U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

ENFORCEMENT PROGRAM ANNUAL REPORT

Calendar Year 2017

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 and Program in calendar year (CY) 2017. NRC regional and Headquarters offices continued to focus on appropriate and consistent enforcement of the agency's regulations.

Escalated Enforcement Action Data

The NRC's Enforcement Policy (Policy) defines an escalated enforcement action as any of the following:

- a notice of violation (NOV) with a severity level (SL) of I, II, or III
- NOVs associated with an inspection finding that the significance determination process evaluates as having low to moderate (White) or greater safety significance
- civil penalties (CPs)
- NOVs and orders to individuals
- orders to modify, suspend, or revoke NRC licenses or the authority to engage in NRC-licensed activities
- orders issued to impose CPs
- enforcement-related confirmatory orders

During CY 2017, the NRC issued 81 escalated enforcement actions under traditional enforcement, the Reactor Oversight Process, and the Construction Reactor Oversight Process. Of these actions, 9 involved CPs totaling $95,900, 10 were enforcement orders without an imposed CP, and 62 were escalated NOVs without a proposed CP.

The total number of escalated enforcement actions decreased in CY 2017 by approximately 9 percent compared to actions in CY 2016. The decrease was largely driven by a 22-percent decline in the number of escalated actions issued to nuclear materials user licensees. In the 4 years preceding CY 2017, the number of escalated enforcement actions issued by the agency had been generally steady, averaging about 83 actions per year. The numbers in CY 2017 are similar to the observed trends in the number of escalated enforcement actions issued each year. Section I of the annual report provides additional information on these trends.

Noteworthy Program Accomplishments

The Office of Enforcement (OE) developed new general criteria for relaxing, withdrawing, and rescinding requirements of orders as a result of feedback from the Commission and the Office of the Executive Director for Operations. On November 21, 2017, the Commission was notified of the implementation of the new criteria, which were later published in a revision to the Enforcement Manual.

In cooperation with the Office of the General Counsel, OE and the Office of Investigations (OI) developed and began implementing a secure SharePoint site that allows OI to provide reports on investigations electronically. This new, innovative approach eliminates the need for OI to produce and distribute paper copies of OI reports to the organizations responsible for reviewing and acting on the completed investigations. The OI reports portal is expected to help improve OI case processing timeliness.

OE also issued one revised enforcement guidance memorandum to support consistent enforcement decisions in CY 2017. In addition, OE was heavily involved in the development of Regulatory Issue Summary (RIS) 2017-06, "NRC Policy on Use of Combination Dosimetry Devices during Industrial Radiographic Operations," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16137A077) that was issued on September 19, 2017. The RIS allows licensees to take advantage of several technological advances in dosimetry for personnel monitoring during industrial radiographic operations to meet NRC requirements under the current rule language.

OE supported the Agency Effectiveness Review of the Inspection Findings Review Board pilot program, which was conducted during fiscal year 2017. Members from the enforcement staff in the regions and Headquarters offices were a part of the 12-member team that reviewed the regions' execution of the pilot program. The team is drafting a report for the Commission with recommendations for the program.

Significant Cases

In CY 2017, the agency processed a number of significant cases that required extensive coordination and cooperation with stakeholders. The following are two of the more significant cases:

- The agency issued an SL II violation with a proposed CP of $22,400 to Qal-Tek Associates, LLC, for violations of Title 10 of the *Code of Federal Regulations* (10 CFR) 71.5(a), which requires licensees that deliver licensed material to a carrier for transport to comply with the applicable U.S. Department of Transportation requirements in 49 CFR Parts 171 through 180.

- The agency issued an SL III violation (with a proposed CP) and two related SL III problems to Louisiana Energy Services, LLC (doing business as URENCO USA) following events associated with the security program at its uranium enrichment facility in Eunice, NM.

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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 (see Figure 1).

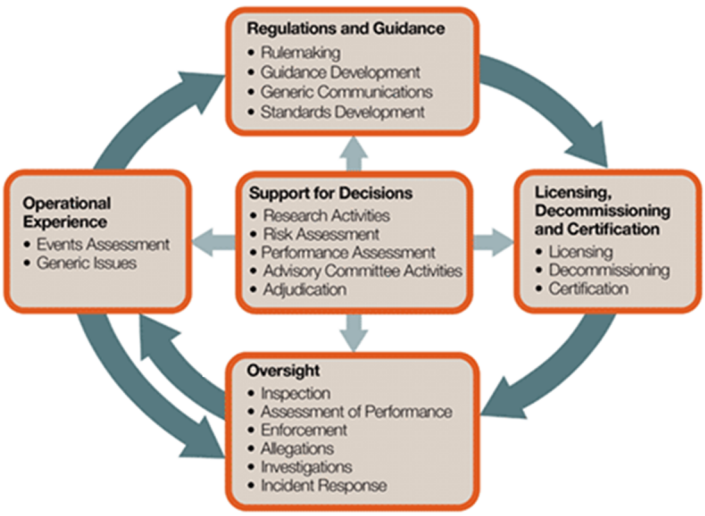


Figure 1—How the NRC Regulates

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 establishes the general principles governing the agency's Enforcement Program and specifies a process for implementing the agency's 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 has a key role in ensuring safety, maintaining security, and protecting the environment. The Enforcement Policy applies to all NRC licensees, to various categories of nonlicensees, and to individual employees of licensed and nonlicensed 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 NRC Enforcement Policy contains graduated sanctions.

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.

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 this program, 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.

While the ROP is used for most violations at operating power reactors, some aspects of violations (e.g., willfulness) cannot be addressed solely through the SDP; such violations require the NRC to follow the traditional enforcement process. Violations that result in actual safety or security consequences, affect the ability of the NRC to perform its regulatory oversight function, or involve willfulness are also processed under traditional enforcement.

In addition, while 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 noncited violations (NCVs). 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 https://www.nrc.gov/reactors/operating/oversight.html.

The 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 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 http://www.nrc.gov/about-nrc/regulatory/enforcement.html, presents a variety of information, such as the Enforcement Policy, the Enforcement Manual, and current temporary enforcement guidance contained in enforcement guidance memoranda (EGMs). 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, details associated with most security-related actions and activities are not available on the NRC's public Web site.

B. Assessment of Escalated Enforcement Actions

Escalated enforcement actions include the following:

- NOVs, including SL I, II, or III violations
- 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) 2017, the NRC issued 81 escalated enforcement actions to licensees, nonlicensees, and individuals. Figure 2 shows the distribution of these actions, by the category of action, for CY 2017.

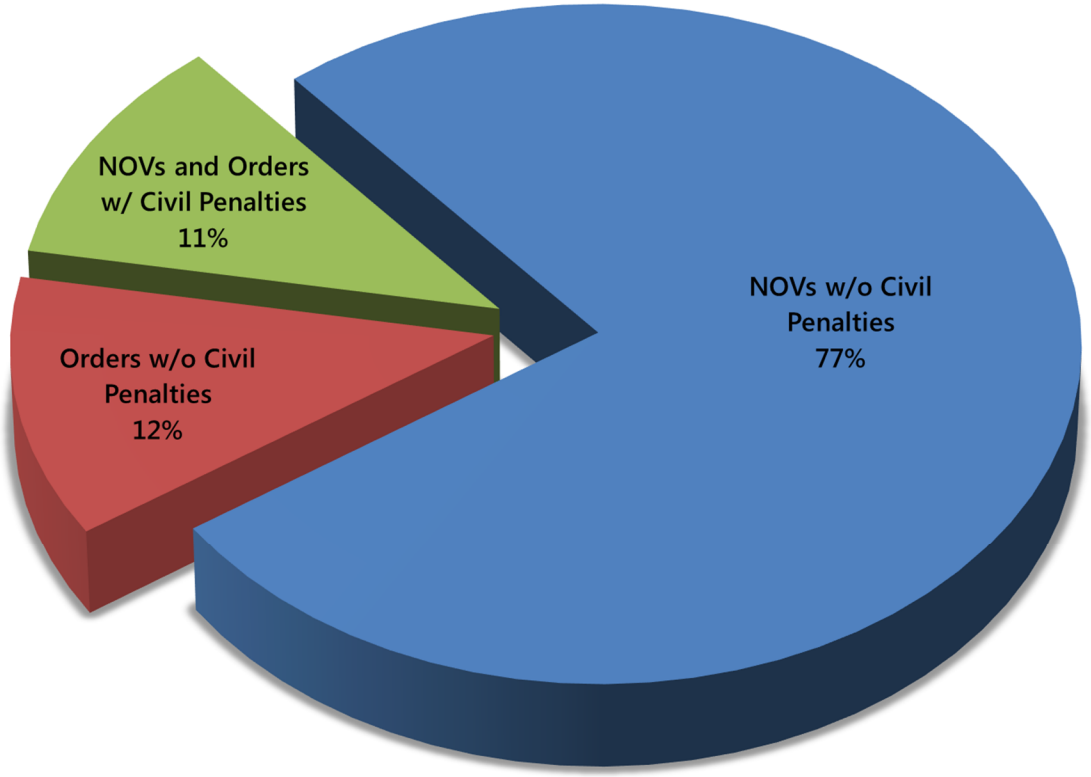


Figure 2—Escalated Enforcement by Type of Action (CY 2017)

The most common type of escalated enforcement action was an NOV without a CP—62 of the 81 escalated actions (or 77 percent) issued during the year fit this category. This percentage is consistent with the overall distribution of escalated enforcement actions during the past 5 years, when approximately 73 percent of all escalated actions issued between CY 2013 and CY 2017 were NOVs without a CP. Generally speaking, a large percentage of

NOVs without CPs is considered a positive outcome because it demonstrates that most licensees identify and correct violations—a goal of the Enforcement Program.

The remaining 23 percent of escalated enforcement actions were almost evenly split between (1) NOVs and orders with a CP and (2) orders without a CP. In 2017, the NRC issued 9 CP actions (11 percent) and 10 orders without a CP (12 percent). The 9 CP actions included 8 NOVs and 1 order imposing a CP. Table 1 (on page 5) shows the number and types of actions issued between 2013 and 2017.

Figure 3 shows the distribution of escalated enforcement actions issued in CY 2017 by business line, or type of licensee. In this figure, individual actions are included in the appropriate category of licensee instead of being counted separately. A more detailed breakdown of the escalated enforcement actions issued in CY 2017 is provided in the tables at the end of Section I, including the region or program office that initiated the action, as well as the type of licensee, nonlicensee, and individual actors involved.

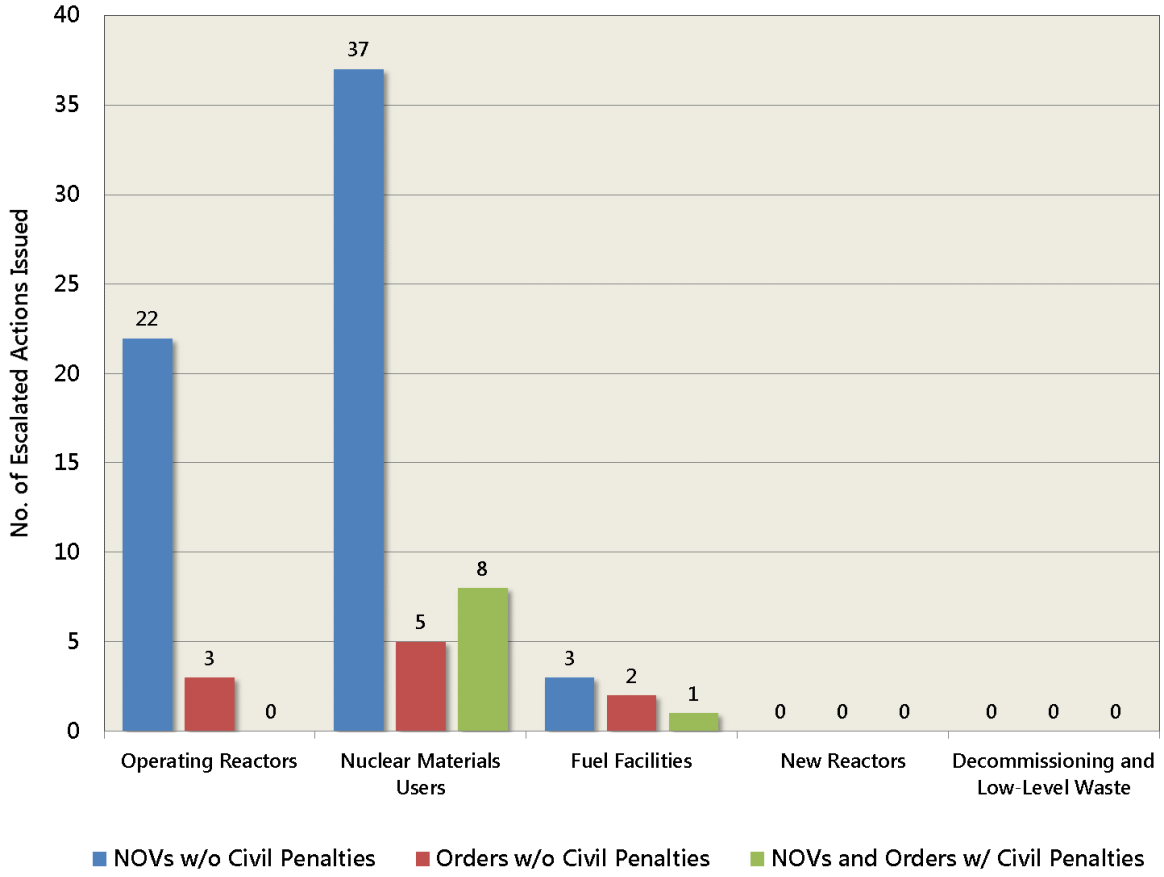


Figure 3—Escalated Enforcement by Business Line (CY 2017)

