations (NCVs) if certain criteria are met. Inspection reports or records document NCVs and briefly describe the corrective action that the licensee has taken or plans to take if these actions are known at the time the NCV is documented. Additional information about the ROP is available at <a href="https://www.nrc.gov/reactors/operating/oversight.html">https://www.nrc.gov/reactors/operating/oversight.html</a>.

The NRC Office of Enforcement (OE) develops policies and programs for the enforcement of NRC requirements. In addition, OE oversees NRC enforcement activities, giving programmatic and implementation guidance to regional and NRC Headquarters offices that conduct or are involved in enforcement activities, to ensure that regional and program offices are consistent in their implementation of the agency's Enforcement Program.

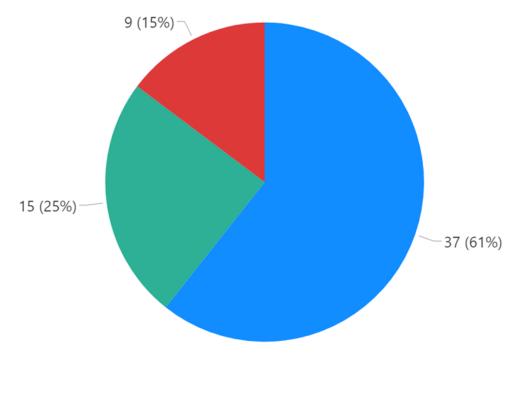
The NRC's Enforcement Web site, available at <u>http://www.nrc.gov/about-nrc/regulatory/</u> <u>enforcement.html</u>, presents a variety of information, such as the policy, the Enforcement Manual (manual), and current temporary enforcement guidance contained in enforcement guidance memoranda (EGM). This Web site also has information about escalated enforcement actions that the NRC has issued to reactor and materials licensees, nonlicensees (vendors, contractors, and certificate holders), and individuals. In keeping with NRC practices and policies, the NRC's public Web site does not provide details associated with most security-related actions and activities.

## **B.** Assessment of Escalated Enforcement Actions

Escalated enforcement actions include the following:

- NOVs, including SL I, II, or III violations
- SL IV violations to individuals
- NOVs associated with Red, Yellow, or White SDP findings (for operating reactor facilities)
- CP actions
- enforcement orders (including confirmatory orders (COs) that result from the ADR process and orders to suspend, revoke, or modify an NRC license)

During calendar year (CY) 2020, the NRC issued 61 escalated enforcement actions to licensees, non-licensees, and individuals. Figure 2 shows the distribution of these actions by category.



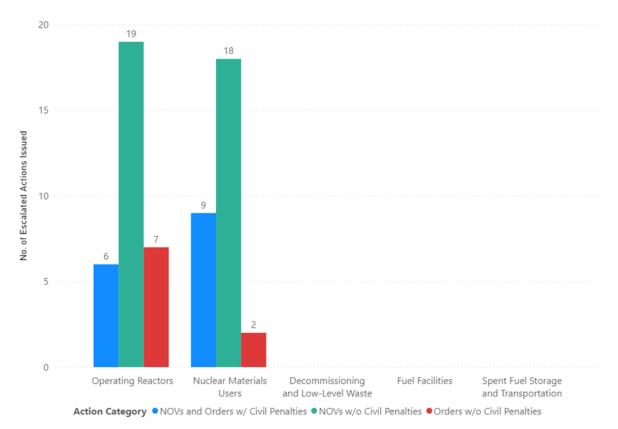
Action Category 
NOVs w/o Civil Penalties
NOVs and Orders w/ Civil Penalties
Orders w/o Civil Penalties

Figure 2 Escalated enforcement by type of action (CY 2020)

The most common type of escalated enforcement action was an NOV without a CP—37 of the 61 escalated actions (or 61 percent) issued in CY 2020. This percentage is slightly lower than the average of NOVs without a CP issued from CY 2016 through CY 2020 (approximately 68 percent). In general, the NRC considers a large percentage of NOVs without CPs as a positive outcome because it demonstrates that most licensees identify and correct violations—a goal of the Enforcement Program.

NOVs and orders with CPs comprised 25 percent of the escalated enforcement actions. This type of action consisted of one order imposing a CP and 14 NOVs with an associated CP. The remaining type of action consisted of nine orders without CPs (15 percent).

Figure 3 shows the distribution of escalated enforcement actions issued in CY 2020 by business line. This figure includes individual actions in the appropriate category of licensee instead of counting the actions separately.



#### Figure 3 Escalated enforcement by business line (CY 2020)

As shown in Figure 3, operating reactors received the largest number of escalated enforcement actions in CY 2020 (a total of 32), accounting for 52 percent of all actions issued. This was followed very closely by nuclear materials users, which received 29 actions (or 48 percent of all actions). No escalated actions were issued to any licensee in the other business lines (i.e., decommissioning and low-level waste, fuel facilities, or spent fuel storage and transportation).

Table 1 breaks down the escalated enforcement actions issued in CY 2020 by region and program office. Historically, Region II has had the fewest number of escalated enforcement actions because it does not process nuclear materials user cases, which usually make up the highest percentage of escalated enforcement actions. However, in 2020, Region II processed 8 operating reactor cases, which amounted to 13 escalated enforcement actions. Escalated enforcement actions by the program offices remain comparable to past escalated action output.

Region/Office	NOVs and Orders w/ CPs	NOVs w/o CPs	Orders w/o CPs	Total
REGION I	3	4	0	7
REGION II	3	9	1	13
REGION III	2	7	0	9
REGION IV	4	12	1	17
NRR	0	0	3	3
NMSS	0	1	0	1
OE	3	1	2	6
OIP	0	3	2	5
Total	15	37	9	61

 Table 1 Escalated Enforcement Actions by Region and Program Office (CY 2020)

Key to Offices

- OE—Office of Enforcement
- OIP—Office of International Programs

## 1. Escalated Enforcement Trends

As previously noted, the NRC issued 61 escalated enforcement actions in CY 2020. The 61 actions represent an increase of approximately 11 percent from the number of actions issued in CY 2019. Table 2 breaks down the total number of escalated enforcement actions the NRC has issued over the past 5 years by type of enforcement action. The number of escalated enforcement actions issued in CY 2020 is slightly lower than the 5-year average of 65 escalated enforcement actions.

NRR—Office of Nuclear Reactor Regulation

NMSS—Office of Nuclear Material Safety and Safeguards

	2016	2017	2018	2019	2020	5-year average
Escalated NOVs w/o CPs	61	63	28	34	37	45
NOVs and Orders w/ CPs	14	8	11	10	14	11
Orders Imposing CPs	2	1	1	3	1	2
Orders w/o CPs	9	8	2	8	9	7
Total	86	80	42	55	61	65

 Table 2 Escalated Enforcement Action Trends

Note: The staff may have adjusted information reported for the previous CYs in this year's annual report to reflect more accurate data that were not available when the previous annual report was published.

Table 2 and Figure 4 show that the number of NOVs issued in 2020 that do not involve a CP increased slightly from 2019 but remains lower than in CYs 2016 and 2017. However, the number of NOVs and orders with CPs, and orders imposing CPs, is relatively consistent with the number in the previous 4 years.

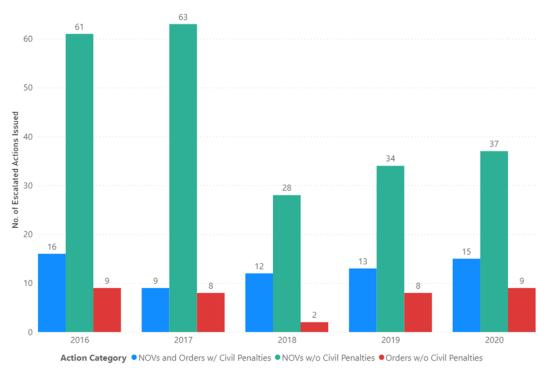
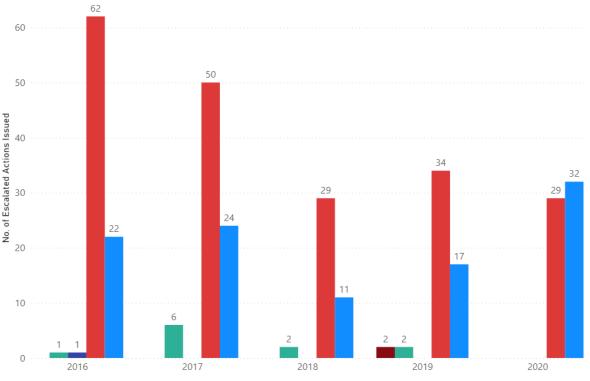


Figure 4 Escalated enforcement actions issued (CY 2016–CY 2020)

Figure 5 presents escalated enforcement trends from CY 2016 through CY 2020 by business line. As shown in the figure, enforcement actions for nuclear materials users were lower than the previous year and show a decreasing trend. However, enforcement actions for operating reactors were almost double from CY 2019. Most of these escalated enforcement actions were the result of processing four Office of Investigations (OI) cases. OI processed eight cases in CY 2020 that resulted in escalated enforcement actions.



Business Line ● Decommissioning and Low-Level Waste ● Fuel Facilities ● New Reactors ● Nuclear Materials Users ● Operating Reactors

#### Figure 5 Escalated enforcement by business line (CY 2016–CY 2020)

Table 3 shows an increase in escalated enforcement actions to licensees, non-licensees, and individuals from CY 2019 to CY 2020. The table also shows that operating reactors, individual actors-reactors (i.e., non-licensed individuals at reactor sites), and licensed operators make up almost half of the escalated enforcement actions. This is not surprising, since Figure 5 points out that the operating reactors business line makes up over half of the escalated actions. Also, the operating reactors business line included two escalated enforcement actions for research and test reactors.

Table 3 Escalated Enforcement Actions by Type of Licensee, Non-licensee, or Individual
(CY 2016–CY 2020)

	2016	2017	2018	2019	2020	Total
Operating Reactor	16	21	8	8	15	68
Gauge	18	17	7	6	8	56
Radiographer	10	7	7	11	2	37
Hospital	5	9	5	1	7	27
Individual Actor-Reactors	3	2	1	7	9	22
Individual Actor-Materials	7	5	0	5	2	19
Materials Distributor	9	0	1	5	2	17
Other	4	3	4	1	1	13
Licensed Operator	3	1	1	1	6	12
Import/Export	2	0	1	3	5	11
Fuel Facility	1	5	2	1	0	9
Pharmacy	2	2	1	0	2	7
Academic	1	1	3	1	0	6
Irradiator	2	1	0	0	0	3
Physician (M)	1	2	0	0	0	3
Research and Test Reactor	0	0	1	0	2	3
Individual Actor-Fuel Facility	0	1	0	1	0	2
Mill	0	1	0	1	0	2
Nonoperating Reactor	0	0	0	2	0	2
Well Logger	1	1	0	0	0	2
Vendor-New Reactors	1	0	0	0	0	1
Vendor-Operating Reactors	0	0	0	1	0	1
Waste Disposal	0	1	0	0	0	1
Total	86	80	42	55	61	324

## 2. Civil Penalty Actions

In CY 2020, the agency processed 15 enforcement actions that involved CPs (14 proposed, 1 imposed) totaling \$1,586,413 proposed and \$606,942 imposed. Two of these enforcement actions included one or more proposed CPs in the enforcement action. Of these actions, nine were associated with operating reactor licensees and three were associated with nuclear materials users. Three proposed CPs were at the maximum daily limit (10 CFR 2.205, "Civil penalties") of \$303,471, all three of which involved the same licensee.

Of the 15 CP cases, only two involved "willfulness," which is defined as either deliberate misconduct or careless disregard. The Commission is particularly concerned with the identification of willful violations. The NRC's regulatory program relies on licensees and their contractors, employees, and agents acting with integrity and communicating with candor; therefore, the agency may consider a violation involving willfulness to be more egregious than the underlying violation taken alone, and the agency may increase the SL accordingly.