As shown in Figure 3, nuclear materials users received the largest number of escalated enforcement actions issued by the NRC this year (a total of 50), accounting for 62 percent of all actions issued. This was followed by operating reactor licensees, who received 25 (or 31 percent) of all actions. The NRC also issued six escalated actions to fuel facilities, and none to new reactors and decommissioning and low-level waste licensees in CY 2017.

Nuclear materials users received approximately 58 percent of the non-CP actions and all but one (8 of 9) of the CP actions this past year.

1. Escalated Enforcement Trends

As previously noted, the NRC issued 81 escalated enforcement actions in CY 2017. The 81 actions represent a decrease of approximately 9 percent from the number of actions issued in CY 2016. Table 1 shows a breakdown of the total number of escalated enforcement actions issued by the NRC over the past 5 years by type of enforcement action. Figure 4 displays this information in a graph.

Table 1—Escalated Enforcement (CY 2013 to CY 2017)*

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017	Average
Escalated NOVs (w/o CPs)	55	60	62	61	62	60
NOVs and Orders w/ CPs	11	10	13	14	8	11
Orders Imposing CPs	0	2	2	2	1	1
Orders (w/o CPs)	10	13	4	12	10	10
Total	**76**	**85**	**81**	**89**	**81**	**82**

* Information reported for prior CYs may have been adjusted in this year's annual report to reflect more accurate data that were not available when the CY 2016 annual report was published.

As shown in Table 1, the number of escalated enforcement actions issued in CY 2017 is very close to the most recent 5-year average. Table 1 and Figure 4 show that the number of NOVs that do not involve a CP has been generally steady since 2013, and any changes in the total number of escalated actions seem to vary with the number of CP actions and orders without a CP, averaging about 12 and 10 actions per year, respectively.

To help explain possible reasons for any annual trends, Figure 5 presents escalated enforcement trends between CY 2013 and CY 2017 by business lines. As shown in Figure 5, the CY 2017 decrease in the number of escalated actions, when compared to the number of actions in CY 2016, may be solely attributed to the decrease in the number of enforcement actions issued to materials user licensees (from 64 to 50). This overall decrease was offset by the additional escalated actions issued to fuel facilities this year (6 actions this year compared to 1 escalated action issued in 2016). Additionally, when considering the past 5 years, the data show general parity in the number of escalated actions issued to operating reactors and materials users between CYs 2013 and 2015; however, since 2016, materials user licensees have accounted

for more than twice as many (approximately 67 percent versus 28 percent of the total) actions as issued to operating reactors.

Tables 4 and 5 at the end of this section offer a more detailed breakdown of enforcement actions issued during CY 2017 by the type of licensee.

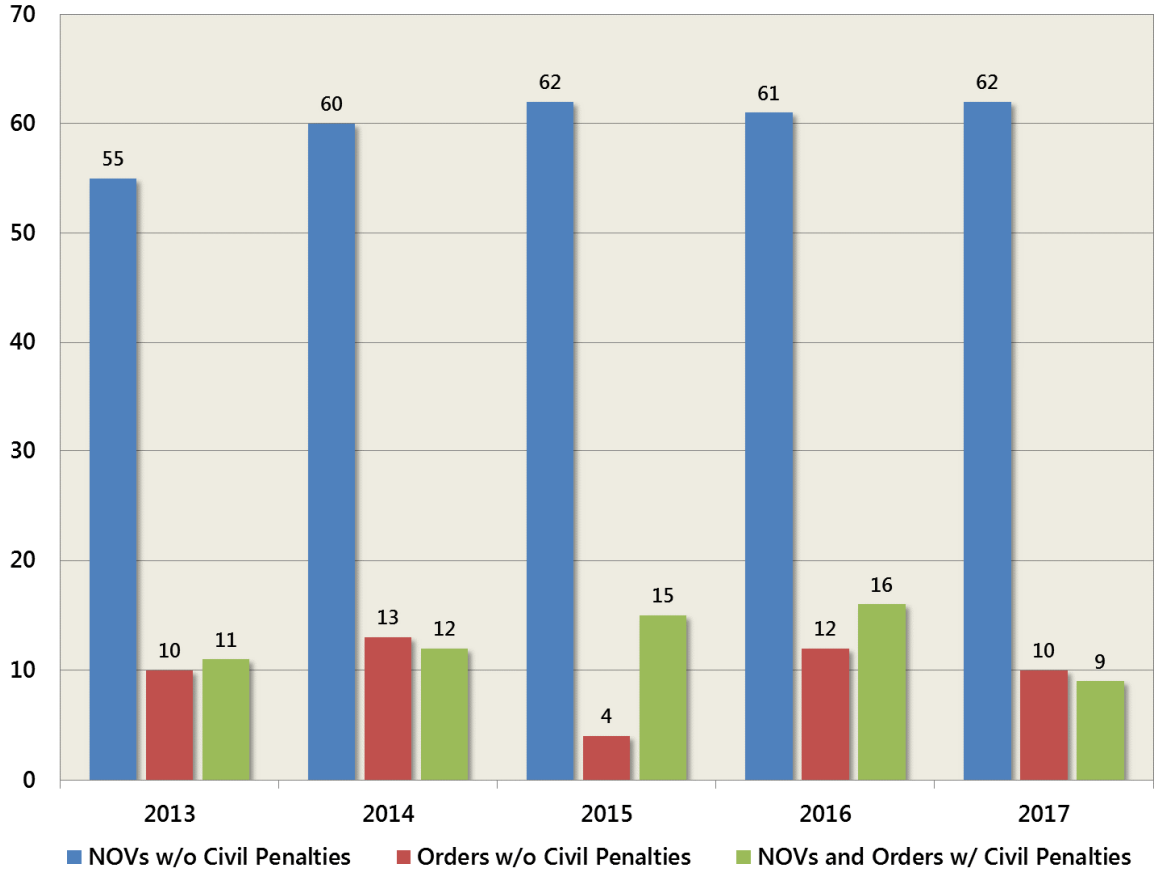


Figure 4—Escalated Enforcement Actions Issued (CY 2013 to CY 2017)

As in previous years, Figure 5 shows that the number of actions issued in CY 2017 was largely influenced by cases involving nuclear materials users. Table 4 further reveals that the materials user actions were led by gauge users, hospitals, and radiographers. Gauge user cases remained steady this year (18), again dominated by the number of cited violations of NRC materials security and storage requirements for portable gauges. Cases involving hospital licensees increased from five (CY 2016) to nine in CY 2017. Additionally, the number of escalated actions involving radiographers decreased from 10 to 6 in CY 2017; however, this number is comparable to the average number of actions issued to radiographers in the past 5 years. Of the six escalated actions issued to radiographers in CY 2017, four involved violations of radiographic operations under 10 CFR Part 34, "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations," and two involved violations of security requirements in 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material." The most notable finding, however, was that no escalated enforcement actions were issued to materials

distributor licensees in CY 2017. In CY 2016, the NRC issued 10 actions and in prior years has averaged approximately 4 cases per year involving materials distributors.

Figure 5 also shows that the number of escalated enforcement actions issued to operating reactor licensees between CY 2013 and CY 2015 ranged from 35 to 38 per year. However, in CY 2016, the agency issued only 23 escalated actions to operating reactors, a 38 percent decrease compared to the average number of actions issued in the previous 3 years. In CY 2017, this trend continued, as the agency issued only 25 escalated actions to operating reactors. Of these, 14 actions were associated with White SDP findings under the ROP, and no violations were associated with Yellow or Red SDP findings.

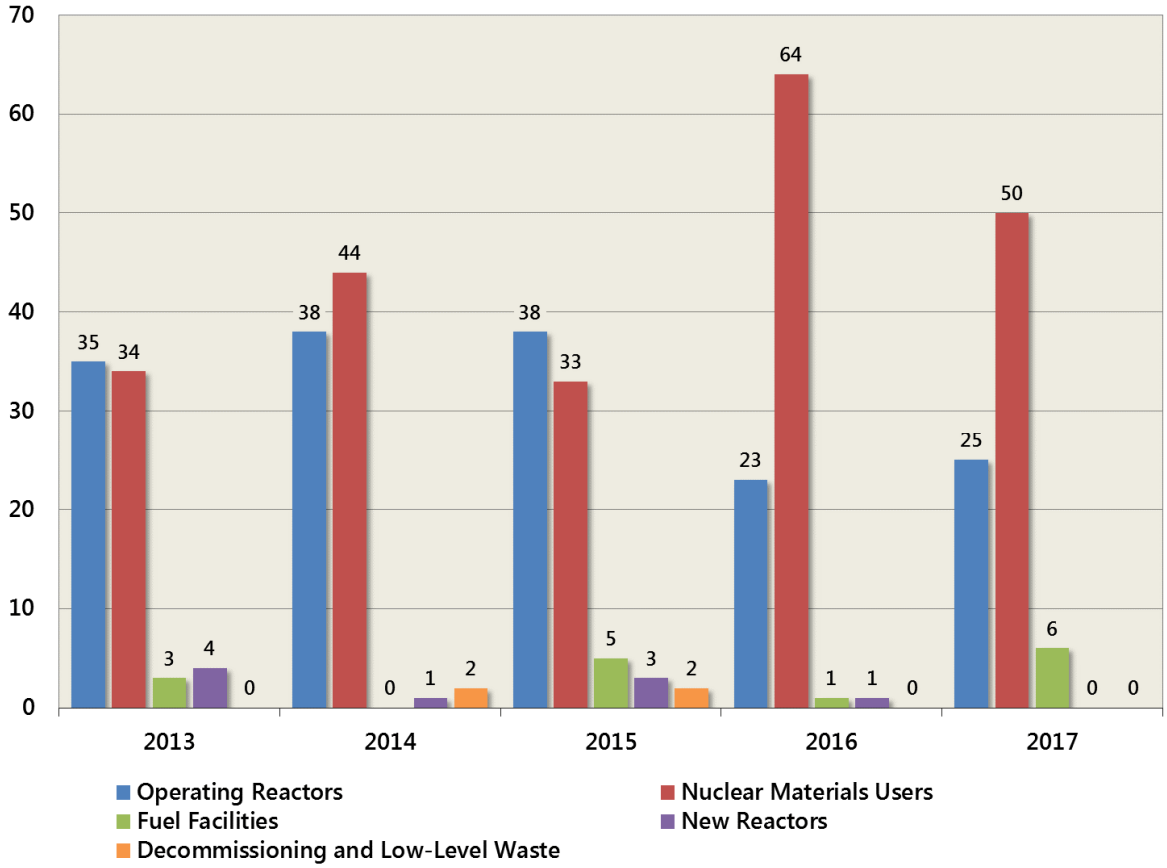


Figure 5—Escalated Enforcement by Business Line (CY 2013 to CY 2017)

2. Civil Penalty Actions

In CY 2017, the agency processed nine enforcement actions that involved CPs totaling $95,900. Of these actions, eight were associated with materials user licensees and one was issued to a fuel cycle facility licensee. The largest CP proposed was $22,400 to Qal-Tek Associates, LLC, based on an SL II problem involving transportation violations of 10 CFR 71.5(a), which requires licensees that deliver licensed material to a carrier for transport to comply with the applicable U.S. Department of Transportation requirements in 49 CFR Parts 171 through 180.