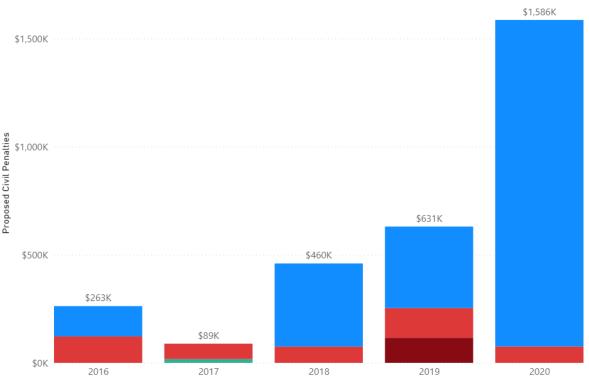
Table 4 compares CP assessments proposed, imposed, and paid for the most recent five CYs and the 5-year average. When reviewing the information in this table, note that an enforcement action may include more than one CP or more than one violation. In addition, a CP may be proposed one year and paid or imposed in another year. In some cases, the NRC has also approved a CP payment plan that permits a licensee to pay the CP in regular installments, sometimes during multiple years. Finally, the amount of a proposed CP may be reduced, or even eliminated, if the agency exercises enforcement discretion as part of a settlement agreement reached through ADR mediation.

	2016	2017	2018	2019	2020	Average
Dranaad CD	14	8	10	9	14	11.0
Proposed CP	\$262,500	\$88,900	\$459,850	\$630,750	\$1,586,413	\$605,683
	2	1	1	3	1	1.6
Imposed CPs	\$35,000	\$7,000	\$22,400	\$101,500	\$606,942	\$154,568
CDo Doid	12	9	16	8	14	11.8
CPs Paid	\$206,500	\$61,500	\$232,400	\$779,250	\$91,500	\$274,230

# Table 4 CP Information (Number of Escalated Enforcement Actions and Total CP Amounts)

Note: Imposition cases and associated CP amounts reflect CPs issued through an order and include (1) orders imposing a CP after a licensee does not pay a proposed CP and (2) CPs agreed to during ADR mediation that are included in the case CO. In the first scenario, the case is a subset of the proposed CP case, as imposing the CP is the next step after a licensee does not pay a proposed CP. However, in the second scenario, an ADR settlement, potentially with a CP, typically occurs before any proposed CP.

The total proposed CP amount issued in CY 2020 was more than double the total proposed CP amount issued in CY 2019 and was significantly greater than the total 5-year average. This was due, in part, to five proposed CPs that were equal to or greater than \$300,000 (including three at the maximum daily CP amount). The NRC also imposed one CP for \$606,942. The total dollar amount of paid CPs (proposed and imposed) in CY 2020 was significantly lower than the previous 2 years. Again, this could be due to payment plans or because licensees had not yet paid the CP in 2020.



Business Line ● Decommissioning and Low-Level Waste ● Fuel Facilities ● Nuclear Materials Users ● Operating Reactors

#### Figure 6 Proposed CPs by business line (CY 2016–CY 2020)

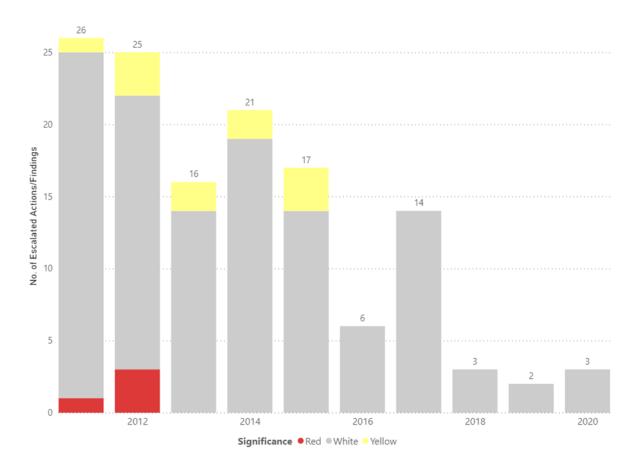
Figure 6 shows the total dollar amount of proposed CPs from CY 2016 through CY 2020 by business line. Appendix A to this report briefly describes each of the enforcement actions for which the NRC assessed a CP in CY 2020. Although the appendices do not address security-related issues involving NOVs with CPs, the data discussed in this report do include the number of NOVs associated with security-related issues.

#### 3. Notices of Violation Without Civil Penalties

In accordance with Section 2.3.4 "Civil Penalty" of the policy, a CP may not be warranted for escalated enforcement actions evaluated under traditional enforcement if certain criteria are met. For example, (1) the identified violation is the first non-willful SL III violation identified during the past 2 years or during the last two inspections (whichever period is longer) at the licensee's facility and the licensee took adequate corrective action to prevent its recurrence, or (2) the identified violation was not the first non-willful SL III violation identified during the past 2 years or during the last two inspections, but the licensee self-identified the violation and took adequate corrective action to prevent its recurrence. Violations assessed under the ROP SDP are normally not considered for CPs unless they involve actual consequences. In addition, the agency may use enforcement discretion, when appropriate, to refrain from proposing a CP, regardless of the normal CP assessment process described above.

In CY 2020, the NRC issued a total of 37 escalated NOVs without CPs to operating reactor licensees (19) and nuclear materials user licensees (18). Of the 19 operating reactor licensee violations, 12 were associated with either a licensed operator or an individual, 3 were associated with White SDP findings under the ROP, and 4 were SL III violations. No violations were associated with Yellow SDP findings, and, for the eighth consecutive year, the NRC issued no Red SDP findings with associated violations. Of the 18 NOVs issued to nuclear materials user licensees, 6 were associated with either radiographers or gauge users, and the remaining NOVs were issued to individuals, hospitals, pharmacies, or import/export licensees.

Figure 7 shows escalated NOV trends associated with SDP findings at operating reactors over the past 10 years. Figure 7 indicates a steady decline since CY 2011, with the last 3 years having the lowest number of escalated actions associated with SDP findings. Also, the NRC has issued no Red findings since CY 2012 or Yellow findings since CY 2015. Appendix B to this report summarizes each of the NOVs issued without a CP, as well as the NOVs associated with SDP findings. Appendix B does not address security-related issues involving NOVs without CPs; however, the data discussed in this report do include the number of NOVs associated with security-related issues.



#### Figure 7 Escalated enforcement associated with ROP SDP findings at operating reactors

## 4. Enforcement Program Timeliness

The NRC issues escalated enforcement actions in cases involving violations assessed at SL I, II, or III (and SL IV for individuals) dispositioned under the traditional enforcement process; violations associated with White, Yellow, or Red findings issued to reactors participating in the ROP; and orders that impose sanctions. The timeliness associated with issuing escalated enforcement actions to operating reactor and material user licensees is an output measure (external goal) reported annually to Congress as part of the NRC's Performance and Accountability Report. External goals to stress the importance of timely escalated enforcement actions are (1) 100 percent of cases not based on investigations by OI are to be completed within an NRC processing time of less than or equal to 160 days, and (2) 100 percent of OI-based cases are to be completed within an NRC processing time of less than or equal to 330 days.

The NRC processing time starts on the latest of (1) the inspection exit for non-OI cases, (2) the date of the memorandum forwarding the OI report to the staff for OI-related cases, (3) the date that the U.S. Department of Justice indicates that the NRC may proceed for cases either prosecuted or reviewed for an extended period of time by the Department, or (4) the date of the U.S. Department of Labor decision that is the basis for the action. For timeliness reporting purposes, the NRC may group multiple escalated enforcement actions and treat them as a single case if they are related to each other. For example, the NRC may disposition a violation and take escalated enforcement action against a licensee and one or more individuals. Although it may take multiple enforcement actions, the NRC will treat these actions as one case for timeliness purposes so that timeliness data are not biased in either a positive or negative direction.

In CY 2020, the NRC staff issued 21 of 22 non-OI-related actions within 160 processing days, and all 9 OI-related actions within 330 processing days. A streamlined process implemented in CY 2016 is likely to have contributed significantly to the staff's ability to meet most of these goals. This process (i.e., modified enforcement panel process) used for both traditional and ROP cases helped to escalate and resolve potentially differing views earlier in the enforcement process. OE will continue to work closely with regional and program office staff in the early identification of enforcement cases that are likely to involve complex technical or legal issues or other case-specific challenges.

Figure 8 shows that, on average, the agency took 101 processing days to issue non-OI-related escalated enforcement actions. This timeframe is less than the congressional goal of 160 processing days. However, one case exceeded the congressional goal by 21 days. To prevent another missed metric, OE has developed and implemented a new communication strategy that involves senior management oversight when it appears that an enforcement case may exceed a congressional metric.

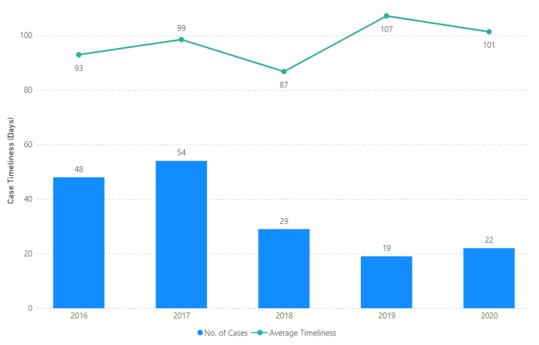


Figure 8 Non-OI-related case timeliness (CY 2016–CY 2020)

Figure 9 shows the case processing timeliness trends for OI-related escalated enforcement actions for the past five CYs. On average, the agency required 238 days to issue an OI-related enforcement action in CY 2020. This is less than the congressional goal of 330 processing days and is higher than the overall average for the past 5 years. The minimum amount of time used to process an OI-related case in CY 2020 was 172 days, while the longest was 304 days.

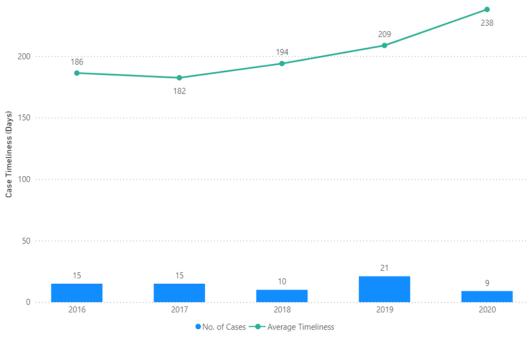


Figure 9 OI-related case timeliness (CY 2016–CY 2020)

The numbers of non-OI-related (22) and OI-related (9) escalated enforcement cases do not add up to the total number of escalated enforcement actions (61) because some cases involved multiple enforcement actions to licensees and individuals.

#### 5. Alternative Dispute Resolution

ADR refers to a variety of voluntary processes, such as mediation and facilitated dialogue, to assist parties in resolving disputes and potential conflicts outside of the courts by using a neutral third party. The NRC employs mediation for its enforcement ADR program using a neutral third party, with no decision-making authority, to help the parties reach an agreement. Participation in the process is voluntary, and the content of the final, mutual agreement is normally formalized in a CO published in the *Federal Register*.

The term "enforcement ADR" refers to the use of mediation (1) after OI has completed its investigation and an enforcement panel has concluded that pursuit of an enforcement action appears to be warranted, and (2) associated with escalated non-willful, traditional enforcement cases with the potential for CPs.

Under OE's enforcement ADR process, the NRC may offer mediation at three points in the enforcement process: (1) before a predecisional enforcement conference, (2) after the initial enforcement action (typically the issuance of an NOV or proposed imposition of a CP), or (3) with the imposition of a CP and before a hearing request. For certain escalated enforcement actions, mediation gives the industry an opportunity to institute broader or more comprehensive corrective actions to better ensure public health, safety, and security than outcomes typically achieved through the traditional enforcement process.

As Figure 10 shows, the NRC opens an average of approximately seven new cases each year under the enforcement ADR program. In CY 2020, the NRC participated in four ADR mediation sessions: three resulted in orders confirming the terms of the parties' agreement, and, in one case, the parties were unable to reach agreement through the ADR process. In an additional case, the ADR process was initiated; however, the licensee later changed its decision to participate, before the conduct of a mediation session. These two "unsettled" cases were subsequently determined using the normal enforcement process.