Of the nine CP cases, four also 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 is based 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 it may increase the SL accordingly.

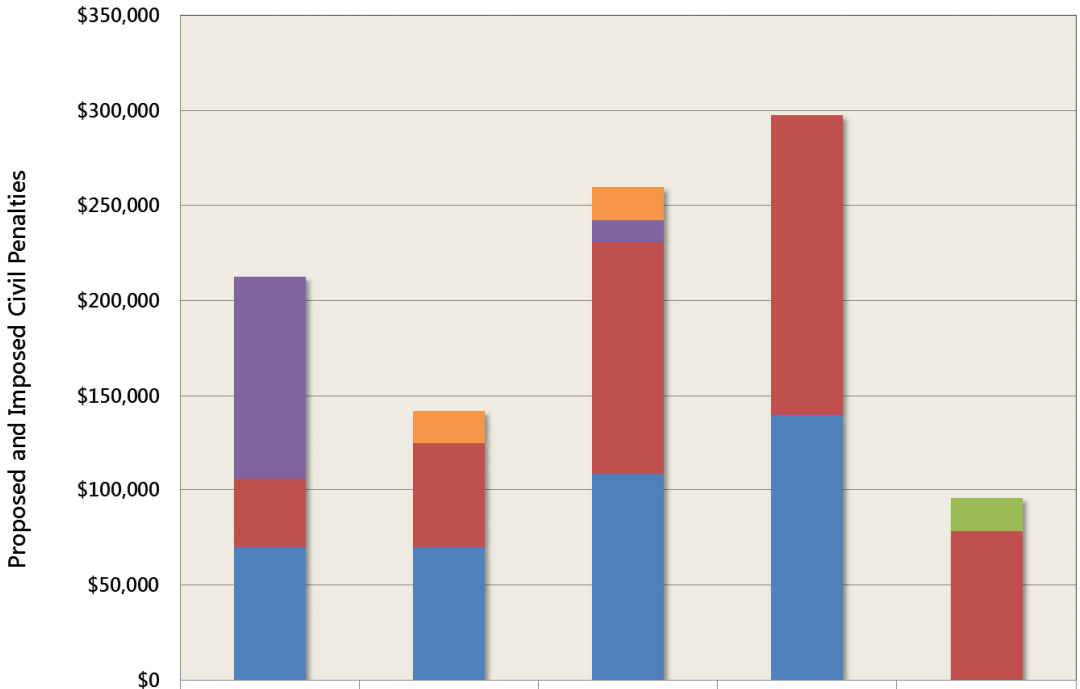
Table 2 compares CP assessments proposed, imposed, and paid for the most recent 5 CYs and the 5-year average. When reviewing the information in this table, it is important to note that an enforcement action may include more than one CP or more than one violation. In addition, a CP may be proposed one year and paid or imposed in another year. In some cases, the NRC has also approved a CP payment plan which permits a licensee to pay the CP in regular installments. Finally, the amount of a proposed CP may be reduced, or even eliminated, if the agency is exercising enforcement discretion as part of a settlement agreement developed during ADR.

Table 2—Civil Penalty Information

	2013	2014	2015	2016	2017	Average
Number of Proposed CPs	10	9	12	14	8	11
Number of Imposed CPs*	1	3	3	2	1	2
Number of Paid CPs	8	8	12	12	9	10
Amount of Proposed CPs	$211,400	$56,700	$214,200	$262,500	$88,900	$166,740
Amount of Imposed CPs	$1,000	$85,400	$45,500	$35,000	$7,000	$34,780
Amount of Paid CPs	$176,500	$110,362	$176,364	$206,500	$61,500	$146,245

* Imposition cases and associated CP amounts reflect CPs issued via an order and include both (1) orders imposing a CP after a licensee does not pay a proposed CP and (2) CPs agreed to in an ADR case that are included in the case CO. In the first scenario, the case is a subset of the proposed CP cases 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 number of CPs (proposed and imposed) issued in CY 2017 was significantly lower than the number of CPs issued in CY 2016 and was lower than the average number issued over the last 5 years. The total CP dollar amount (proposed and imposed amounts) also significantly decreased (about 68 percent) in CY 2017 compared to CY 2016. No CPs were associated with ADR settlement agreements in CY 2017.



	2013	2014	2015	2016	2017
Decommissioning and LLW	$0	$17,500	$17,500	$0	$0
New Reactors*	$106,400	$0	$11,200	$0	$0
Fuel Facilities	$0	$0	$0	$0	$17,500
Nuclear Materials Users	$36,000	$54,600	$122,500	$157,500	$78,400
Operating Reactors	$70,000	$70,000	$108,500	$140,000	$0

* The New Reactors business line includes CPs proposed and imposed on vendors and suppliers.

Figure 6—Civil Penalties by Business Line (CY 2013 to CY 2017)

Figure 6 shows the total dollar amount of proposed and imposed CPs, by licensee business lines, in CY 2017 and the preceding 4 years. Figure 7 shows the share of the total CP amounts issued over the past 5 years between each of the operating reactor, nuclear materials user, fuel facility, and other business lines. Often, total CP amounts may peak in a particular year because of one or two CP actions. For example, in 2016, the NRC issued one NOV/CP in the amount of $140,000 to the Tennessee Valley Authority for failing to conduct compensatory fire watches at the Browns Ferry Nuclear Plant. This caused a small spike in the total CP amounts for that year. Therefore, a single year does not indicate a trend—an important factor to consider when assessing possible trends.

Appendix A briefly describes each of the CP actions for CY 2017. Although the appendix does not address security-related issues involving NOVs with CPs, the data discussed in this report include the number of NOVs associated with security-related issues.

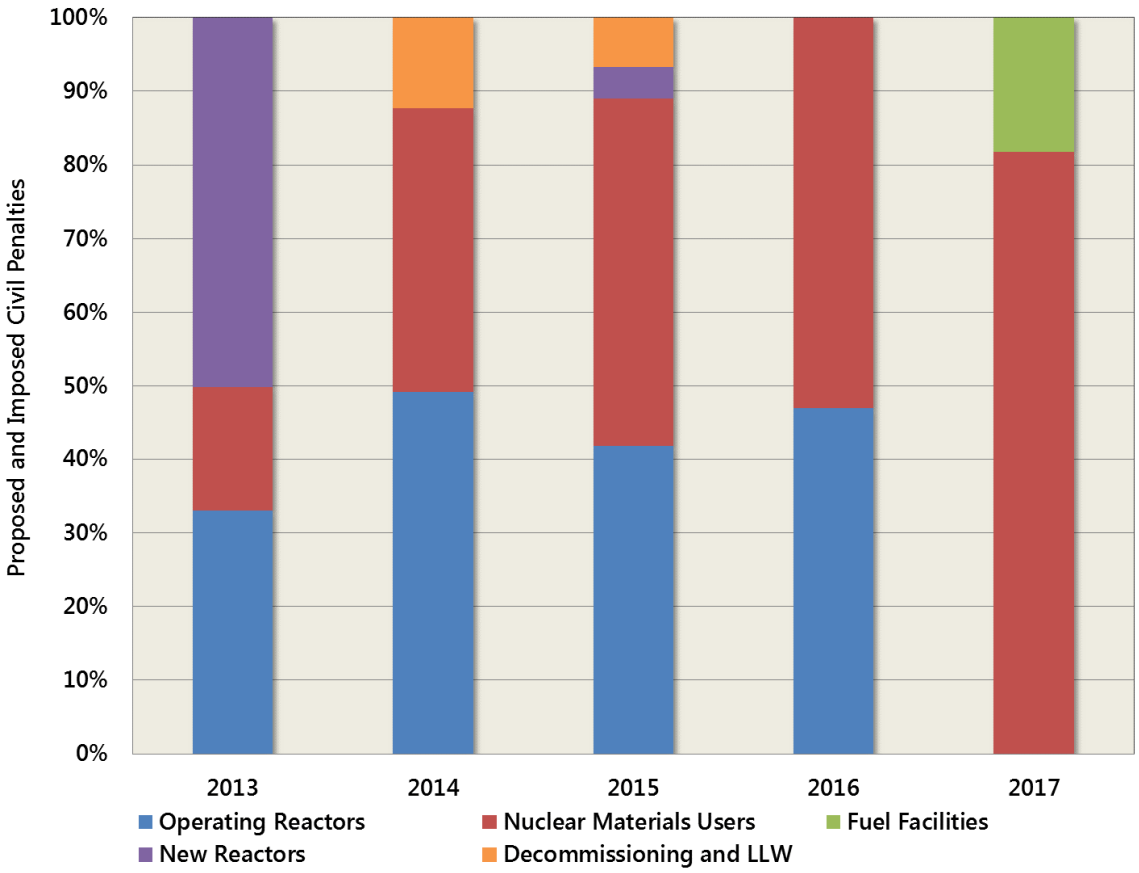


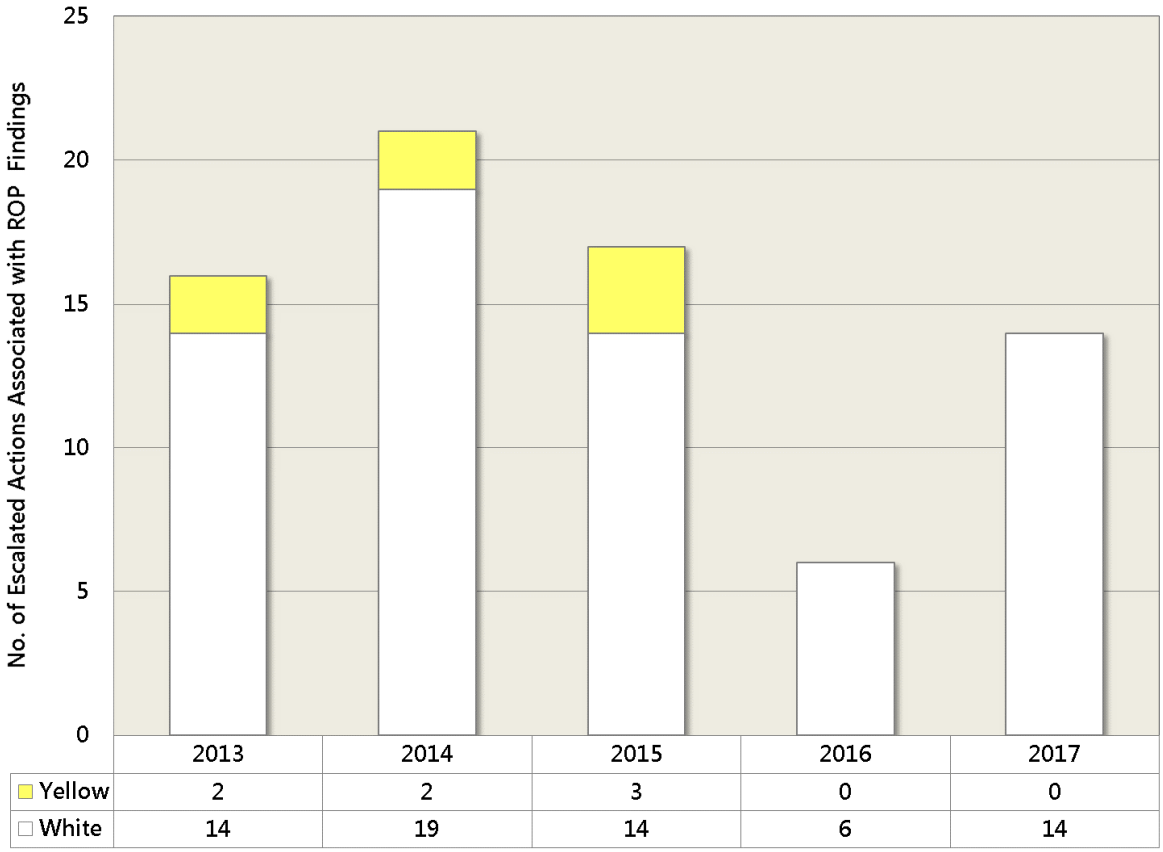
Figure 7—Percentage of Civil Penalties by Business Line

3. Notices of Violation without Civil Penalties

In accordance with Section 2.3.4 of the Enforcement Policy, a CP may not be warranted for escalated enforcement actions evaluated under traditional enforcement if certain criteria are met. For example, if (1) the identified violation is the first nonwillful SL III violation identified in the past 2 years or during two inspections at the licensee's facility and the licensee took adequate corrective action to prevent its recurrence, or (2) this was not the first nonwillful SL III violation identified in the past 2 years or during 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 2017, the NRC issued 62 escalated NOVs without CPs, led by the number of NOVs issued to materials user licensees (37 of 62) and operating reactor licensees (22 of 62). Of the 37 NOVs issued to materials licensees, 14 were associated with gauge users. Of the 22 operating reactor licensee violations, 14 were associated with White SDP findings under the ROP. No violations were related to Yellow SDP findings, and for a fifth consecutive year, the NRC issued no Red SDP findings with

associated violations in CY 2017. Figure 8 shows escalated NOV trends associated with SDP findings at operating reactors over the past 5 years. As indicated in Figure 8, the 14 escalated actions associated with SDP findings that were issued in CY 2017 is very comparable to the number in the previous 4 years (averaging about 15 actions per year).