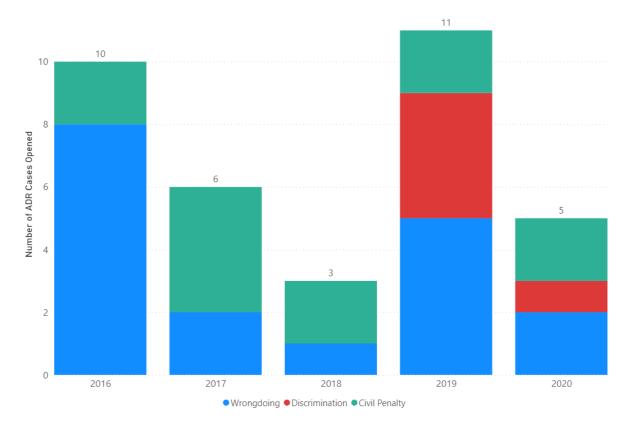


Figure 10 ADR cases opened (CY 2015–CY 2019)

In CY 2020, the staff continued to focus on enhancing the ADR program's timeliness, transparency, and overall effectiveness. These efforts included the enhancement of ADR guidance and other tools related to mediation session preparation and internal coordination and communication to support successful mediation sessions and order issuance (e.g., use of virtual mediation technology and receipt of pre-mediation position documents).

As Figure 11 indicates, the average time to process an ADR case, from the date of the mediation offer to the issuance of a CO, decreased slightly this year. This decline is directly attributed to a decrease in the length of time between the mediation session and the issuance of the CO. The decrease is accredited to efficiencies in mediation session preparation and improved internal coordination to support CO issuance. However, as reflected in Figure 11, the average time to conduct the actual mediation session increased after the parties agreed to mediate. The increase is attributed to the additional resources necessary to ensure both parties were adequately prepared to conduct successful mediation sessions.

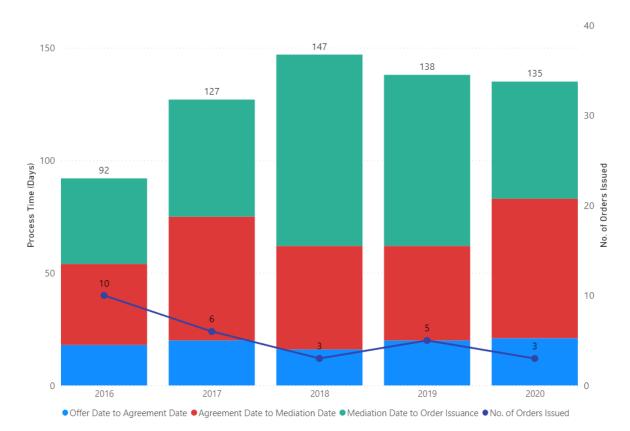
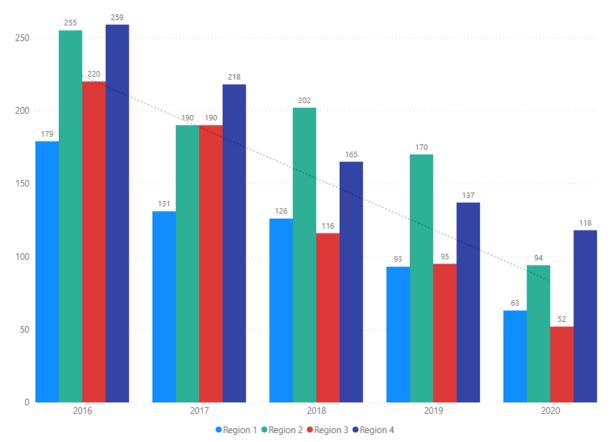


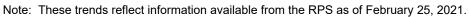
Figure 11 Calendar days from ADR offer to issuance of CO

# C. Non-escalated Enforcement

Non-escalated enforcement actions include SL IV NOVs and NCVs under traditional enforcement and NOVs and NCVs associated with Green SDP findings under the ROP. Information on operating reactors is recorded in the Reactor Program System (RPS), and nuclear materials users' non-escalated actions in the Web-Based Licensing (WBL) system.

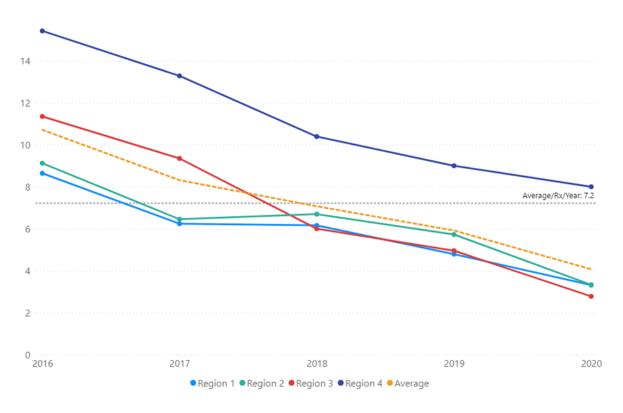
Figure 12 trends operating reactor non-escalated enforcement actions by region. As noted in previous annual reports, the trends in operating reactor SL IV NOVs and NCVs issued under traditional enforcement and NOVs and NCVs associated with Green SDP findings continue to fall. This is consistent with an overall downward trend in the number of inspection findings, event notifications, licensee event reports, and reactor scrams observed over the last several years.





#### Figure 12 Operating reactors non-escalated enforcement (CY 2016 through CY 2020)

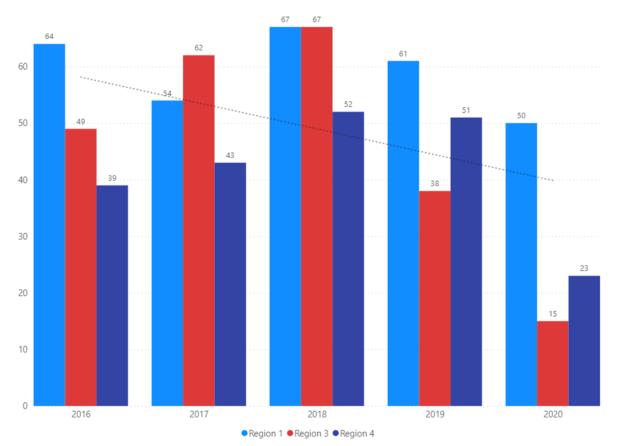
Figure 13 shows the trend in non-escalated enforcement actions issued by the regional offices over the past 5 years. The information, obtained from RPS, was "normalized" to show the average number of non-escalated actions by operating reactor in each of the regions. Figure 13 indicates that consistency has steadily improved among the regional offices in the number of non-escalated enforcement actions issued since CY 2015; in particular, Regions I, II, and III are averaging around three non-escalated enforcement actions per operating reactor. Although Region IV issued a higher average number of non-escalated enforcement actions per operating reactor in CY 2020, the downward trend seen over the past several years has continued. This trend coincides with similar escalated enforcement action trends observed across all regulatory oversight programs (i.e., licensee business lines). This is consistent with the trends reflected in Figure 12.



Note: These trends reflect information available from RPS as of February 25, 2021.

# Figure 13 Non-escalated enforcement per operating reactor by region (CY 2016–CY 2020)

Figure 14 shows the trend in non-escalated enforcement actions for nuclear materials users for each region.



Note: These trends reflect information available from the WBL as of February 25, 2021.

Figure 14 Materials users non-escalated enforcement (CY 2016–CY 2020)

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# II. Enforcement Case Work

# A. Significant Enforcement Actions

In CY 2020, the agency participated in several noteworthy enforcement actions, as summarized below. A complete writeup can be found in the appropriate appendices.

#### Tennessee Valley Authority

On November 6, 2020, the NRC issued an NOV and proposed imposition of CP in the amount of \$903,471 to the Tennessee Valley Authority (TVA) for multiple violations of NRC requirements. On December 7, 2020, TVA responded to these violations and the NRC is still reviewing this matter.

#### Tennessee Valley Authority

On August 24, 2020, the NRC issued an NOV and proposed imposition of CP in the amount of \$606,942 to the TVA for an SL I problem, with two violations, and an SL II problem, with two violations, involving failure to implement 10 CFR 50.7, "Employee protection." On November 30, 2020, TVA requested the order be set for hearing and subsequently, an Atomic Safety and Licensing Board (Board) was established to preside over the proceeding. As of the end of CY 2020, the Board was still reviewing this matter.

#### Prohibition Order to Mr. Shea

On August 24, 2020, the NRC issued an order prohibiting involvement in NRC-licensed activities for a period of 5 years to Mr. Joseph Shea, the former Vice President of Regulatory Affairs at the TVA, for an SL I violation involving deliberate misconduct that caused the TVA to be in violation of 10 CFR 50.7. On September 22, 2020, Mr. Shea submitted a motion to set aside the immediate effectiveness of the order. The Board granted the motion and referred the ruling to the Commission. As of the end of CY 2020, the Commission was still reviewing this matter.

#### Reed College Confirmatory Order

On March 16, 2020, the NRC issued a CO to Reed College (Reed), Reed Research Reactor, to formalize commitments made as a result of an ADR mediation session held on January 23, 2020. The commitments were made as part of a settlement agreement between Reed and the NRC based on evidence gathered during an investigation in which the NRC had identified multiple apparent violations.

# Prohibition Order and Alternative Dispute Resolution Confirmatory Order to Dr. Krahenbuhl

On March 16, 2020, the NRC issued an order prohibiting Dr. Melinda Krahenbuhl, the former Director, Reed Research Reactor, Reed College, from involvement in NRC-licensed activities for a period of 3 years. The order also suspended Dr. Krahenbuhl's senior reactor operator license for 3 years. In response to the order, Dr. Krahenbuhl and the NRC participated in a successful ADR session held on June 22, 2020, and the commitments

agreed to during the session were documented in a CO dated July 27, 2020. Accordingly, the NRC withdrew the March 16, 2020, order prohibiting the former Director's involvement in NRC-licensed activities.

# **B. Hearing Activities**

On December 12, 2019, TEAM Industrial Services, Inc. (TEAM), requested a hearing in response to an order imposing a CP of \$14,500, for a violation that involved moving a radiographic exposure device before ensuring that the device was in a fully locked position. In response to TEAM's hearing request, the NRC acknowledged TEAM's right to a hearing, and, with TEAM's concurrence, the NRC and TEAM engaged in settlement discussions. On February 12, 2020, the parties submitted their joint motion to the Atomic Safety Licensing Board (Board). On February 21, 2020, the Board issued a memorandum and order approving the agreement of the terms.

On September 22, 2020, Mr. Joseph Shea submitted a motion to set aside the immediate effectiveness of an order issued on August 24, 2020, prohibiting his involvement in NRC-licensed activities. A Board was established on September 24, 2020, to preside over the proceeding. The NRC staff submitted an answer to Mr. Shea's motion to set aside the immediate effectiveness on September 28, 2020. A prehearing conference took place on September 30, 2020. On October 5, 2020, Mr. Shea responded to the staff's answer, and, on October 13, 2020, the staff replied to Mr. Shea's response. The Board, with one judge dissenting, granted Mr. Shea's motion to set aside the immediate effectiveness of the staff's order on November 3, 2020. The Board referred the ruling to the Commission in accordance with 10 CFR 2.202(c)(2)(viii). As of the end of CY 2020, the Commission was still reviewing this matter.

# C. Enforcement Orders

In CY 2020, the NRC issued 10 orders to licensees, non-licensees, and individuals. The ten orders included five COs that were issued to confirm commitments associated with ADR settlement agreements, two prohibition orders, two suspension orders, and one order to impose an CP. Appendix C to this document briefly describes the enforcement orders the NRC issued in CY 2020.

## D. Enforcement Actions Supported by the Office of Investigations

In CY 2020, OI investigations supported 51 percent of the escalated enforcement actions (31 of the 61) the agency issued. This figure is approximately the same as last year (56 percent). The escalated actions that OI investigated include the following:

- 7 of the 15 escalated NOVs and orders with CPs (47 percent)
- 18 of the 37 escalated NOVs without CPs (49 percent)
- 6 of the 9 enforcement orders without CPs (67 percent)

In CY 2020, OI investigated 18 substantiated cases (enforcement actions may not have been taken on some of these cases in CY 2020) and 36 unsubstantiated cases.

## E. Actions Involving Individuals and Non-licensee Organizations

In CY 2020, the agency issued 17 escalated enforcement actions to individuals and nonlicensees. These actions consisted of 12 NOVs of SL III, 2 NOVs of SL II, 2 prohibition orders, and 1 CO resulting from an ADR mediation session. The number of escalated actions issued to individuals in CY 2020 is more than the average number of actions issued between CY 2016 and CY 2020. Appendix C to this document summarizes the orders that the agency issued to individuals, and Appendix D summarizes the NOVs the agency issued to individuals in CY 2020.