	2013	2014	2015	2016	2017
Yellow	2	2	3	0	0
White	14	19	14	6	14

Figure 8—Escalated Enforcement Associated with ROP SDP Findings at Operating Reactors

In CY 2017, the NRC issued three escalated NOVs without CPs to fuel facility licensees. In the past 5 years, fuel facility licensees averaged slightly more than two escalated NOVs each year. 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 include the number of NOVs associated with security-related issues.

4. Enforcement Program Timeliness

Escalated enforcement actions are issued in cases involving violations assessed at SL I, II, or III if they are 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 reactor and materials licensees is an output measure (external goal) reported annually to Congress as part of the NRC's Performance Accountability Report. The external goals, modified in 2012 to stress the importance of timely escalated enforcement actions, are as follows: (1) 100 percent of cases not based in the Office of Investigations (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.

In addition to the external goals, the NRC staff continues to use other internal timeliness measures for trending purposes and to provide information to support potential improvements to its processes. These internal goals are (1) completing non-OI-based cases with an average NRC processing time of less than or equal to 120 days and (2) completing OI-based cases with an average NRC processing time of less than or equal to 180 days.

The NRC processing time starts on the latest of the following dates: (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, multiple escalated enforcement actions may be grouped together and treated as a single case if the enforcement actions 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 multiple enforcement actions were taken, these actions will be treated as one case for timeliness purposes so that timeliness data are not skewed in either a positive or negative direction.

In CY 2017, all non-OI-related actions were issued within 160 processing days, and the staff met the external goal for dispositioning non-OI cases. This represents a 2-year positive trend when compared to CY 2015 when 4 of the 54 non-OI-related cases exceeded the external goal. For OI-related cases, the NRC issued all but 1 of the 16 OI-related enforcement actions in fewer than 330 processing days in CY 2017. Therefore, the staff did not meet the external goal for dispositioning OI-related enforcement actions in CY 2017. The one case that did not meet the external goal for OI-related actions involved several issues of wrongdoing and significantly different views on how to proceed with the case after the staff concluded that one of the persons, who had also raised concerns to the NRC, had committed wrongdoing. The NRC had to make several difficult decisions, which contributed to the additional time needed to process the case.

In CY 2016, the staff streamlined the SDP and enforcement processes (e.g., the staff increased use of the modified panel process and revised the Significance and Enforcement Review Panel process). To help elevate and resolve potentially differing

views earlier in the enforcement process, OE will continue to work closely with the regional and program office staff in identifying enforcement cases that are likely to involve complex technical issues or other case-specific challenges. To improve performance in this area, management will continue to emphasize timeliness.

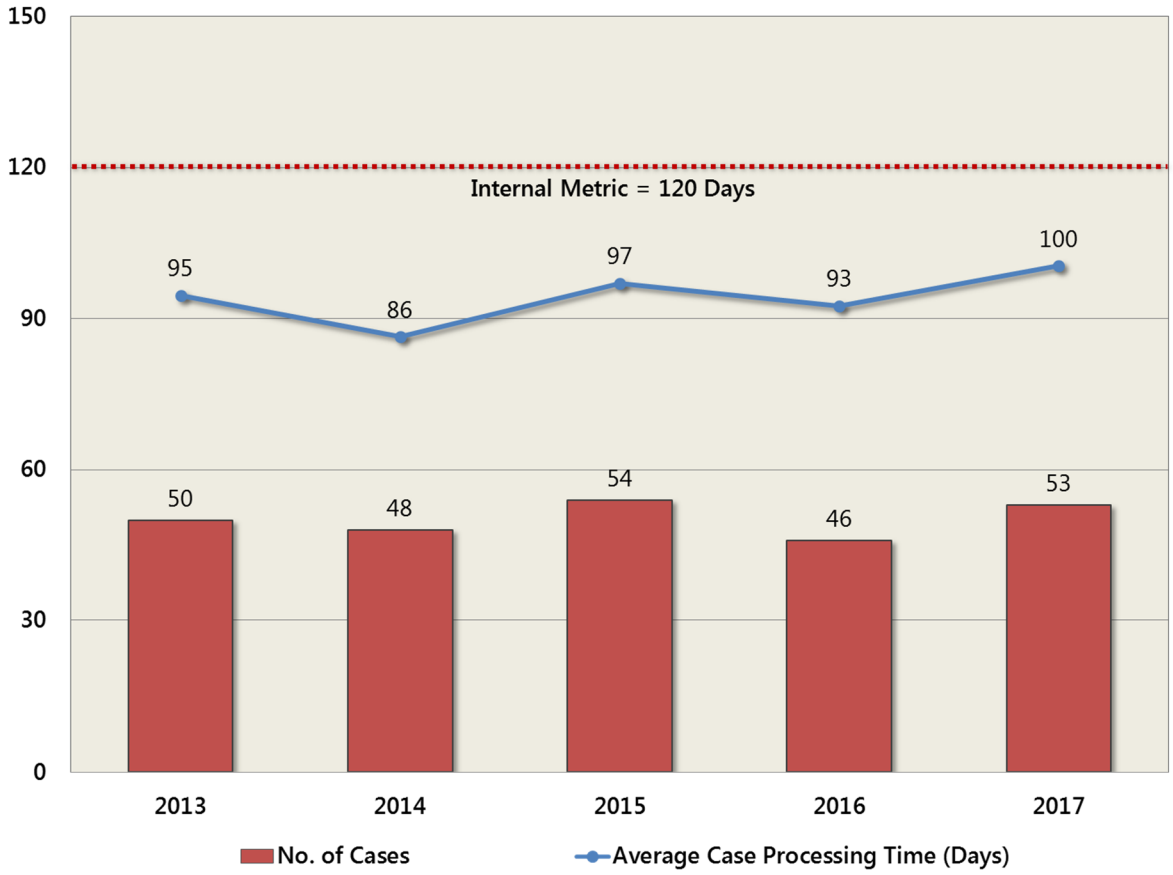


Figure 9—Non-OI Case Timeliness (CY 2013 to CY 2017)

Figure 9 shows that, on average, the agency required 100 processing days to issue a non-OI-related enforcement action. This is less than the goal of 120 processing days and is generally consistent with the overall trend for the past 5 years, although somewhat higher.

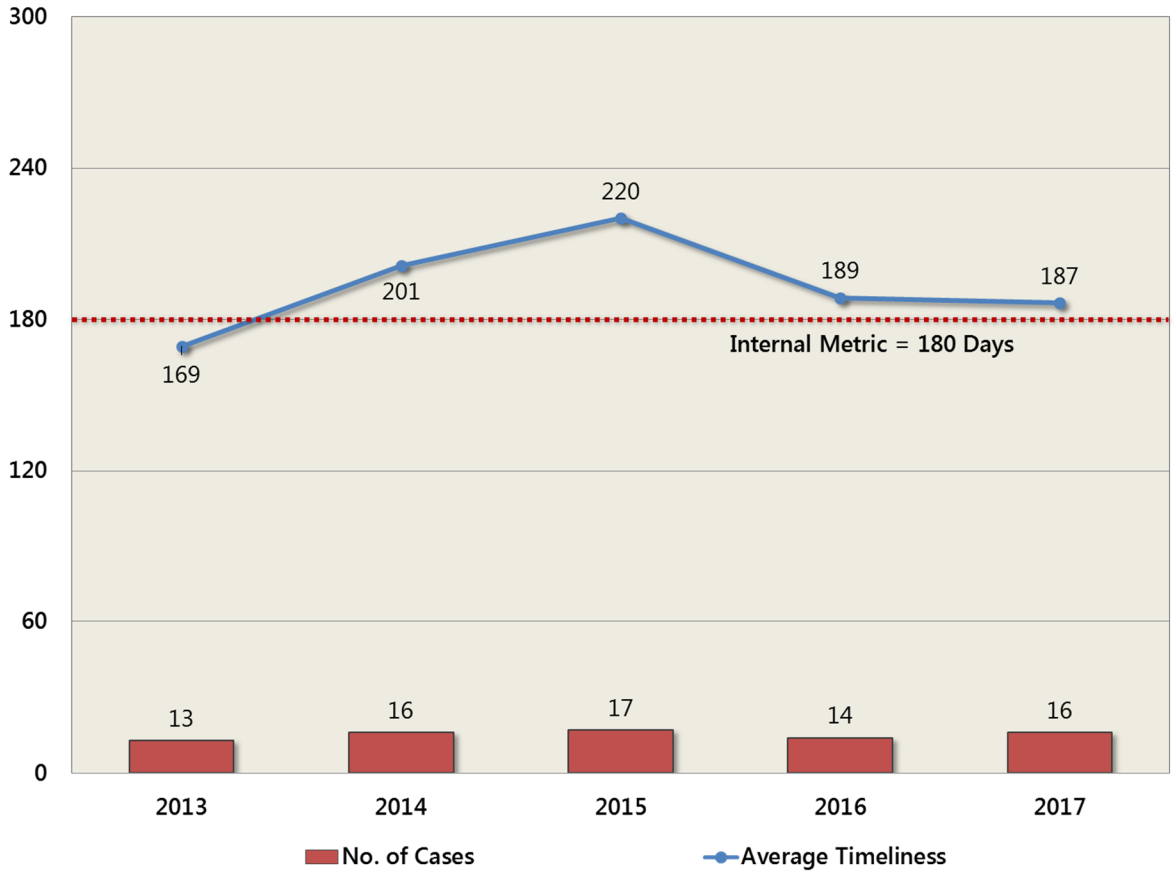


Figure 10—OI Case Timeliness (CY 2013 to CY 2017)

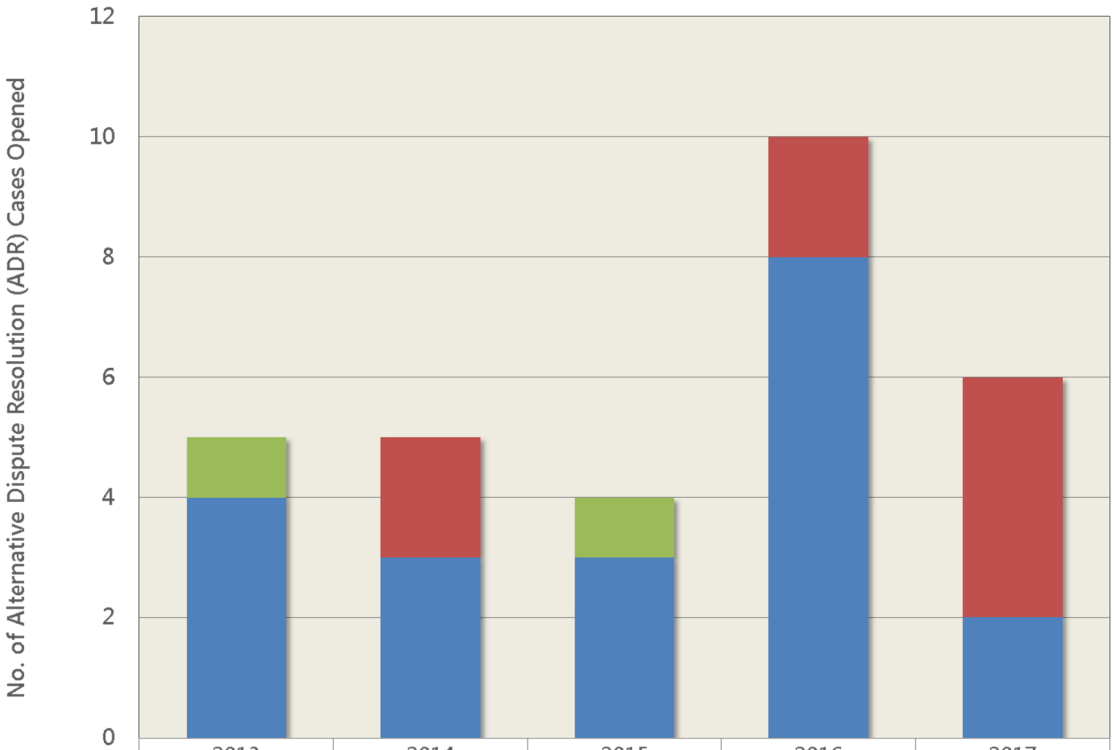
Figure 10 shows the case processing timeliness trends for OI-related escalated enforcement actions for the past 5 CYs. The figure shows that, on average, the agency required 187 days to issue an OI-related enforcement action in CY 2017. While this number is greater than the internal goal of 180 days, it represents continued improvement from 2014 and 2015 when the number of processing days averaged 201 and 220, respectively. The staff will continue to monitor OI-related case processing timeliness trends and anticipates improved timeliness through the use of the new electronic OI reports portal and other innovations made in 2018.

5. Alternative Dispute Resolution

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 courts by using a neutral third party. The NRC employs mediation for its enforcement ADR program using a neutral third party, with no decisionmaking authority, to help the parties reach an agreement. Participation in the process is voluntary, and the content of the final agreement is mutually agreed on. If established, the terms agreed on are normally formalized in a CO, which is 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 all escalated nonwillful, traditional enforcement cases with the potential for CPs, with the exception of those involving the ROP and Construction Reactor Oversight Program.

Under the 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. The NRC believes that 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.

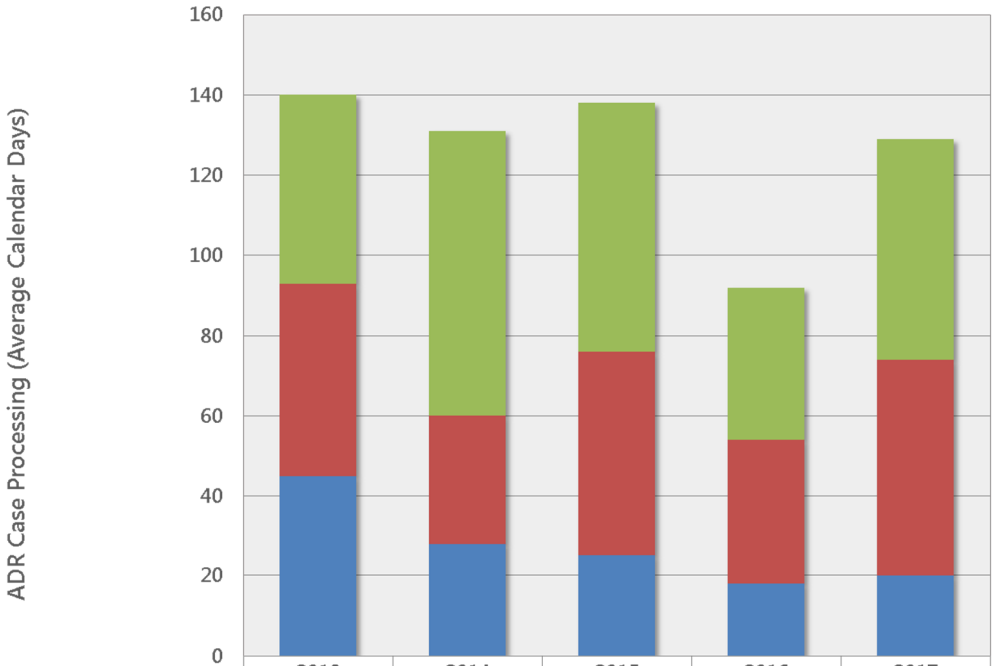


	2013	2014	2015	2016	2017
Discrimination	1	0	1	0	0
Civil Penalty	0	2	0	2	4
Wrongdoing	4	3	3	8	2

Figure 11—Alternative Dispute Resolution Cases Opened (CY 2013 to CY 2017)

As Figure 11 shows, approximately six new cases are opened each year under the enforcement ADR program. In CY 2017, the NRC participated in six ADR mediations, with five resulting in orders confirming the terms of the parties’ agreement (one case was in processing as of January 2018). In the past 5 years, all of the enforcement cases that have used ADR have resulted in a settlement agreement.

In CY 2017, the staff continued to focus on enhancing the enforcement ADR program's timeliness, transparency, and overall effectiveness. While the program enhancements initiated over the past several years had a positive effect on the ADR process, most noticeably during CY 2016, OE continues to develop and implement additional process improvements to increase the overall efficiency and, in turn, the timeliness of the program. Some process improvements include enhancement of guidance and other tools related to mediation session preparation and internal coordination and communication to support successful mediation sessions and order issuance.



	2013	2014	2015	2016	2017
Mediation Date to Order Issuance	47	71	62	38	55
Agreement Date to Mediation Date	48	32	51	36	54
Offer Date to Agreement Date	45	28	25	18	20
No. of Orders Issued	5	5	4	10	5

Figure 12—Calendar Days from Alternative Dispute Resolution Offer to Issuance of Confirmatory Order

As depicted in Figure 12, the average time to process an ADR case, from the date of the offer to the issuance of a CO, increased this year compared to CY 2016. However, the increase during CY 2017 is still a slight decline from the average processing time over the past 5 years.

C. Nonescalated Enforcement

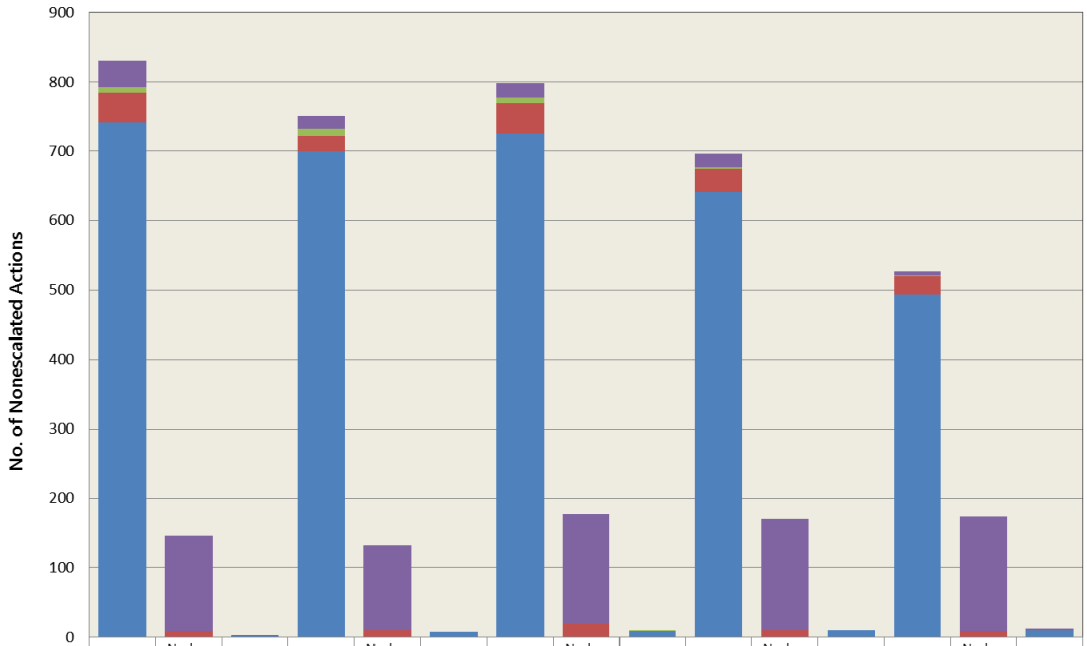
When OE first published the Enforcement Program Annual Report, it focused solely on escalated enforcement actions while providing limited information on nonescalated enforcement. Nonescalated enforcement actions include SL IV NOVs and NCVs under traditional enforcement and NOVs and NCVs associated with Green SDP findings under the ROP. In recent years, recognizing that most enforcement actions fall into the nonescalated category, OE began to provide more information on nonescalated enforcement trends. One of the challenges in tracking and trending these actions is that the regions and program offices record nonescalated enforcement in separate databases. Beginning this year, operating reactors information is being recorded in the Replacement Reactor Program System (RRPS), which superseded the old Reactor Program System (RPS) database that had served the NRC's operating reactors inspection program for many years. The staff can now more easily obtain RRPS data through the NRC's internal Web site. Materials users' nonescalated actions are stored in the Web-Based Licensing (WBL) system, and new reactor construction data are maintained in the Construction Inspection Program Information Management System (CIPIMS).

In 2015, OE completed a review of tracking systems used for nonescalated enforcement actions in selected program areas. OE performed this review, in part, because of commitments made in response to a 2008 audit by the Office of the Inspector General that identified recommendations for tracking nonescalated violations (OIG-08-A-17, "Audit of NRC's Enforcement Programs," dated September 26, 2008). OE's report, "Review of Selected Non-Escalated Violation Tracking Systems," dated October 15, 2015, identified the need for more detailed guidance from the respective program offices to improve the consistency and completeness of nonescalated enforcement data, as well as to clarify tracking expectations. Furthermore, the report highlighted the value of applying a single electronic tracking system used uniformly in each program area. The envisioned system would be available to multiple users and offer both electronic searching and collection of similar information to address information needs. While a single electronic tracking system could allow for a more complete presentation of the agency's use of nonescalated enforcement actions, it is not current on the Agency's planning horizon. As such, OE will continue to manually compile nonescalated enforcement data annually from the various available tracking systems.

Figure 13 (on page 18) provides information obtained from the RRPS, WBL system, and CIPIMS. As shown in the figure, the NRC issued approximately 720 nonescalated enforcement actions annually to operating reactors for the most recent 5 CYs. Nuclear materials users have also averaged 160 nonescalated actions each year, and new reactor licensees have received approximately eight nonescalated actions during this time. The slight increase in new reactors violations stems from construction activities at these sites.

In recent years, there has been a notable overall downward trend in operating reactor SL IV NOVs and NCVs issued under traditional enforcement and NOVs and NCVs associated with Green SDP findings issued under the ROP. 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. The NRC plans to further assess these trends, along with other data, per Inspection Manual Chapter (IMC) 0307, Appendix B, "Reactor Oversight Process Baseline Inspection Procedure Assessments and Reviews."

The IMC 0307, Appendix B, assessment is expected to be completed by the end of CY 2018 and is planned to be documented in the next ROP self-assessment SECY paper.