# F. Enforcement Action Involving Discrimination

In CY 2020, the NRC processed two cases involving allegations of discrimination, resulting in one prohibition order, a CO, an NOV with CP, and multiple NOVs. These allegations arose from the removal of an employee for engaging in a protected activity. From CY 2016 to CY 2020, the agency averaged just over one discrimination case per year.

## G. Use of Judgment and Discretion in Determining Appropriate Enforcement Sanctions

Within its statutory authority, the NRC may choose to exercise discretion and either escalate or mitigate enforcement sanctions or otherwise refrain from taking enforcement action. This exercise of discretion allows the NRC to determine actions that are appropriate for a particular case, consistent with the policy. After considering the general tenets of the policy and the safety and security significance of a violation and its surrounding circumstances, the NRC may exercise judgment and discretion in determining the severity level of a violation and the appropriate enforcement sanction.

In CY 2020, the NRC exercised discretion in 18 enforcement cases to address violations of NRC requirements. This is slightly less than in CY 2019 (19 cases).

#### 1. Discretion Involving Temporary or Interim Enforcement Guidance

The NRC used enforcement discretion in accordance with an EGM 7 times in CY 2020, compared to 11 times in CY 2019:

- On April 8, 2013, the staff issued EGM-13-003, "Interim Guidance for Dispositioning Violations Involving 10 CFR 35.60 and 10 CFR 35.63 for the Calibration of Instrumentation to Measure the Activity of Rubidium-82 and the Determination of Rubidium-82 Patient Dosages" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13101A318). This EGM was intended to address two specific instances in which it is not possible to meet the current NRC regulatory requirements. The agency dispositioned three cases that met the criteria under this guidance.
- On August 1, 2018, the staff issued EGM-18-002, "Interim Guidance for Dispositioning Violations for Failure to Control and Maintain Constant Surveillance for Portable Gauges" (ADAMS Accession No. ML18170A167). This EGM allowed the use of a graded approach to evaluate the likelihood for an

opportunity for loss or theft of a portable gauge, or exposure to workers or the public. This approach would allow for citation as an SL IV for violations of 10 CFR 20.1802, "Control of material not in storage," that are less serious, but that are of more than minor concern, that resulted in no or relatively inappreciable potential safety or security consequences. The agency dispositioned two cases that met the criteria under this guidance.

- On April 15, 2020, the staff issued EGM-20-002, "Dispositioning Violations of NRC Requirements During Coronavirus Disease 2019 (COVID-19)" (ADAMS Accession No. ML20083K794). This EGM gives guidance when an NRC licensee encounters compliance issues caused by COVID-19-related impacts. The staff used this discretion once in CY 2020.
- On July 15, 2020, the staff issued EGM-20-003, "Interim Guidance for Dispositioning Violations of Licensed Material Possession and Use Limits" (ADAMS Accession No. ML20156A340). This EGM provides staff guidance to disposition violations of 10 CFR 30.34, "Terms and conditions of licenses," specifically for violations associated with licensed possession and use of byproduct material. The staff used this discretion once in CY 2020.

#### 2. Discretion Involving Violations Identified Because of Previous Enforcement Actions

The staff may exercise enforcement discretion, in accordance with Section 3.3, "Violations Identified Because of Previous Enforcement Action," of the policy, if the licensee identified the violation as part of the corrective action for a previous enforcement action, and the violation has the same or a similar root cause as the violation causing the previous enforcement action. The NRC did not exercise this discretion in CY 2020.

### 3. Discretion Involving Special Circumstances

Section 3.5, "Special Circumstances," of the policy states that the NRC may reduce or refrain from issuing a CP or an NOV for an SL II, III, or IV violation based on the merits of the case after considering the guidance in the policy and such factors as the age of the violation, the significance of the violation, the clarity of the requirement and associated guidance, the appropriateness of the requirement, the overall sustained performance of the licensee, and other relevant circumstances, including any that may have changed since the violation occurred. This discretion is expected to be exercised only if application of the normal guidance in the policy is unwarranted.

The NRC cited Section 3.5 of the policy four times in CY 2020 to disposition the following violations of its requirements:

• <u>Oceaneering International, Inc. (licensee)</u>—On March 2, 2020, the licensee had a three-person crew conducting radiographic operations offshore in the Gulf of Mexico. One of the licensee's crew was moving the radiographic exposure device's associated equipment between radiographic exposures on an offshore production platform when the exposure device fell into the Gulf of Mexico. The NRC exercised discretion because the byproduct material represented an isolated, rather than programmatic weakness. Further, the NRC determined that the

byproduct material, because of its physical characteristics and inaccessible location, was of limited safety and environmental significance and did not pose a material health, safety, or security risk to members of the public.

- <u>Daher-TLI (licensee)</u>—The licensee failed to file its physical inventory listing report and material balance report for its Kentucky facility by March 31, 2020, a violation of 10 CFR 150.17(a). The licensee stated that Kentucky State-ordered restrictions due to the COVID-19 public health emergency (PHE) resulted in limiting facility schedules, staffing, and access, which affected the ability to file the reports by the prescribed date.
- <u>Agilent Technologies, Inc. (Agilent)</u>—Agilent failed to perform a required biennial audit by April 30, 2020. By not receiving prior approval for an extension from that requirement before the due date, Agilent is in violation of 10 CFR 32.210(f). Agilent has experienced restrictions and limitations due to the COVID-19 PHE, which limited its ability to perform the audits by the due date. This impact is the result of State-issued restrictions on social distancing, including impacts on air travel, and thus were not fully within Agilent's control. The NRC acknowledged this fact and used discretion not to cite Agilent for the 10 CFR 32.210(f) violation.
- <u>Massachusetts Institute of Technology (MIT)</u>— MIT informed the NRC that it was not able to complete the channel plateau curves surveillance on its test and research reactor by June 27, 2020, due to a reactor scram resulting from a loss of offsite power. Upon subsequent reactor restart, MIT discovered a power supply was damaged due to a power surge that occurred following the loss of offsite power and subsequent restoration. Further delay in receiving a replacement part(s) due to the COVID-19 PHE impacted the shipping and receiving of the repair part. Ultimately, MIT completed the surveillance on July 23, 2020. After considering the facts and circumstances of the events, the NRC did not cite MIT for the violation.

## 4. Discretion in Determining the Amount of a Civil Penalty

Section 3.6, "Use of Discretion in Determining the Amount of a Civil Penalty," of the policy states that, notwithstanding the outcome of the normal CP assessment process addressed in Section 2.3.4 of the policy, the NRC may exercise discretion by (1) proposing a CP where application of the CP assessment factors would otherwise result in zero penalty, (2) escalating the amount of the resulting CP to ensure that the proposed penalty appropriately reflects the significance of the issue, or (3) mitigating the amount based on the merits of the case and the ability of the various classes of licensees to pay.

The NRC cited Section 3.6 of the policy one time in CY 2020:

• <u>Wightman & Associates, Inc., (licensee)</u>—NRC inspectors conducted a reactive inspection to evaluate the facts and circumstances of an event reported to the NRC about a sealed source that was discovered to be missing from a Troxler Model 3440 portable nuclear density gauge. The NRC determined that a violation of 10 CFR 20.1802 occurred concerning the licensee's failure to maintain control and constant surveillance of licensed material that was in an unrestricted area and was not in storage. This type of violation is normally cited as an SL III violation with a CP.

However, due to the facts of the case, the NRC cited the licensee with an SL IV violation, with no CP.

#### 5. Discretion Involving No Significance Determination Process Performance Deficiency

Section 3.10, "Reactor Violations with No Performance Deficiencies," of the policy states that violations of NRC requirements normally falling within the ROP SDP process for operating power reactors for which there are no associated SDP performance deficiencies (e.g., a violation of technical specifications, which is not a performance deficiency) may be dispositioned using enforcement discretion, similar to the approach described in Section 3.2, "Violations Involving Old Design Issues," of the policy.

The NRC cited Section 3.10 of the policy twice in CY 2020:

- <u>Florida Power & Light Company, St. Lucie (licensee)</u>—On July 15, 2019, during routine monthly surveillance testing of the 1B emergency diesel generator (EDG), the EDG tripped due to high jacket water temperature. The licensee's investigation determined that the engine crankshaft tapered end that connects to the radiator fan idler pulley shaft had sheared. The NRC inspectors concluded that the failure was not reasonably foreseeable and preventable by the licensee; therefore, the technical specification violation was not a result of a clearly defined and identifiable performance deficiency. As a result, the staff exercised enforcement discretion in accordance with the policy.
- <u>Virginia Electric & Power Co., North Anna Power Station (licensee)</u>—On February 18, 2020, during planned maintenance activities, brass shavings were discovered on the upper crankcase of the 1J EDG. Licensee investigation revealed degradation of the number one cylinder, upper piston pin bushing, likely caused by a degradation of the connecting rod aluminum cooling oil spherical retainer ring. Although the EDG did not fail any surveillance tests, it was determined that the EDG would likely have been unable to meet its 30-day mission time. The inspectors concluded that this failure was not reasonably foreseeable and preventable by the licensee; therefore, the technical specification violation was not a result of a clearly defined and identifiable performance deficiency. As a result, the staff exercised enforcement discretion in accordance with the policy.

## 6. Notices of Enforcement Discretion

Occasionally, a power reactor licensee's compliance with a technical specification or other license condition requires a plant transient or performance testing, inspection, or other system realignment that is of greater risk than the current specific plant conditions. In these circumstances, the NRC staff may choose not to enforce the applicable requirements. The staff exercises this enforcement discretion, designated as a notice of enforcement discretion (NOED), in accordance with Section 3.8, "Notices of Enforcement Discretion for Operating Power Reactors and Gaseous Diffusion Plants," of the policy, only if the staff is clearly satisfied that the action is consistent with protecting public health and safety. The staff may also issue NOEDs in cases involving severe weather or other natural phenomena when it determines that exercising this discretion will not compromise safety. Licensees or certificate holders must provide justification for NOEDs that

documents the safety basis for the request and provides other information the staff deems necessary to issue an NOED.

The NRC issued one NOED in CY 2020:

• <u>Wolf Creek Nuclear Operating Corporation (licensee)</u>—On June 25, 2020, the licensee declared train B EDG inoperable when the fan that was required to provide cooling for the EDG B engine room failed. The licensee entered its technical specification action, which requires restoration of the EDG to operable status within 72 hours. If this action is not met, the action requires the unit be shut down to Mode 3 within 6 hours and cooled down to Mode 5 within 36 hours. Electrical testing indicated the failed fan motor was grounded and needed to be replaced. The licensee determined that the corrective actions necessary to replace and test the supply fan and restore the EDG to operable status could not be completed within the 72-hour completion time and requested additional time through an NOED. The NRC determined that granting an NOED was consistent with the policy and had no adverse impact on public health and safety to avoid an unnecessary plant transient.

# H. Withdrawn Actions

Licensees can challenge enforcement actions for several reasons; for example, a licensee might dispute the requirements, the facts of the case, the agency's application of the policy, or the significance of the violation. Licensees may also provide clarifying information that was not available at the time of the inspection. For any of these reasons, the NRC may have to revisit an enforcement action and, in some instances, recategorize an action.

OE has established a metric for the quality of enforcement actions based on the number of disputed and withdrawn enforcement actions in a fiscal year (FY); however, this report covers CY 2020 rather than an FY. The metric is less than or equal to four per FY of withdrawn disputed enforcement actions (maximum of four per FY for the agency, not to exceed two per office or region). This metric does not include violations that are withdrawn because of supplemental information that was not available to an inspector before the assessment of an enforcement action.

In CY 2020, there was only one disputed action for which the NRC withdrew an NOV. On October 16, 2019, Exelon Generation Company, LLC, contested a Green NOV at its R.E. Ginna Nuclear Power Plant. The NOV was cited against 10 CFR Part 50, "Domestic licensing of production and utilization facilities," Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," Criterion III, "Design Control," for a failure to design or ensure that, in the event of a design-basis earthquake, the safety-related EDG motor control centers would not be lost due to a low impedance electrical circuit fault in the non-safety-related vault sump pump motors. After further review, the NRC found that the degree of electrical isolation provided in the EDG motor control center design met applicable requirements; therefore, the NRC withdrew the NOV.

# **III. Ongoing Activities**

# A. Enforcement Policy and Guidance

## 1. Enforcement Policy Revisions

On January 15, 2020, OE revised the policy to incorporate the adjusted civil monetary penalties for 2020, in accordance with the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015.

## 2. Enforcement Manual Guidance

The staff periodically revises the manual to reflect changes to the policy, operating experience, and stakeholder input. The staff incorporated the following changes into Revision 11 of the manual:

- On February 13, 2020, the staff added EGM 20-001, "Enforcement Discretion Not to Cite Certain Violations of 10 CFR 73.56 Requirements," to Appendix A.
- On April 15, 2020, the staff added EGM 20-002, "Dispositioning Violations of NRC Requirements During Coronavirus Disease 2019 (COVID-19)," and EGM 20-002, Attachment 1, "Dispositioning Violations of NRC Requirements for Completion Periodicities Associated with Security Training and Requalification Requirements During the COVID-19 Public Health Emergency," to Appendix A.
- On May 19, 2020, the staff added EGM 20-002, Attachment 2, "Dispositioning Violations of NRC Requirements Under 10 CFR Parts 30–36 and 39, Resulting from Impacts of the COVID-19 Public Health Emergency (PHE), Where the Licensee Suspended the Use of Licensed Material and Placed Material in Safe Storage," to Appendix A.
- On May 27, 2020, the staff added EGM 20-002, Attachment 3, "Dispositioning Violations of NRC Requirements for Compliance with Radiological Emergency Response Plans During the COVID-19 Public Health Emergency," to Appendix A.
- On July 15, 2020, the staff added EGM 20-003, "Interim Guidance for Dispositioning Violations of Licensed Material Possession and Use Limits," to Appendix A and removed EGM 07-001, 09-003, 09-007, and 12-002 from Appendix A due to their expiration.
- On December 1, 2020, the staff revised several sections in Parts I and II to reflect current enforcement practices and provide clarifying guidance. The staff also removed EGM 07-004, 09-002, 09-004, 11-004, 13-002, 14-002, 14-003, 15-001 (Revision 1), 15-002 (Revision 1), 15-003, and 18-001 due to their expiration.
- On December 17, 2020, the staff revised EGM 20-001 to extend its timeframe.

#### Enforcement Guidance Memoranda

OE issues EGM to provide temporary guidance on the interpretation of specific provisions of the policy. The full text of all publicly available EGM (Appendix A to the Enforcement Manual) are on the NRC's public Web site, <u>https://www.nrc.gov/reading-rm/basic-ref/enf-man/app-a.html</u>. OE issued three EGM in CY 2020, one of which contains three attachments:

- On February 13, 2020, the staff issued EGM 20-001, "Enforcement Discretion Not to Cite Certain Violations of 10 CFR 73.56 Requirements." The NRC determined that Inspection Procedure 71130.01, "Access Authorization," lacked the requisite clarity with which inspectors are required to verify that licensees take the necessary steps to obtain enough information to determine the true identity of applicants for unescorted access or unescorted access authorization. Based on this lack of clear and objective inspection criteria, coupled with upcoming guidance enhancements to reinforce compliance, this EGM gave the staff guidance to exercise enforcement discretion and not cite these types of violations until the NRC (1) develops and issues revised guidance describing an acceptable approach for complying with 10 CFR 73.56(d)(3), and (2) updates applicable inspection guidance accordingly.
- On April 15, 2020, the staff issued EGM 20-002, "Dispositioning Violations of NRC Requirements During Coronavirus Disease 2019 (COVID-19)." The NRC developed this guidance to provide a mechanism for ensuring continued safe and secure operation of NRC-regulated activities during the COVID-19 PHE. This flexibility will minimize regulatory impacts licensees may experience due to the COVID-19 PHE, while the NRC continues to provide reasonable assurance of adequate protection of public health and safety, promotes the common defense and security, and protects the environment. This EGM will allow for the addition, in the form of separate attachments, of additional guidance on a topic-by-topic basis.
- On April 15, 2020, the staff issued EGM 20-002, Attachment 1, "Dispositioning Violations of NRC Requirements for Completion Periodicities Associated with Security Training and Regualification Requirements During the COVID-19 PHE." To satisfy some regulatory requirements, licensee security organizations may need to assemble personnel in numbers that could exceed the COVID-19 assembly recommendations and challenge social distancing guidance provided by Federal and State agencies. The NRC believes it is appropriate for licensees to take actions to limit and minimize exposure to the virus during the COVID-19 PHE. Licensees may also be challenged with the availability of medical staff to conduct physical examinations for security staff recertifications due to competing priorities and public health and safety precautions. This EGM will enable licensees sufficient time to resume performing certain training or requalification actions in accordance with the training and regualification requirements specified in 10 CFR Part 73, "Physical protection of plants and materials," Appendix B, "General Criteria for Security Personnel," Section VI, "Nuclear Power Reactor Training and Qualification Plan for Personnel Performing Security Program Duties," Subparts B, C, D, E, F, and G.

- On May 19, 2020, the staff issued EGM 20-002, Attachment 2, "Dispositioning Violations of NRC Requirements Under 10 CFR Parts 30–36 and 39, Resulting from Impacts of the COVID-19 PHE, Where the Licensee Suspended the Use of Licensed Material and Placed Material in Safe Storage." The NRC understands that the impact of social distancing, stay-at-home orders, or illnesses due to COVID-19 could result in licensees not having sufficient staff to continue their use of licensed material. Some licensees may choose to suspend use of licensed material in response to State and local COVID-19 orders or Federal guidelines. This EGM allows discretion to be granted for certain non-compliances by a licensee that chooses to suspend use of licensed material and has placed and maintained all licensed radiological material in safe storage, in accordance with applicable requirements, during the COVID-19 PHE.
- On May 27, 2020, the staff issued EGM 20-002, Attachment 3, "Dispositioning Violations of NRC Requirements for Compliance with Radiological Emergency Response Plans During the COVID-19 Public Health Emergency." The staff is cognizant that a licensee's actions to mitigate the PHE may create challenges to comply with certain emergency preparedness requirements. Licensees may implement temporary compensatory measures to enhance their ability to meet Federal, State, and local guidelines for limiting the spread of COVID-19, as well as to reduce the burden on offsite response organizations during the PHE. This EGM will allow discretion to be granted to a licensee that takes prudent actions to ensure that its emergency response readiness would be effectively maintained throughout the COVID-19 PHE.
- On July 15, 2020, the staff issued EGM 20-003, "Interim Guidance for Dispositioning Violations of Licensed Material Possession and Use Limits." In 10 CFR 30.34(c), the NRC requires, in part, that each licensee under 10 CFR Parts 30 through 36 and 10 CFR Part 39 confine its possession and use of the byproduct material to the location and purposes authorized in the license. Under the current policy, a violation of 10 CFR 30.34(c) for a "failure to seek required NRC approval before the implementation of a significant change in licensed activities that has radiological or programmatic significance" is an example categorized as an SL III. This EGM will allow inspectors to disposition certain 10 CFR 30.34(c) violations (if they meet certain criteria) as an SL IV violation.

# **B.** Enforcement Program Initiatives

In CY 2020, OE engaged in several activities designed to enhance and continuously improve the agency's Enforcement Program. Some of the typical program activities include developing internal office procedures, maintaining adequate staff knowledge and supporting training, mentoring new staff members by more experienced staff, and conducting counterpart meetings.

## 1. Program Enhancements

Throughout the year, OE staff worked on several initiatives to help maintain an effective and efficient enforcement program, including the following:

- In close coordination with the Office of the Chief Financial Officer (OCFO), OE is enhancing the process for tracking CP payments made by NRC licensees. Currently, it is difficult to track CP payments in the OCFO tracking system, since the agency does not issue an invoice when proposing or imposing a CP to licensees. The goal of this effort is to implement clear guidance and formal interface protocols with OCFO for the effective and efficient tracking of CP payments.
- OE began developmental efforts with the Office of the Chief Information Officer to replace the existing Enforcement Actions Tracking System to better integrate all enforcement, allegations, and investigations information into a single case management system. The new system, expected to go into production in April 2022, will allow the wider availability of enforcement actions data to the staff and, ultimately, create a dynamic public interface for portions of the data.
- In conjunction with the case management system project, OE developed pilot enforcement dashboards that will be rolled out in 2021 under the NRC-wide initiative to provide more user-friendly information to the staff. The interactive dashboards will allow the staff to examine overall enforcement trends, including escalated and nonescalated actions.
- OE began a major initiative to revise its Enforcement Policy. This is a multi-office and regional effort to address feedback provided by internal stakeholders in recent years. The objective of the revision is to enhance its clarity, incorporating lessons learned and providing additional discussion of certain principles to enable better consistency and efficiency in implementation across the agency.
- OE made several changes and updates to the manual to reflect current enforcement practices and to provide clarifying guidance where needed. OE staff revised Section 3.6, "Use of Discretion in Determining the Amount of a Civil Penalty," and Section 3.7, "Exercise of Discretion to Issue Orders," to align existing manual guidance on the use of enforcement discretion with its corresponding section in the policy. A new Part II, Section 3.9, "Dispositioning Violations of Naturally Occurring and Accelerator-Produced Radioactive Materials (NARM) Requirements," was added to the manual to incorporate guidance on violations of NARM requirements previously contained in EGM-09-004. In addition, OE added three new EGM to Appendix A, most notably EGM-20-002, which provided guidance to the staff on the appropriate use of enforcement discretion in certain situations when NRC licensees encounter compliance issues caused by COVID-19-related impacts. Finally, OE removed 16 EGM from Appendix A because the period of application had expired.
- During the COVID-19 pandemic, due to State and Federally mandated assembly and travel restrictions, OE staff learned and became proficient with Web-based meeting platforms (i.e., WebEx and Zoom). Learning these platforms enabled the NRC and licensees to successfully conduct numerous virtual pre-decisional enforcement conferences. Thus, the NRC was able to process enforcement actions during the pandemic.
- OE actively participated in the NRC's Backfitting Community of Practice efforts, including undertaking a major revision to NUREG-1409, "Backfitting Guidelines," which provides guidance on the backfitting, issue finality, and forward fitting policies

in Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests." It also addressed several issues pertaining to backfit claims and enforcement.

• As a result of the NRC exceeding a Congressional Budget Justification (CBJ) metric, OE has established a new oversight process. Enforcement cases within 60 days of exceeding its CBJ metric will be identified and tracked, and an action plan will be developed and shared with upper management (Office Directors and Regional Administrators) involved in the case. Once the case is within 40 days of exceeding the CBJ, the action plan will be elevated and shared with the Office of the Executive Director for Operations.

## 2. Knowledge Management

Activities associated with training and knowledge transfer, such as the following, took place in CY 2020:

- OE developed enforcement-related topics for inclusion in Nuclepedia and supported officewide participation in subject matter development.
- OE piloted the use of short videos within SharePoint to provide specific task-oriented guidance as a desk guide.
- OE further developed and enhanced internal office procedures to ensure reliability of enforcement program implementation and decision-making.
- OE continued development of an electronic files and retrieval system within the office's SharePoint site to capture documents associated with precedent-setting enforcement cases and policy changes. The system leverages the capabilities of ADAMS and SharePoint to make it easier for staff members to search and retrieve enforcement-related documents that have shaped the NRC's Enforcement Program throughout its history.
- OE completed development of a series of training modules to provide an agencywide on-demand refresher training capability for qualified inspectors. Subject areas include overviews of both the non-escalated and escalated enforcement processes and guidance on writing NOVs and NCVs.

# C. Regional Accomplishments

In CY 2020, the regional offices conducted periodic self-assessments of the Enforcement Program to ensure effective performance and to identify opportunities for continuous improvement. The self-assessments encompassed both the reactor and materials arenas, considered performance associated with the development and issuance of both nonescalated and escalated enforcement actions, and included activities that required a high degree of coordination with other NRC stakeholders. Overall, the self-assessments showed that the regions were effectively implementing the Enforcement Program. For any weaknesses identified, the assessments recommended improvements.