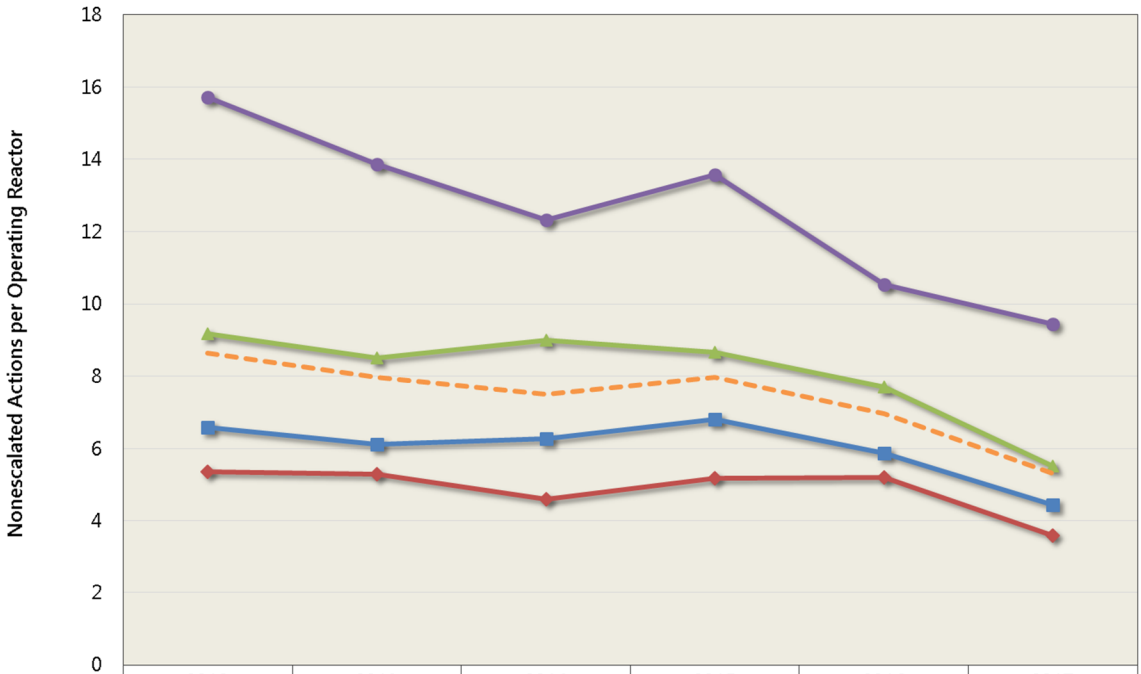
	Operating Reactors	Nuclear Materials Users	New Reactors	Operating Reactors	Nuclear Materials Users	New Reactors	Operating Reactors	Nuclear Materials Users	New Reactors	Operating Reactors	Nuclear Materials Users	New Reactors	Operating Reactors	Nuclear Materials Users	New Reactors
	2013			2014			2015			2016			2017*		
NOV - SL IV	37	137	1	19	122	0	21	157	0	19	161	0	6	165	1
NOV - Green	8	0	0	11	0	0	8	0	1	2	0	0	1	0	0
NCV - SL IV	43	9	0	22	10	0	44	20	0	34	10	0	27	9	1
NCV - Green	741	0	2	699	0	8	725	0	9	641	0	10	493	0	10

* Data for CY 2013 through CY 2016 may have been adjusted from previous annual reports to reflect the most current information available. The information for CY 2017 reflects RRPS, WBL system, and CIPIMS data recorded as of March 18, 2018.

Figure 13—Nonescalated Enforcement (CY 2013 to CY 2017)

In September 2013, the Government Accountability Office (GAO) issued GAO-13-743, "Nuclear Power: Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight." One of the report's findings related to the enforcement program generally and stated that "differences exist across NRC regions in identifying and resolving findings, and NRC has taken some steps to address them." More specifically, the GAO observed that the identification of nonescalated findings, which equate to very low risk significance, differed from region to region. The GAO also noted that the NRC had taken some steps to address these differences but had not comprehensively reviewed the underlying reasons. The number of escalated findings, which equate to greater risk significance, was more consistent across regions.

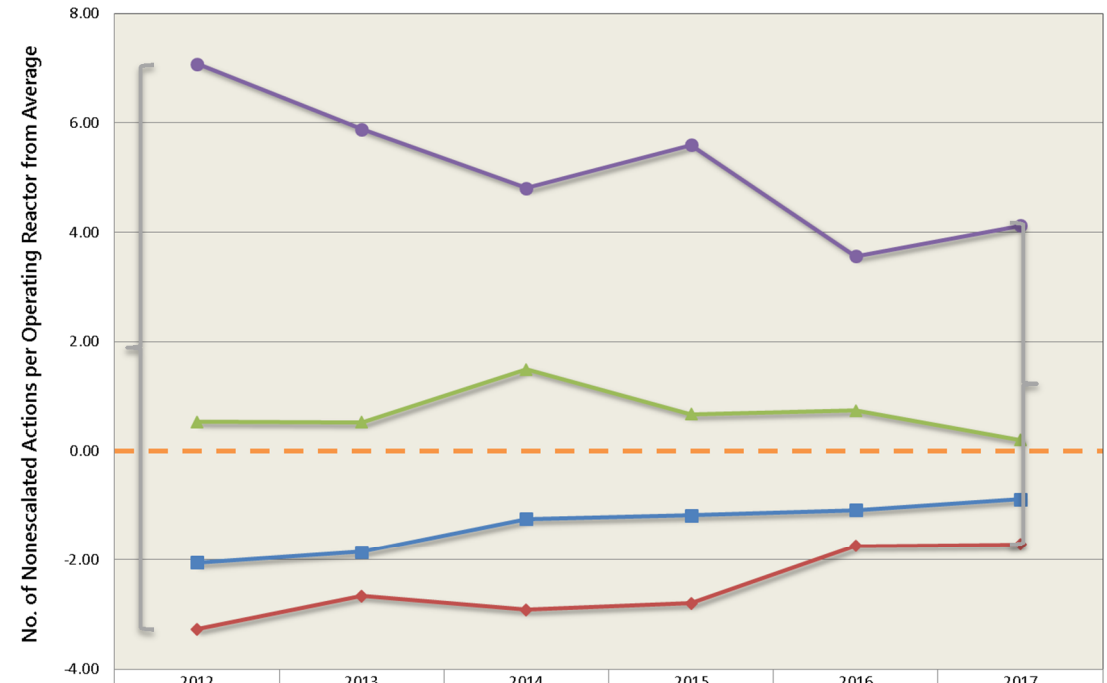
In 2014, the NRC performed a study to address, in part, the differences across the regions described in the GAO report. This study revealed that the regions were screening performance deficiencies for more than minor findings and assigning identification credit to findings of very low safety significance differently. As a result, in 2015, the staff began to improve its procedures and completed procedural revisions and training to make the screening process more predictable.



	2012	2013	2014	2015	2016	2017
Region I	6.58	6.12	6.27	6.80	5.88	4.44
Region II	5.36	5.30	4.59	5.18	5.21	3.61
Region III	9.17	8.50	9.00	8.65	7.70	5.52
Region IV	15.71	13.86	12.32	13.58	10.53	9.44
Average	8.63	7.97	7.51	7.98	6.96	5.32

Figure 14—Nonescalated Enforcement per Operating Reactor by Region (CY 2012 to CY 2017)

Figure 14 shows the trend of nonescalated enforcement actions issued by the regional offices for the past 6 years. The information, obtained from the new RRPS, was "normalized" to show the average number of nonescalated actions per operating reactor in each of the regions. As seen in Figure 14, consistency has steadily improved among the regional offices in the number of nonescalated enforcement actions issued since CY 2012. However, notable differences remain among the regions, with the number of nonescalated enforcement actions ranging between 3.6 and 9.4 actions per operating reactor in CY 2017. OE will continue to monitor these trends in CY 2018.



	2012	2013	2014	2015	2016	2017
Region I	-2.06	-1.86	-1.24	-1.18	-1.08	-0.88
Region II	-3.27	-2.67	-2.92	-2.80	-1.75	-1.72
Region III	0.53	0.53	1.49	0.67	0.74	0.20
Region IV	7.08	5.89	4.81	5.60	3.57	4.12

* These trends reflect information available from RRPS as of March 2018.

Figure 15—Nonescalated Enforcement per Operating Reactor Difference from Average by Region (CY 2012 to CY 2017)

Figure 15 provides information similar to that in Figure 14, noting the differences from the average number of nonescalated actions per operating reactor (i.e., the average number of actions per operating reactor is equal to zero). As noted in the figure, Region IV issued about 4.1 more nonescalated actions per operating reactor than the "average" regional office, and Region II issued 1.7 fewer actions than the average regional office in CY 2017. Again, while differences remain, this is a significant improvement from CY 2012 when the same regional offices issued approximately 7.1 more and 3.3 fewer nonescalated actions per operating reactor, respectively.

Table 3—Escalated Enforcement Actions by Region and Program Office

	NOVs w/o CPs	Orders w/o CPs	NOVs and Orders w/ CPs	Total
Region I	7	3	3	13
Region II	10	3	1	14
Region III	25	3	2	30
Region IV	20	0	3	23
NMSS	0	1	0	1
NRO	0	0	0	0
NRR	0	0	0	0
NSIR	0	0	0	0
OE	0	0	0	0
OIP	0	0	0	0
Total	**62**	**10**	**9**	**81**

Key to Offices

- NMSS—Office of Nuclear Material Safety and Safeguards
- NRO—Office of New Reactors
- NRR—Office of Nuclear Reactor Regulation
- NSIR—Office of Nuclear Security and Incident Response
- OE—Office of Enforcement
- OIP—Office of International Programs

Table 4—Escalated Enforcement Actions by Type of Licensee, Nonlicensee, or Individual

	NOVs w/o CPs	Orders w/o CPs	NOVs and Orders w/ CPs	Total
Operating Reactor	20	2	0	22
Gauge	14	1	3	18
Hospital	8	0	1	9
Radiographer	5	0	1	6
Fuel Facility	2	2	1	5
Individual Actor—Materials	3	2	0	5
Other	2	0	1	3
Physician (M)	0	0	2	2
Pharmacy	1	1	0	2
Individual Actor—Reactors	1	1	0	2
Individual Actor—Fuel Facility	1	0	0	1
Licensed Operator	1	0	0	1
Irradiator	1	0	0	1
Academic	1	0	0	1
Mill	0	1	0	1
Waste Disposal	1	0	0	1
Well Logger	1	0	0	1
Total	**62**	**10**	**9**	**81**

Table 5—Escalated Enforcement Action Trends by Type of Licensee

	2013	2014	2015	2016	2017	Total
Operating Reactor	30	29	27	17	22	125
Gauge	5	17	10	18	18	68
Radiographer	5	6	4	10	6	31
Hospital	8	4	5	5	9	31
Materials Distributor	2	1	7	10	0	20
Individual Actor—Materials	2	5	1	7	5	20
Individual Actor—Reactors	1	5	8	3	2	19
Fuel Facility	3	0	5	1	5	14
Licensed Operator	2	4	2	3	1	12
Physician (M)	3	4	1	1	2	11
Academic	4	3	1	1	1	10
Vendor—New Reactors	3	1	1	1	0	6
Irradiator	2	1	0	2	1	6
Well Logger	1	0	1	1	1	4
Pharmacy	0	0	0	2	2	4
Import/Export	0	0	1	2	0	3
Nonoperating Reactor	0	1	2	0	0	3
Research Reactor	2	0	1	0	0	3
New Construction—Reactor	1	0	1	0	0	2
Waste Disposal	1	0	0	0	1	2
Decommissioned Reactor/Site	0	1	0	0	0	1
Individual Actor—Vendor	0	0	1	0	0	1
Individual Actor—Fuel Facility	0	0	0	0	1	1
Mill	0	0	0	0	1	1
Other	1	3	2	5	3	14
Total	**76**	**85**	**81**	**89**	**81**	**412**

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II. Enforcement Case Work

A. Significant Enforcement Actions

In CY 2017, the agency was involved in several noteworthy enforcement actions.

Louisiana Energy Services, LLC

On March 3, 2017, the NRC issued an NOV to the Louisiana Energy Services, LLC (doing business as URENCO USA (UUSA)) uranium enrichment facility in Eunice, NM, for an escalated problem involving aspects of the security program related to the security events. An investigation conducted by the NRC Office of Investigations determined that one violation was partly the result of deliberate misconduct by UUSA and contractor employees. Because some of the violations were closely related to the same security events and were attributed to common root and contributing causes, the NRC grouped the violations into major areas to appropriately characterize the significance of the security events.

Qal-Tek Associates, LLC

On December 12, 2017, the NRC issued an NOV and proposed imposition of a CP in the amount of $22,400 to Qal-Tek Associates, LLC, for an SL II problem. The violation involved the failure to comply with 10 CFR 71.5(a), which requires licensees that deliver licensed material to a carrier for transport to comply with the applicable U.S. Department of Transportation requirements in 49 CFR Parts 171 through 180. Specifically, Qal-Tek shipped five radioactive sources in a single 38-liter (10-gallon) steel drum shipping container, and three of these sources were also located in an inner lead container (commonly referred to as a “pig” container) that was not properly braced. The shipment went from Idaho Falls, ID, through several airports without incident to a temporary jobsite in New York City. For the return transport of the sources to Idaho Falls on April 11, 2017, a licensee radiation safety officer prepared the package in the same manner as the initial shipment. This time, however, the lid of the pig opened during transport, and three of the sources moved from the pig into the surrounding sealed steel drum. Dose rates measured at 1 meter and on contact exceeded NRC regulatory limits; however, the NRC’s analysis concluded that members of the public were unlikely to have received doses in excess of regulatory limits.

B. Hearing Activities

No hearing activities resulted from enforcement actions in CY 2017.

C. Enforcement Orders

In CY 2017, the NRC issued 11 orders to licensees, nonlicensees, and individuals. The 11 orders included 6 COs that were issued to confirm commitments associated with ADR settlement agreements. None of the ADR-related COs included a requirement to pay a CP as a result of the settlement agreement. Three orders involved prohibiting individuals from participating in NRC-regulated activities, one order imposed a CP on a materials user licensee, and another order revoked materials licenses, in part, for failing to pay CPs associated with a previous enforcement action.

As shown in Section I, Table 1, the number of orders the NRC issued in CY 2017 decreased slightly from CY 2016. This decrease can be attributed to the number of COs issued following ADR mediation (the NRC issued 12 COs in 2016 and 6 in 2017). Appendix C briefly describes the enforcement orders issued in 2016.

D. Enforcement Actions Supported by the Office of Investigations

In CY 2017, OI investigations supported 32 percent of the escalated enforcement actions (26 of the 81) issued by the agency. This figure is only slightly lower than the percentage of cases supported by OI investigations in CY 2016. The escalated actions supported by OI investigations include the following:[1]

- 4 of the 9 escalated NOVs and orders with CPs (44 percent)
- 18 of the 62 escalated NOVs without CPs (29 percent)
- 4 of the 10 enforcement orders without CPs (40 percent)

The number of enforcement actions supported by OI investigations (26) is generally on par with the average number of enforcement actions supported by OI investigations over the previous 4 years (actions averaged 24.8 between CY 2013 and CY 2016). The average percentage of enforcement actions supported by an OI investigation over the past 5 years (CY 2013 through CY 2017) is approximately 30 percent.

E. Actions Involving Individuals and Nonlicensee Organizations

In CY 2017, the agency issued nine escalated enforcement actions to licensed and unlicensed individuals. This number is included in the total number of escalated enforcement actions (NOVs and orders) that the agency issued in 2017. Appendix C summarizes the orders that were issued to individuals, and Appendix D summarizes the NOVs issued to individuals in CY 2017. These appendices do not describe individual enforcement actions involving security-related violations. The number of escalated actions issued to individuals in CY 2017 (9) is slightly less than the average number of actions issued between CY 2013 and CY 2017 (11 per year).

The agency issued no escalated enforcement actions to nonlicensee organizations (i.e., vendors) in CY 2017.

F. Enforcement Action Involving Discrimination

In CY 2017, no escalated enforcement actions resulted from a substantiated allegation of discrimination. Between CY 2013 and CY 2017, the NRC handled, on average, one substantiated discrimination case each year; however, it is not unprecedented to have a year with no escalated enforcement action taken because of discrimination.

[1] Note that the number of escalated actions reported in this section differs from the number of cases shown in Figure 10 since a single case may encompass multiple actions.

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. The exercise of discretion allows the NRC to determine actions that are appropriate for a particular case, consistent with the Enforcement 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 levels of violations and the appropriate enforcement sanctions.

In CY 2017, the NRC exercised discretion in 36 enforcement cases to address violations of NRC requirements. This number reflects a slight increase in the number of cases in which the agency used discretion from CY 2016 (34 cases) and is comparable to recent trends. A discussion of the more significant cases dispositioned using enforcement discretion in CY 2017 follows.

1. Discretion Involving Temporary or Interim Enforcement Guidance

The NRC used enforcement discretion in accordance with either an Interim Enforcement Policy or an EGM 18 times in 2017, a 30-percent decrease compared to 2016.

- On March 13, 2014, the NRC issued EGM-14-001, “Interim Guidance for Dispositioning 10 CFR Part 37 Violations with Respect to Large Components or Robust Structures Containing Category 1 or Category 2 Quantities of Material at Power Reactor Facilities Licensed under 10 CFR Parts 50 and 52.” The NRC staff established this EGM following a review of how 10 CFR Part 37 applies to large components and Category 1 or Category 2 quantities of radioactive material stored in robust structures. The staff determined that enforcement discretion, under certain conditions, is appropriate for some violations of 10 CFR Part 37 at power reactor facilities while a long-term regulatory action is being considered. In CY 2017, only one case met the criteria listed in the EGM, and the NRC exercised discretion to not cite violations that were evaluated at SL IV. This number is in sharp contrast to the 15 cases that met the criteria for discretion in CY 2016.

- The NRC dispositioned seven violations using discretion in accordance with Revision 3 to EGM-11-003, “Dispositioning Boiling Water Reactor Licensee Noncompliance with Technical Specification Containment Requirements during Operations with a Potential for Draining the Reactor Vessel,” dated January 15, 2016. The NRC may exercise enforcement discretion for violations of certain technical specification (TS) requirements at boiling-water reactors under EGM-11-003. In comparison, the NRC dispositioned three cases using this discretion in CY 2016.

- On June 10, 2015, the NRC issued the initial revision to EGM-15-002, “Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance.” On February 7, 2017, the agency revised EGM-15-002 to incorporate the lessons learned from the implementation of the original

guidance. The NRC issued this EGM because, over the past several years, operating reactor licensees and the agency have identified facilities that have not conformed to their licensing basis for tornado-generated missile protection and are therefore not in compliance with applicable regulations. Because the overall risk resulting from these nonconformances is typically low, this EGM provides guidance on exercising enforcement discretion for tornado-generated missile noncompliances in certain circumstances. In CY 2017, the agency dispositioned six cases that met the criteria under this guidance.

- The NRC continued to perform fire protection inspections at power reactor sites to verify compliance with the requirements of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." Violations of these requirements that were identified at sites transitioning to the National Fire Protection Association Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," and that met the criteria as stated in the Interim Enforcement Policy 9.1, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)," warranted enforcement discretion, and the NRC did not issue NOVs. Four documented cases involved this type of discretion in CY 2017.

2. Discretion Involving Violations Identified Because of Previous Enforcement Actions

The staff may exercise enforcement discretion, in accordance with Enforcement Policy Section 3.3, "Violations Identified Because of Previous Enforcement Action," 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. In CY 2017, the NRC dispositioned two violations consistent with the guidance in Section 3.3 of the Policy.

3. Discretion Involving Special Circumstances

Section 3.5, "Special Circumstances," of the Enforcement 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 where application of the normal guidance in the Policy is unwarranted.

The NRC cited Section 3.5 of the Policy eight times in CY 2017 to disposition violations of its requirements. A brief discussion of these cases follows.

- Diablo Canyon Nuclear Power Plant—Licensee Event Report 05000275/323/2015-S01-00 documented a plant worker's failure to disclose potential disqualifying information on a personal history questionnaire on August 9, 2015. The worker's failure to report this information resulted in a

violation of 10 CFR 50.9, "Completeness and Accuracy of Information," which states, in part, that information required to be maintained by the licensee shall be complete and accurate in all material aspects. When licensee personnel became aware of the disqualifying information, they immediately terminated the individual's site access, conducted a review of any work the individual had done on the site, and notified the NRC. The NRC concluded that it was not reasonable for the licensee's staff to foresee and correct this condition before the discovery of the information and, therefore, did not identify an associated performance deficiency. The NRC staff also determined that this issue was of very low security significance.

- Department of the Navy (Master Materials License)—The NRC evaluated the facts and circumstances surrounding a temporary failure to control a device used for radiography and determined that it was appropriate to refrain from issuing an NOV.

- Waste Control Specialists, LLC—Between June 12, 2014, and December 3, 2014, Waste Control Specialists (WCS) was in apparent violation of 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," by moving waste to a location not authorized in its Part 70 license or otherwise covered by an exemption. Specifically, WCS moved standard waste box containers from a storage pad outside the Treatment, Storage, and Disposal Facility building into the Federal Waste Disposal Facility, which was not an authorized location according to its license. Because the NRC agreed that WCS took actions that were appropriate to protect public health and safety, it exercised discretion to refrain from issuing an NOV in this case.

- IRISNDT, Inc.—An apparent violation was identified regarding the failure of a radiographer or radiographer's assistant to wear a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter while performing radiographic operations, as required by 10 CFR 34.47(a). Specifically, IRISNDT used a single device to perform the functions of both a direct reading dosimeter and an alarm ratemeter simultaneously. Before the issuance of Regulatory Issue Summary (RIS) 2017-06, "NRC Policy on Use of Combination Dosimetry Devices during Industrial Radiographic Operations," on September 19, 2017, the NRC generally considered the use of the direct reading dosimeter and alarming ratemeter by a single electronic device to fulfill the requirement for personnel monitoring in 10 CFR 34.47(a) as a violation. However, in view of the circumstances of this case, the NRC determined that it was appropriate to exercise enforcement discretion to refrain from citing the violation because (1) the device met all the functionality specified in the regulations and was properly calibrated, (2) the NRC is currently evaluating a 2016 petition for rulemaking, which addresses 10 CFR 34.47(a) personnel monitoring devices, (3) the licensee self-identified the potential lack of understanding of the requirement in 10 CFR 34.47(a) and obtained clarification, and (4) the licensee took immediate corrective actions that included supplying the staff with individual alarm ratemeters. (In RIS 2017-06, the NRC revised its previous position and determined that licensees may use combined dosimetry devices, also known as electronic alarming dosimeters, as a dual-function device for meeting the direct reading dosimeter and the alarm ratemeter device requirements specified in 10 CFR 34.47(a).)

- Palo Verde Nuclear Generating Station, Unit 1—The NRC exercised discretion for a self-revealing violation of TS 3.4.14, "RCS Operational Leakage," that was associated with pressure boundary leakage through an instrument nozzle. The leakage was discovered while Unit 1 was shut down for a refueling outage during a scheduled boric acid walkdown inspection of the reactor coolant system (RCS). The licensee corrected the condition by repairing the nozzle by applying American Society of Mechanical Engineers Code Case N-733, "Mitigation of Flaws in NPS 2 (DN 50) and Similar Nozzles and Nozzle Partial Penetration Welds in Vessels and Piping by Use of a Mechanical Connection Modification, Section XI, Division 1," dated July 1, 2005, with the use of a mechanical nozzle seal assembly. Because the licensee's control measures could not have detected the failure, the NRC concluded that it was not reasonable for the licensee staff to foresee and correct this condition before the discovery of the leak.

- Applus RTD USA, Inc.—The NRC identified an apparent violation as a radiographer or radiographer's assistant failed to wear a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter while performing radiographic operations, as required by 10 CFR 34.47(a). Specifically, Applus RTD USA used a single device to perform the functions of both a direct reading dosimeter and an alarm ratemeter simultaneously. As previously noted, before the issuance of RIS 2017-06, the NRC generally considered it a violation to use the direct reading dosimeter and alarming ratemeter by a single electronic device to meet the requirement for personnel monitoring in 10 CFR 34.47(a). However, in view of the circumstances of this case, the NRC determined that it was appropriate to exercise enforcement discretion to refrain from citing the violation because (1) the device met all the functionality that was specified in the regulations and was properly calibrated, (2) the regulation of such dual-function dosimetry had changed from Agreement State to NRC jurisdiction for the individual involved, and (3) the NRC is currently evaluating a 2016 petition for rulemaking, which addresses 10 CFR 34.47(a) personnel monitoring devices.

- GE-Hitachi Nuclear Energy—One security-related violation of NRC requirements was identified and is documented in the nonpublic inspection report. The NRC determined that it was appropriate to exercise discretion and not cite the violation in accordance with Section 3.5 of the NRC's Enforcement Policy.

- Westinghouse Electric Company—The NRC identified an apparent violation involving export shipments of nuclear reactor equipment by the Westinghouse Electric Company (WEC) that were not reported to the NRC and the U.S. Department of Commerce as required by 10 CFR 110.54(a)(1) and the Protocol Additional to the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States. The NRC exercised enforcement discretion to not cite this violation because of (1) the low safety significance of the violation, (2) a lack of clarity in the NRC's guidance associated with the applicability of reporting requirements for the specific items that were exported, and (3) the fact that WEC has not been subject to any enforcement actions related to 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," requirements within the

last 2 years. In addition, WEC promptly submitted amended quarterly reports required by 10 CFR 110.54(a)(1) to the U.S. Department of Commerce when it learned that these exports had not been reported as required.