## D. Calendar Year 2021 Focus Areas

During CY 2021, OE plans to address the following focus areas:

- OE plans to develop and issue a Commission notation vote paper that will describe the basis for the proposed policy revisions and request Commission approval.
- OE plans to conduct at least two assessments of the regional or program offices' enforcement programs. The primary goals of these assessments are to verify consistent application of the NRC's Enforcement Policy and processes, acknowledge good work practices, provide assessment team participants with knowledge transfer, and identify needed improvements in OE guidance.
- In addition to the ongoing proposed policy revision effort, OE will coordinate a working group consisting of regional and program office staff to propose revisions to the policy violation example 6.12, "Materials Security." This working group will develop enhanced violation examples for Category 1 and Category 2 quantities of radioactive material in accordance with 10 CFR Part 37, "Physical protection of category 1 and category 2 quantities of radioactive material."

# Appendix A—Summary of Cases Involving Civil Penalties\*

## **Civil Penalties Issued to Operating Reactor Licensees**

Tennessee Valley Authority Watts Bar Nuclear Plant EA-19-092

On November 6, 2020, the U.S. Nuclear Regulatory Commission (NRC) issued a notice of violation (NOV) and proposed imposition of a civil penalty (CP) totaling \$903,471 to the Tennessee Valley Authority (TVA) for multiple violations of NRC requirements. The first violation, a severity level (SL) III violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic licensing of production and utilization facilities." Appendix B. "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," Criterion V, "Instructions, Procedures, and Drawings," involved the failure to follow procedures. Specifically, main control room staff failed to ensure shift operations were conducted in a safe and conservative manner, did not stop when unsure and proceed in a deliberate and controlled manner, did not validate available information, allowed production to override safety, and proceeded in the face of uncertainty. The second violation was an SL II violation of 10 CFR 50.9(a) with a proposed CP of \$303,471. Specifically, a TVA employee failed to provide complete and accurate information during an interview with the NRC Office of Investigations about the startup on November 11, 2015. The third violation was an SL III violation of 10 CFR Part 50, Appendix B, Criterion V, with a proposed CP of \$300,000. Specifically, a TVA manager and procedure writer changed a step in the startup procedure for Watts Bar Nuclear Plant, Unit 1, using an improper change process and altered the technical intent of the procedure and allowed the startup to continue without first achieving a specific reactor temperature. Finally, the NRC issued an SL III problem to the TVA for violations of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," and 10 CFR Part 50, Appendix B, Criterion V, with a proposed CP of \$300,000. During a November 11, 2015, startup, with only excess letdown available for pressurizer level control, the pressurizer level rose uncontrollably until the main control room operators placed another system in service to abate the pressurizer water level rise. However, the operators failed to follow approved plant procedures when doing so and failed to make control room log entries to accurately depict the event and associated equipment manipulations.

Tennessee Valley Authority Watts Bar Nuclear Plant EA-20-006 and EA-20-007

On August 24, 2020, the NRC issued an NOV and proposed imposition of a CP of \$606,942 to the TVA for an SL I problem with two violations and an SL II problem with two violations involving failure to implement 10 CFR 50.7, "Employee protection." Specifically, on March 9, 2018, the TVA discriminated against a former Sequoyah employee for engaging in protected activity by raising concerns about a chilled work environment and TVA responses to two non-cited violations. After becoming aware of this protected activity, the former Director of Corporate Nuclear Licensing filed a formal complaint against the former employee. The filing of a formal complaint triggered an investigation by the TVA's Office of the General Counsel. This action was based, at least in part, on the former employee engaging in protected activity. On May 25, 2018, following the investigation, the former employee was placed on paid

<sup>\*</sup> Cases involving security-related issues are not included in the following Appendices.

administrative leave until the former employee resigned in August 2018. This action was based, at least in part, on the former employee engaging in protected activity.

In addition, on March 9, 2018, the TVA discriminated against a former corporate employee for engaging in protected activity by raising concerns of a chilled work environment. After becoming aware of the protected activity, the former Director of Corporate Nuclear Licensing filed a formal complaint against the former employee. The filing of a formal complaint triggered an investigation by the TVA's Office of the General Counsel. This action was based, at least in part, on the former employee engaging in a protected activity. On January 14, 2019, following the investigation, the former Vice President of Regulatory Affairs played a significant role in the decision-making process to place the former employee on paid administrative leave and terminate the former employee. These actions were based, at least in part, on the former employee. These actions were based, at least in part, on the former employee. These actions were based, at least in part, on the former employee. These actions were based, at least in part, on the former employee. These actions were based, at least in part, on the former employee. These actions were based, at least in part, on the former employee engaging in protected activity. On November 30, 2020, TVA requested the order be set for hearing and subsequently, an Atomic Safety and Licensing Board (Board) was established to preside over the proceeding. As of the end of CY 2020, the Board was still reviewing this matter.

## **Civil Penalties Issued to Materials Licensees**

Lantheus Medical Imaging San Juan, PR

On April 23, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to Lantheus Medical Imaging (licensee) for a problem associated with two violations for deliberate misconduct by a former senior technical support specialist and an SL III violation for the licensee's failure to comply with a condition of its NRC license. The first two violations involved the licensee's failure to (1) monitor the occupational radiation exposure of a former employee in accordance with 10 CFR 20.1502. "Conditions requiring individual monitoring of external and internal occupational dose," and (2) provide related information to the NRC that was complete and accurate in all material respects, in accordance with 10 CFR 30.9(a). The third violation involved the licensee's failure to comply with Condition 12 of its NRC license, which required that licensed material be used by, or under the supervision of, an individual specifically named in the license. Specifically, between January 2014 and December 2017, the licensee did not monitor occupational exposure to radiation from licensed sources, and, because a former employee did not always wear required dosimetry, his annual exposure to radiation could have exceeded the regulatory limit. Additionally, on August 15, 2018, the licensee terminated the employment of the supervising individual listed in Condition 12 of its NRC license and did not submit the license amendment request until September 21, 2018.

Hot Asphalt Paving, Inc. Ponce, PR

On June 24, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to Hot Asphalt Paving, Inc. (HAPI), for violations of 10 CFR 30.36(h) and 10 CFR 30.36(j). The violation involved HAPI's failure to complete decommissioning of its site within 24 months of initiation of decommissioning and failure to receive NRC approval for an alternate schedule for decommissioning in accordance with regulations. On September 3, 2014, HAPI notified the NRC that the company was no longer conducting licensed activities. As of June 24, 2020, HAPI had not transferred its nuclear gauges to certify the disposition of its licensed material and had not completed decommissioning activities. Additionally, HAPI did not receive NRC approval for

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an alternate schedule for decommissioning in accordance with 10 CFR 30.36, "Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas."

St. Joseph Regional Medical Center Lewiston, ID

On October 7, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to St. Joseph Regional Medical Center (licensee) for a problem involving three violations occurring between June 1, 2016, and October 21, 2019. These violations involved the licensee's failure (1) to prepare written directives that were dated and signed by an authorized user before the administration of iodine-131 sodium iodide greater than 30 microcuries and therapeutic doses of palladium-103 (10 CFR 35.40(a)), (2) to ensure that written directives for the administration of a therapeutic dosage of unsealed radium-223 contained the dosage and route of administration (10 CFR 35.40(b)(2)), and (3) to develop, implement, and maintain written procedures to provide high confidence that each administration requiring a written directive was in accordance with the written directive (10 CFR 35.41(a)(2)).

Thrasher Engineering Inc. Bridgeport, WV

On April 27, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to Thrasher Engineering Inc. (licensee) for violation of 10 CFR 30.34(i). The violation involved the licensee's repeated failure to use two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal. Specifically, on October 29, 2019, the licensee's gauge user left a portable gauge in the bed of a pickup truck, with only a single locked case to secure the portable gauge from unauthorized removal, when he was inside the construction site trailer and did not have control and constant surveillance of the portable gauge.

Avera McKennan Inc. Sioux Falls, SD

On August 12, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to Avera McKennan (licensee) for a problem associated with three violations. The violations were significant because they were associated with programmatic failures in the licensee's dosimetry program and because individuals had a substantial potential to exceed NRC occupational exposure limits. The violations involved the licensee's failure to adequately monitor occupational exposure as required by 10 CFR 20.1502(a)(1), follow its radiation protection program as required by 10 CFR 20.1101(a), and report an occupational dose in excess of the dose limits as required by 10 CFR 20.2203(a)(2)(i).

Alt and Witzig Engineering, Inc. Carmel, IN

On May 13, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$8,500 to Alt and Witzig Engineering, Inc. (licensee), for two violations. The first violation was associated with the theft of a portable gauge due to the failure to secure the gauge as required. The second violation was for the licensee's failure to immediately notify the NRC of the stolen gauge. Specifically, on October 3, 2019, the licensee failed to secure a portable gauge with two independent physical barriers while not under its control and constant surveillance, in accordance with 10 CFR 30.34(i) and 10 CFR 20.1801, "Security of stored material," resulting in

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a stolen gauge. In addition, the licensee did not immediately notify the NRC of the theft in accordance with 10 CFR 20.2201, "Report of theft or loss of licensed material."

The Queen's Medical Center Honolulu, HI

On October 27, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to The Queen's Medical Center (Queen's) for a problem associated with three violations. The violations involve Queen's failure to monitor exposure to radiation and radioactive material at levels sufficient to demonstrate compliance with the occupational dose limits of 10 CFR Part 20, "Standards for protection against radiation." Specifically, nine interventional radiologist physicians, whose occupational exposure exceeded 10 percent of the limits in 10 CFR 20.1201(a), were not monitored over the course of several years (from January 2011 to May 28, 2019). Additionally, Queen's failed to provide adequate instructions for the proper use of dosimeters to the nine radiologist physicians who were likely to receive an occupational dose in excess of 100 millirem in a year, in violation of 10 CFR 19.12(a)(3). Finally, Queen's failed to implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with 10 CFR Part 20.

St. Luke's Regional Medical Center Boise, ID

On September 15, 2020, the NRC issued an SL III NOV and proposed imposition of a CP of \$7,500 to St. Luke's Regional Medical Center (licensee) for a problem associated with three violations. The violations involved the licensee's failure to (1) monitor the occupational exposure of workers from licensed and unlicensed sources of radiation in accordance with 10 CFR 20.1502(a)(1), (2) develop and implement certain elements of its radiation protection program in accordance with 10 CFR 20.1101(a), and (3) provide instructions to individuals in accordance with 10 CFR 19.12(a)(3). Specifically, from January 1, 2012, to February 24, 2020, the licensee did not properly monitor interventional radiology physicians whose occupational exposure exceeded the NRC's annual radiation exposure limit over the course of 8 years and did not develop and implement a radiation protection program commensurate with the scope and extent of its licensed activities. Additionally, the licensee did not provide instructions about radiation safety involving the proper use and storage of dosimeters to four interventional radiology physicians who were likely to receive an occupational dose in excess of the required annual limit.

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## Appendix B—Summary of Escalated Notices of Violation Without Civil Penalties

### Notices of Violation Issued to Operating Reactor Licensees

Southern Nuclear Operating Company, Inc. Vogtle Electric Generating Plant

On March 31, 2020, the U.S. Nuclear Regulatory Commission (NRC) issued a notice of violation (NOV) to Southern Nuclear Operating Company, Inc. (Southern), associated with a White significance determination process finding for a violation of a technical specification surveillance requirement at Vogtle Electric Generating Plant. Specifically, Southern failed to adequately perform periodic channel calibrations for post-accident monitoring equipment since initial startup of Vogtle Units 1 and 2.

Entergy Operations, Inc. Arkansas Nuclear One

On September 23, 2020, the NRC issued an SL III NOV to Entergy Operations, Inc. (Entergy), for a violation of Title 10 of the *Code of Federal Regulations* (10 CFR) 73.55(a)(3) at Arkansas Nuclear One, Units 1 and 2. The violation involved Entergy's failure to maintain the onsite physical protection program when contract supervisors deliberately failed to notify the security organization upon discovering prohibited items on a person in the protected area.

Virginia Electric and Power Company Surry Power Station, Unit 2

On July 30, 2020, the NRC issued an NOV to Virginia Electric and Power Company (licensee) associated with a White significance determination process finding in violation of 10 CFR 50.55a(f)(4). The finding involved the failure of the turbine-driven auxiliary feedwater pump discharge check valve during surveillance testing. Specifically, from November 23, 2005, to November 20, 2019, the licensee did not analyze common failure or maintenance patterns to determine their significance and to identify potential failure mechanisms of the valve when establishing its check valve condition monitoring program in accordance with the 2004 American Society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants, Mandatory Appendix II. As a result, all three Unit 2 auxiliary feedwater pumps were declared inoperable, and the safety function was considered lost until the turbine-driven auxiliary feedwater line was isolated.

### Notices of Violation Issued to Materials Licensees

Bittner Engineering, Inc. Escanaba, MI

On February 12, 2020, the NRC issued an SL III NOV to Bittner Engineering, Inc. (licensee), for a problem associated with four violations. The violations involved the licensee's failure to (1) have the named individual on its license perform the duties and responsibilities of the radiation safety officer (RSO) in accordance with Condition 12 of NRC License No. 21-26010-01, (2) perform leak tests of sealed sources in accordance with Condition 13 of NRC License No. 21-26010-01, (3) review and implement the radiation safety program in

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accordance with 10 CFR 20.1101(c), and (4) provide hazmat employees with the hazmat refresher training in accordance with 10 CFR 71.5(a). Specifically, the RSO named on the license retired in 2014, and the license was not amended to name a new RSO until May 23, 2019. Additionally, between December 2014 and May 23, 2019, the licensee did not perform the annual leak tests on the portable gauges, did not perform the required review of the radiation safety program, and did not provide the required recurrent training for its hazmat employees.

Shultz Surveying & Engineering, Inc. Branson, MO

On March 11, 2020, the NRC issued an SL III NOV problem and exercise of discretion to Schultz Surveying & Engineering, Inc. (licensee). The violations involved the licensee's failure to (1) have the named individual on its license perform the duties and responsibilities of the RSO in accordance with Condition No. 11 of NRC License No. 24-32159-01, (2) transfer the byproduct material to an authorized person in accordance with 10 CFR 30.41(a), and (3) provide a written response to an April 30, 2018, order revoking the license based on nonpayment of license fees. As a corrective action, the licensee submitted a request to terminate its NRC license. In accordance with Section 3.6 of the Enforcement Policy, the NRC exercised discretion to not propose a civil penalty and terminated the license on February 20, 2020.

Avera St. Luke's Hospital Aberdeen, SD

On March 11, 2020, the NRC issued an SL III NOV problem and exercise of discretion to Avera St. Luke's Hospital (licensee). The violations involved the licensee's failure to (1) monitor occupational exposure of workers from licensed and unlicensed sources of radiation in accordance with 10 CFR 20.1502(a)(1), (2) develop and implement certain elements of its radiation protection program in accordance with 10 CFR 20.1101(a), and (3) submit a written report to the NRC within 30 days of discovery of a reportable event in accordance with 10 CFR 20.2203, "Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits." From February 2018 through July 2019, the licensee did not properly monitor an authorized user's radiation exposure that resulted in the authorized user having a significant potential to exceed the NRC's annual radiation exposure limit and did not develop and implement a radiation protection program commensurate with the scope and extent of its licensed activities. Additionally, on October 3, 2018, a dosimetry vendor notified the licensee of an exposure potentially exceeding the NRC's annual exposure limits for an authorized user working under its NRC license. The licensee did not investigate nor notify the NRC until July 30, 2019.

Municipality of Anchorage Anchorage, AK

On February 13, 2020, the NRC issued an SL III NOV to the Municipality of Anchorage (licensee) for a violation of Condition 12 of NRC Materials License No. 50-15852-02. The violation involved the licensee's failure to have the named individual on its license perform the duties and responsibilities of the RSO for the period from September 30, 2017, through January 6, 2020. Specifically, the RSO listed on the license retired on September 30, 2017, and the license was not amended to name a new RSO until January 7, 2020.

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EA-19-127

EA-19-108

Sanders Medical Products Knoxville, TN

On March 3, 2020, the NRC issued an SL III NOV to Sanders Medical Products (SMP) for two violations. The first violation involved SMP not filing an application with the Deputy Director of the Office of International Programs for a specific license to export a Ge-68 1,581-microcurie ( $\mu$ Ci) source, using an appropriate method listed in 10 CFR 110.4, "Communications." Specifically, on June 3, 2019, SMP attempted to export a Ge-68 1,581- $\mu$ Ci source to Tehran, Iran, without filing an application for a specific license, when such activity would have required NRC authorization. Therefore, SMP did not file an export application, and the shipment was not authorized by a specific license issued under 10 CFR Part 110, "Export and import of nuclear equipment and material." The second violation involved SMP exporting a Ge-68 1,581- $\mu$ Ci source without being authorized by a specific license issued under 10 CFR Part 110. FR Part 110. Specifically, on November 26, 2018, SMP exported to Alchemy Scientific Bureau in Baghdad, Iraq, a Ge-68 1,581- $\mu$ Ci source without a specific license, when such activity would have required NRC authorization. Therefore, the NRC did not issue an export license, and the shipment was not authorized by a specific license issued under 10 CFR Part 110.

Centro Comprensivo de Cancer de la UPR San Juan, PR

On June 30, 2020, the NRC issued an SL III NOV problem to Centro Comprensivo de Cancer de la UPR (licensee). The first violation involved the licensee's failure to maintain or adequately control a high-dose-rate remote after-loader (HDR) unit, the HDR console, the console keys, and the HDR treatment room, in accordance with 10 CFR 35.610(a)(1). The second violation involved the resultant failure by the licensee to secure from unauthorized removal or access licensed material in accordance with 10 CFR 20.1802, "Control of material not in storage." Specifically, on November 21, 2019, the licensee's medical physicist left the treatment room area and inadvertently left the HDR console keys in the console and the key securing the HDR unit, as well as the key and keycard used to access the outer door of the HDR unit room, unsecured on the desk. During this period, the licenseed material was not secured from unauthorized removal or access.

Bayou Inspection Services, Inc. Amelia, LA

On June 22, 2020, the NRC issued an SL III NOV to Bayou Inspection Services, Inc. (licensee), for a violation involving the failure to file NRC Form 241, "Report of Proposed Activities in Non-Agreement States," at least 3 days before engaging in licensed activities within NRC jurisdiction, in accordance with 10 CFR 150.20, "Recognition of Agreement State licenses." Specifically, on February 20, 2020, the licensee engaged in licensed activities in the Gulf of Mexico, without filing the required documentation with the NRC.

Christian Wheeler Engineering San Diego, CA

On June 18, 2020, the NRC issued an SL III NOV to Christian Wheeler Engineering (licensee) for a violation involving the failure to file NRC Form 241 at least 3 days before engaging in licensed activities within NRC jurisdiction, in accordance with 10 CFR 150.20. Specifically, from January 7 through February 20, 2020, the licensee performed licensed activities at Camp Pendleton, Oceanside, CA, and from February 19 through February 20, 2020, at Marine Corps

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EA-20-046

Air Station Miramar/Naval Air Station, San Diego, CA, without filing the required documentation with the NRC.

Sanford Medical Center Sioux Falls, SD

On October 16, 2020, the NRC issued an SL III NOV problem to Sanford Medical Center (licensee). The violations involved the licensee's failure to (1) monitor occupational exposure of workers from licensed and unlicensed sources of radiation in accordance with 10 CFR 20.1502(a)(1), (2) develop and implement certain elements of its radiation protection program in accordance with 10 CFR 20.1101(a), and (3) provide instructions to individuals in accordance with 10 CFR 19.12(a)(3). Specifically, the licensee did not (1) monitor the occupational exposure to radiation from unlicensed radiation sources and the use of individual monitoring devices by an authorized user, (2) did not provide instructions for further investigation or other actions when there was a discrepancy in dosimetry readings, and (3) failed to provide adequate instructions about the proper use of personnel dosimeters to an authorized user who was likely to receive an occupational dose in excess of the required annual limit. The NRC also issued an SL IV violation to the licensee for failing to submit a written report within 30 days after learning of a dose in excess of the occupational dose limits for adults in 10 CFR 20.1201, "Occupational does limits for adults," in accordance with 10 CFR 20.2203(a)(2)(i).

International Isotopes, Inc. Idaho Falls, ID

On October 20, 2020, the NRC issued an SL II NOV problem to International Isotopes, Inc. (INIS). Specifically, (1) INIS failed to have appropriate administrative procedures that assured the completion of safety evaluations in accordance with 10 CFR 31.13(c)(3), and (2) the INIS radiation safety committee inappropriately approved procedures that changed the conditions of the NRC license and that decreased the effectiveness of the radiation safety program. The NRC considered these violations to be significant because the inadequate procedures directly contributed to a significant contamination event at the University of Washington's Harborview Medical Center on May 2, 2019.

International Isotopes, Inc. Idaho Falls, ID

On September 17, 2020, the NRC issued an SL III NOV to INIS for a violation that involved multiple exports of byproduct material to an embargoed destination without a specific license. Specifically, on May 24, May 29, October 2, and December 4, 2019, INIS exported byproduct material in four separate shipments to Iraq, an embargoed destination, without the required NRC specific license, in accordance with 10 CFR 110.5, "Licensing requirements."

TTL Associates, Inc. Plymouth, MI

On December 3, 2020, the NRC issued two SL III NOVs to TTL Associates, Inc. (TTL), for a violation of 10 CFR 20.1802 and a violation of Condition 14 of TTL's license. Specifically, TTL failed to control and maintain constant surveillance of a portable moisture density gauge located in an unrestricted area. Also, TTL detached a sealed source containing licensed material from

EA-20-050

EA-20-095

EA-20-110

the source rod without being specifically authorized to do so, disregarding the requirement specified on its license.

## Notices of Violation Issued to Fuel Cycle Facility Licensees

None.

## Appendix C—Summary of Orders

### Orders Issued to Operating Reactor Licensees

Duke Energy Progress, LLC H.B. Robinson Steam Electric Plant

On March 11, 2020, the U.S. Nuclear Regulatory Commission (NRC) issued a confirmatory order (CO) to Duke Energy Progress, LLC (Duke Energy), formalizing commitments reached during an alternative dispute resolution (ADR) mediation session held on December 16, 2019. The ADR session was associated with an apparent violation of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48, "Fire protection"; Technical Specification 5.4.1.a of Appendix A of the operating license; and 10 CFR 50.9(a), due to the willful failure of non-licensed operators to conduct procedurally required fire watches and operator rounds. In consideration of the CO, the NRC will not cite the apparent violation and will not issue an associated civil penalty.

Reed College Reed Research Reactor

On March 16, 2020, the NRC issued a CO to Reed College (Reed), Reed Research Reactor, to formalize commitments made as a result of an ADR mediation session held on January 23, 2020. The ADR session was associated with apparent violations of 10 CFR 50.9(a) and Renewed Operating License R-112, License Condition 2.C.(3). In response to the apparent violations, Reed agreed to complete additional corrective actions and enhancements, as fully discussed in the CO. In consideration of the corrective actions and commitments outlined in the CO, the NRC agreed not to pursue any further enforcement action (including issuance of a civil penalty) relating to the apparent violation.

Arizona Public Service Company Palo Verde Nuclear Generating Station

On November 17, 2020, the NRC issued a CO to Arizona Public Service Company (APS) memorializing commitments reached during an ADR mediation session held on September 16, 2020. The ADR session was associated with apparent violations that involved an inadequate design analysis for the NAC International MAGNASTOR® dry cask storage system used at APS's Palo Verde Nuclear Generating Station. APS performed a new tip-over analysis for the spent fuel storage casks and committed to additional corrective actions such as creating a challenge review board to assess the screenings and evaluations under 10 CFR 72.48, "Changes, tests, and experiments," before implementing a design change. As a result of the CO, the NRC will not cite the apparent violations.

Armed Forces Radiobiological Research Institute (AFRRI) EA-20-056 AFRRI Research and Test Reactor

On November 19, 2020, the NRC issued a CO to AFRRI memorializing commitments reached during an ADR mediation session held on September 19, 2020. The ADR session was associated with an apparent violation of 10 CFR 50.7, "Employee protection," at the AFRRI Bethesda, MD facility. The violation apparently involved discrimination against an AFRRI senior reactor operator for engaging in protected activities, in that the employee was subjected to a

EA-19-071

EA-19-025

2-day suspension without pay, in part, for raising a concern related to the licensee's physical security plan and control of reactor access. As a result of the CO, AFRRI committed to several corrective actions, including enhancements to its safety culture program and establishment of a safety conscious work environment program, as well as independent third-party support. In consideration of the corrective actions and commitments outlined in the CO, the NRC will not cite the apparent violation and will not issue an associated civil penalty.

### **Suspension Orders**

**Transport Logistics International** Fulton, MD

-and-

ConverDvn Greenwood Village, CO

On December 16, 2020, the NRC issued two suspension orders, one to Transport Logistics International and the other to ConverDyn, both NRC licensees. These orders modify the license to suspend certain exports to the United Kingdom under a license permitting export to the European Union, effective January 1, 2021. The formal transition period marking the United Kingdom's exit from the European Union started on December 31, 2020.

### **Orders Issued to Individuals**

### Dr. Melinda Krahenbuhl

On March 16, 2020, the NRC issued an order prohibiting Dr. Melinda Krahenbuhl, Director, Reed Research Reactor, Reed College, from involvement in NRC-licensed activities for a 3-year period. The order also suspended Dr. Krahenbuhl's senior reactor operator license for 3 years. Dr. Krahenbuhl deliberately caused her employer, Reed College, to be in violation of 10 CFR 50.9(a) when she willfully provided information to the Commission that was not complete and accurate in all material respects. Dr. Krahenbuhl also caused Reed College to be in violation of Renewed Operating License R-112, License Condition 2.C.(3). Specifically, Dr. Krahenbuhl will be prohibited from any involvement in NRC-licensed activities for a period of 3 years; thereafter, she will be required to notify the NRC within 20 days following acceptance of her first employment offer involving NRC-licensed activities.

### Mr. Joseph Shea

On August 24, 2020, the NRC issued an order prohibiting the involvement of Mr. Joseph Shea, the former Vice President of Regulatory Affairs at the Tennessee Valley Authority (TVA), in NRC-licensed activities for a period of 5 years for a severity level I violation involving deliberate misconduct that caused the TVA to be in violation of 10 CFR 50.7. Specifically, Mr. Shea played a significant role in the decision-making process to place a former corporate employee on paid administrative leave on October 15, 2018, and then terminate the former corporate employee on January 14, 2019, in part, for engaging in protected activity, including raising concerns of a chilled work environment. On September 22, 2020, Mr. Shea submitted a motion to set aside the immediate effectiveness of the order. The Board granted the motion and referred the ruling to the Commission. As of the end of CY 2020, the Commission was still reviewing this matter.

IA-19-035

IA-20-008

EA-20-152

Dr. Melinda Krahenbuhl

IA-20-040

On July 27, 2020, the NRC issued a CO to Dr. Melinda Krahenbuhl confirming commitments reached as part of an ADR mediation settlement agreement between Dr. Krahenbuhl and the NRC. The commitments were made as part of the settlement agreement based on violations of NRC requirements discussed in Order IA-19-035, dated March 16, 2020. An ADR mediation session took place in a virtual meeting setting with Dr. Krahenbuhl, her representative, and the NRC on June 22, 2020, and the parties reached a preliminary settlement agreement. In consideration of the corrective actions and commitments outlined in the CO, the NRC withdrew the March 16, 2020, order. Subject to the satisfactory completion of the additional corrective actions, the NRC will take no further action concerning the apparent violations.

## Appendix D—Summary of Escalated Enforcement Actions Against Individuals

### Notices of Violation

Mr. Michael S. Paul

On March 12, 2020, the U.S. Nuclear Regulatory Commission (NRC) issued an severity level (SL) III notice of violation (NOV) to Mr. Michael Paul for violations of Title 10 of the *Code of Federal Regulations* (10 CFR) 55.53(j), which requires, in part, that the licensee not perform activities authorized by a license issued under 10 CFR Part 55, "Operators' licenses," while under the influence of alcohol that could adversely affect his or her ability to safely and competently perform his or her duties. Specifically, Mr. Paul reported for duty at Susquehanna Nuclear, LLC's (licensee), Susquehanna Steam Electric Station, Unit 1, while under the influence of alcohol. The licensee determined that he was under the influence of alcohol through a random test administered to him on July 4, 2019, as part of the facility's fitness-forduty program.

### Mr. César Blanco

On April 23, 2020, the NRC issued an NOV to Mr. César Blanco, for an SL III problem related to two willful violations. Mr. Blanco deliberately caused his former employer, Lantheus Medical Imaging, to be in violation of NRC requirements when he willfully failed to wear dosimetry and willfully submitted incomplete and inaccurate information to the NRC. Specifically, between January 2014 and December 2017, Mr. Blanco deliberately failed to wear required dosimetry when performing work on the cyclotron, and on February 14, 2018, he deliberately provided false information to an NRC inspector about his dosimetry usage.

### Mr. Stanley Shultz

On March 11, 2020, the NRC issued an SL III NOV to Mr. Stanley Shultz for a violation involving deliberate misconduct that caused his employer, Schultz Surveying & Engineering, Inc., to be in violation of 10 CFR 30.41(a). Specifically, on January 31, 2017, Mr. Shultz deliberately transferred byproduct material to a person not authorized to receive the material under the terms of a specific license, general license, or their equivalents issued by the Atomic Energy Commission, the NRC, or an Agreement State.

### Ms. Erin Henderson

On August 24, 2020, the NRC issued an SL II NOV to Ms. Erin Henderson for a violation involving deliberate misconduct that caused the Tennessee Valley Authority (TVA) to be in violation of 10 CFR 50.7, "Employee protection." Specifically, on March 9, 2018, Ms. Henderson filed a formal complaint against two former employees that triggered an investigation by the TVA's Office of the General Counsel. This resulted in the former employees being placed on paid administrative leave and the subsequent termination of one of the former employees. Ms. Henderson's action was based, at least in part, on the former employees engaging in protected activities.

IA-20-005

IA-19-033

IA-20-025

IA-20-009

#### Mr. Billy Johnson

On November 6, 2020, the NRC issued an SL III NOV to Mr. Billy Johnson for multiple NRC violations. The first violation, an SL III violation of his NRC operator license, was issued for failing to adhere to operating procedures and other conditions specified in the Watts Barr Nuclear Plant, Unit 1 (WBN-1), facility license. Specifically, on November 11, 2015, on watch as the shift manager, he continued a reactor heatup evolution with only one reactor coolant inventory control system in service. This resulted in a relatively quick and uncontrollable pressurizer water level rise, which resulted in the main control room (MCR) operators taking actions outside of approved operating procedures to reestablish pressurizer water level control. The second violation, an SL III violation of 10 CFR 50.5. "Deliberate misconduct," was issued for his deliberate failure to ensure that MCR operators operated equipment in accordance with approved procedures. During a startup on November 11, 2015, he improperly directed MCR operators to place a reactor plant system in service in violation of approved procedures. The third violation, an SL II violation of 10 CFR 50.5, was issued for making false statements during an NRC Office of Investigations interview, when he stated there was no significant pushback from MCR operators to continue with the November 11, 2015, reactor heatup, and it was his decision to continue the heatup. The NRC discovered two separate e-mails written by Mr. Johnson that stated he had been persuaded to move forward with the heatup and that continuing with the heatup was really a senior management decision. In later interviews, he admitted these facts.

#### Mr. William Sprinkle

On November 6, 2020, the NRC issued an SL III NOV to Mr. William Sprinkle for violating 10 CFR 50.5 when he deliberately initiated and approved a change to a step in the TVA's WBN-1 startup procedure by using an inappropriate change process. He identified the need for this change, directed a procedure writer to make the change, then acted as final approver of this change, knowing, based on his experience and training, that the change did not meet the minor/editorial change criteria specified in the TVA's processes.

### Mr. Todd Blankenship

On November 6, 2020, the NRC issued an SL III NOV to Mr. Todd Blankenship for violating his NRC-issued operator license when he failed to adhere to operating procedures and other conditions specified in the TVA's WBN-1 license by not practicing conservative decision-making, proceeding in the face of uncertainty, and allowing production and cost to override safety during a startup at WBN-1 on November 11, 2015.

### Mr. Dennis Bergmooser

On July 15, 2020, the NRC issued an SL III NOV to Mr. Dennis Bergmooser for a willful violation that caused his former employer, DTE Energy Company, to be in violation of establishing, implementing, and maintaining a list of individuals who are authorized to have unescorted access to specific nuclear power plant vital areas during nonemergency conditions in accordance with 10 CFR 73.56(j). Specifically, Mr. Bergmooser directed an individual, who was not a cognizant licensee or applicant manager or supervisor responsible for directing the work activities, to update and reapprove access to vital areas for multiple individuals, and he deliberately failed to satisfy the continuing 30-day behavior observation specified in the licensee's procedures, in that he failed to complete the behavioral observations and electronically sign the revalidation. Mr. Bergmooser, as a manager responsible for the

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IA-20-023

IA-20-020

revalidations, deliberately directed a nonsupervisory subordinate, who was not trained under 10 CFR 26.29, "Training," to perform continuous 30-day behavior observation revalidations.

### Mr. Todd Hegeman

On September 24, 2020, the NRC issued an SL III NOV to Mr. Todd Hegeman for deliberately causing Entergy Operations, Inc. (Entergy), Arkansas Nuclear One, to be in violation of NRC requirements when he willfully failed to notify security upon discovering prohibited items in the protected area (PA) in accordance with 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," and Entergy procedures. Specifically, on or about October 10, 2018, Mr. Hegeman, a contractor employee supervisor, engaged in deliberate misconduct that caused Entergy to be in violation of a regulation issued by the Commission when he was aware of prohibited items (i.e., unauthorized ammunition) inside the PA and failed to promptly notify security of the prohibited items.

### Mr. James Johnson

On September 24, 2020, the NRC issued an SL III NOV to Mr. James Johnson for deliberately causing Entergy, Arkansas Nuclear One, to be in violation of NRC requirements when he willfully failed to notify security upon discovering prohibited items in the PA as required by 10 CFR 73.55 and Entergy procedures. Specifically, on or about October 10, 2018, Mr. Johnson, a contractor employee supervisor, engaged in deliberate misconduct that caused the licensee to be in violation of a regulation issued by the Commission when he was aware of prohibited items (i.e., unauthorized ammunition) inside the PA and failed to promptly notify security of the prohibited items.

## Mr. Thomas Spivey

On September 24, 2020, the NRC issued an SL III NOV to Mr. Thomas Spivey for deliberately causing Entergy, Arkansas Nuclear One, to be in violation of NRC requirements when he willfully failed to notify security upon discovering prohibited items in the PA in accordance with 10 CFR 73.55 and Entergy procedures. Specifically, on or about October 10, 2018, Mr. Spivey, a contractor employee supervisor, engaged in deliberate misconduct that caused the licensee to be in violation of a regulation issued by the Commission when he was aware of prohibited items (i.e., unauthorized ammunition) inside the PA and failed to promptly notify security of the prohibited items.

## Mr. Denver Lee

On September 24, 2020, the NRC issued an SL III NOV to Mr. Denver Lee for deliberately causing Entergy, Arkansas Nuclear One, to be in violation of NRC requirements when he willfully failed to notify security upon discovering prohibited items in the PA in accordance with 10 CFR 73.55 and Entergy procedures. Specifically, on or about October 10, 2018, Mr. Lee, a contractor employee supervisor, engaged in deliberate misconduct that caused the licensee to be in violation of a regulation issued by the Commission when he was aware of prohibited items (i.e., unauthorized ammunition) inside the PA and failed to promptly notify security of the prohibited items.

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IA-20-029

IA-20-028

IA-20-030

## Appendix E—Summary of Escalated Enforcement Actions Against Non-licensees (Vendors, Contractors, and Certificate Holders)

## Notices of Violation Issued to Non-licensees

NAC International Norcross, GA

EA-20-066

On December 21, 2020, the U.S. Nuclear Regulatory Commission issued a notice of violation to NAC International (NAC) for a severity level III and a severity level IV violation. NAC failed to comply with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 72.48(c)(2)(viii), and 10 CFR 72.146(c). The violations involved a design change for NAC's MAGNASTOR dry cask storage system. NAC failed to use a methodology as specified in the MAGNASTOR Final Safety Analysis Report and failed to obtain an amendment to use a different methodology. In response, NAC performed the spent fuel cask tip-over analysis again, this time using the appropriate methodology, and obtained satisfactory results. NAC also implemented corrective actions to enhance its design control and 10 CFR 72.48, "Changes, tests, and experiments," screening processes.