4. Discretion in Determining the Amount of a Civil Penalty

Section 3.6 of the Policy, "Use of Discretion in Determining the Amount of a Civil Penalty," states that, notwithstanding the outcome of the normal CP assessment process addressed in Section 2.3.4, "Civil Penalty," the NRC may exercise discretion by either (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. In 2017, one documented case cited Section 3.6 of the Policy to mitigate the entire amount of a potential CP based on the facts of the case.

5. Discretion Involving No Significance Determination Process Performance Deficiency

Enforcement Policy, Section 3.10, "Reactor Violations with No Performance Deficiencies" (formerly Section 2.4.d), 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 TS, which is not a performance deficiency) may be dispositioned using enforcement discretion, similar to the approach described in Section 3.2 of the Policy, "Violations Involving Old Design Issues." In 2017, the NRC exercised enforcement discretion in accordance with Section 3.10 of the Policy in seven cases involving violations where there was no identified performance deficiency. All seven violations involved TS attributable to equipment failures that were not considered avoidable.

- Susquehanna Steam Electric Station, Unit 1—The licensee experienced two separate RCS pressure boundary leaks, one from a local power range monitor instrument housing and a second in a small-bore seal pipe associated with the Unit 1 B reactor recirculation pump. Although these constituted violations of TS involving the reactor coolant pressure boundary, the NRC concluded that they were not within Susquehanna's ability to foresee and correct and were not a performance deficiency.

- North Anna Power Station, Units 1 and 2—On March 9, 2016, with Unit 1 at 100-percent power in Mode 1 and Unit 2 in Mode 6 for a scheduled refueling outage, motor-operated valve (MOV) 2-QS-MOV-202B failed to stroke open during testing because of excess unseating thrust. This valve had been replaced in September 2011, and a similar valve in Unit 1 had been replaced in September 2010. Both valves are stroke-tested every refueling outage and are monitored by the MOV program every six refueling outages. The licensee's investigation determined that all appropriate testing required by the MOV program and design changes had been applied. The investigation found no previous failure of these valves, no human errors during initial valve setup or maintenance, and no design errors. Based on review of the licensee's apparent cause evaluation, industry operating experience, and previous MOV test data

and inservice test program stroke time data, the NRC concluded that no performance deficiency was associated with this issue because the cause of failing the TS surveillance tests was not within the licensee's ability to reasonably foresee and correct.

- Joseph M. Farley Nuclear Plant, Unit 1—The NRC exercised enforcement discretion for a TS violation because the Unit 1 pressurizer safety valve as-found lift pressure was not within allowable limits. The NRC determined that the as-found condition was not within the licensee's ability to foresee and correct in advance because, during the period that the valve was in service, there were no control room indications of seat leakage. In addition, the low as-found lift setpoint did not adversely affect RCS overpressurization protection, since the valve continued to perform its RCS overpressure protection function to prevent the system from exceeding the design pressure of 2,485 pounds per square inch gauge. The licensee entered this issue into its corrective action program.

- Lasalle County Station, Units 1 and 2—NRC inspectors identified a violation related to inadequate design control for the Unit 1 and Unit 2 high-pressure core spray injection valves. Specifically, the actuator settings for these valves were selected to ensure that the valves would have enough torque and thrust to operate under design-basis conditions while staying below the maximum weak link limits. However, the licensee incorrectly identified the weak link of the valves as the valve stem, instead of the stem-to-wedge threaded and pinned connection, which had a more limiting structural capacity. As a result, the applied actuator loads exceeded the connection's structural capacity and allowed (1) the pressed-fit collar to move during valve operation, (2) the wedge pin to be in the load path, and (3) an increase in the loads applied to the threads of the connection. The NRC did not identify an associated performance deficiency for the inadequate weak link analysis. The inspectors determined that this issue was not within the licensee's ability to foresee and correct, partly because it was a latent design issue not previously identified within the industry.

- St. Lucie Plant, Unit 1—St. Lucie Unit 1 operated with RCS pressure boundary in the 1B2 reactor coolant pump lower seal heat exchanger contrary to TS 3.4.6.2, "Reactor Coolant System Operational Leakage." Although a violation of the TS occurred, the violation was not attributable to an equipment failure that was avoidable by reasonable licensee quality assurance measures or management controls. Inspectors therefore concluded that there was no performance deficiency associated with the RCS boundary leakage.

- Duane Arnold Energy Center—During a recent refueling outage, local leak rate testing revealed that leakage past the "B" inboard main steam isolation valve exceeded TS limits. The NRC did not identify an associated performance deficiency for this TS violation and determined that this issue was not within the licensee's ability to foresee and correct. The staff based its conclusion on the lack of firm evidence of a trend or other indication that the valves would exceed TS leakage rate limits when the valve was last tested during the previous refueling outage.

- Peach Bottom Atomic Power Station, Unit 2—Exelon identified a flaw in a section of 1-inch stainless steel piping that is part of the Peach Bottom, Unit 2, high-pressure service water system, which provides cooling water to four heat exchangers in the residual heat removal system during postaccident conditions. As a result, the licensee determined that the flaw had rendered the "2C" high-pressure service water subsystem inoperable and determined that this constituted a violation associated with Unit 2 TS. The NRC concluded that the TS violation was not the result of a performance deficiency in that it was not reasonable for the licensee to have identified the violation before its occurrence. Furthermore, the licensee met all applicable design standards at the time of the 1993 design modification, and corrective actions taken met all new applicable standards.

6. Notices of Enforcement Discretion

Occasionally, a power reactor licensee's compliance with a TS 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 Enforcement Policy, Section 3.8, "Notices of Enforcement Discretion for Operating Power Reactors and Gaseous Diffusion Plants," only if it 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. NOEDs require justification from a licensee or certificate holder that documents the safety basis for the request and provides other information the staff deems necessary to issue an NOED. In CY 2017, the NRC issued the following two NOEDs:

- Browns Ferry Nuclear Plant (NOED 17-2-01)—On September 10, 2017, the NRC verbally granted enforcement discretion to the Tennessee Valley Authority (TVA) to not enforce compliance with TS Limiting Condition for Operation (LCO) 3.0.3 requirements that would have required Browns Ferry Nuclear Plant, Units 1, 2, and 3, to be in Mode 2 later that same day. On September 9, 2017, at 3:20 p.m., the Unit 1 and 2 "A" control bay (CB) chiller was declared inoperable in support of maintenance activities because of a high-water temperature alarm caused by a faulty thermistor. On September 10, 2017, at 11:51 a.m., the "B" CB chiller was declared inoperable because of a fault code for phase reversal protection on compressor A, due to a faulty capacitor. The Unit 1 and 2 CB chillers provide cooling water required to support the operability of the control room air conditioning (A/C), electrical board room A/C, and 4-kilovolt (kV) shutdown boards. Additionally, the 4-kV shutdown boards are required to support the standby gas treatment system and control room emergency ventilation system. At least one of the Unit 1 and 2 CB chillers is required to be operable to ensure the operability of their supported equipment. Loss of both Unit 1 and 2 CB chillers resulted in a declaration that the supported systems were inoperable. Because the Unit 1 and 2 CB chillers supply cooling water to the Unit 1 and 2 electric board rooms' A/C, Technical Requirements Manual (TRM) LCO 3.7.6, Condition B (declare the affected electrical equipment in the board rooms

inoperable), was entered. The 4-kV shutdown boards A, B, C, and D were declared inoperable as required by TRM LCO 3.7.6. TVA requested enforcement discretion for an additional 12 hours and 9 minutes for entering Mode 2, with subsequent entries into Mode 3 and Mode 4 extended by 12 hours and 9 minutes as well, to allow for the completion of maintenance on the chillers. On the basis of the staff's evaluation of TVA's request, the NRC granted enforcement discretion, and entry into Mode 2 was extended by 12 hours and 9 minutes, as were subsequent mode changes required by TS LCO 3.0.3, to allow completion of repairs on the A CB chiller.

- Dresden Nuclear Power Station (DNPS), Unit 3 (NOED 17-3-001)—On September 12, 2017, the NRC verbally granted enforcement discretion to Exelon Generation Company (EGC) to not enforce compliance with TS 3.1.7, "Standby Liquid Control (SLC) System," Required Action C.1, which would have required Dresden Nuclear Power Station, Unit 3, to be in Mode 3 by 7:31 a.m. on September 13, 2017. During an equipment operator round on September 10, 2017, workers discovered sodium pentaborate crystallization (B-10) buildup under piping insulation on SLC discharge piping with no active leak. DNPS initially determined that the Unit 3 SLC was operable. However, during subsequent inspection and examination of the SLC pipe on September 12, 2017, DNPS identified a flaw in a pipe fitting on the 304 stainless steel SLC common discharge pipe, and a weep-type leak was identified with the pump in operation. As a result of this discovery, DNPS determined that the Code Class 2 pressure boundary was not intact. TRM Section 3.4.a, Condition B, "Structural Integrity," was entered, and the system was isolated. Both DNPS Unit 3 SLC subsystems were declared inoperable in accordance with TS 3.1.7. EGC requested that the NRC not enforce compliance with the actions required by DNPS, Unit 3, TS 3.1.7, Required Action C.1, during the time needed to perform repairs. Based on its review of the information provided by the licensee, the NRC granted enforcement discretion, and Unit 3 Mode 3 entry was extended by 35 hours required by TS 3.1.7, Condition C, to allow completion of repair on the SLC system.

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 Enforcement Policy, or the significance of the violation. Licensees may also provide clarifying information that was not available at the time of the inspection, and this may affect a finding of noncompliance.

OE has established a metric for quality of enforcement actions based on the number of disputed and withdrawn enforcement actions. The goal is fewer than four withdrawn enforcement actions in a CY per region. This metric does not include violations that are withdrawn on the basis of supplemental information that was not available to an inspector before the assessment of an enforcement sanction.

In CY 2017, the NRC issued approximately 800 nonescalated enforcement actions to operating reactor, nuclear materials user, fuel cycle facility, and new reactor licensees. This number is generally consistent with the trend in recent years. Of these actions,

seven nonescalated enforcement actions were disputed. This number is also consistent with the average number of actions disputed in the past 5 years. In CY 2017, the NRC withdrew three of the seven nonescalated actions that were disputed. In these cases, the agency withdrew the actions after it had received additional information that was not available to the staff before the original action. The withdrawal of three actions is also on par with the number of actions withdrawn each year between CY 2013 and 2017. As a result, the NRC met the goal for disputed violations in CY 2017, which indicates that NOVs and other nonescalated enforcement actions were prepared properly and accurately.

In CY 2017, the agency issued 81 escalated enforcement actions, and two NOVs associated with White SDP findings were disputed. In both cases, the agency denied and did not withdraw the disputed NOVs.

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III. Ongoing Activities

A. Enforcement Policy and Guidance

1. Enforcement Policy Revisions

Periodically, the NRC revises its Enforcement Policy to reflect congressional mandates, regulatory changes, operating experience, and stakeholder input.

- On May 8, 2017, the staff submitted SECY-17-0059, "Proposed Enforcement Policy Revision for Processing Fitness-for-Duty Cases Resulting from Site Fitness-for-Duty Drug and Alcohol Violations by Individuals," to the Commission for its review (Notation Vote). The purpose of the SECY paper is to seek Commission approval to issue a revised enforcement policy to limit the review and processing of cases involving individuals who violate drug and alcohol provisions of site fitness-for-duty (FFD) programs, which are explicitly described in 10 CFR 26.75, "Sanctions." In 10 CFR Part 26, "Fitness for Duty Programs," the NRC requires licensees to establish drug and alcohol testing programs and report test results to the agency. Based on the FFD performance information reported to the NRC since 2009, the commercial nuclear industry continues to implement Part 26 drug and alcohol requirements effectively, and the FFD program has directly contributed to public health and safety and the common defense and security. The staff believes that substantial resources would be saved if the NRC typically deferred to the licensee's processes for handling individual violations of its FFD drug and alcohol policy, as required by 10 CFR 26.75. The proposed policy change is under Commission review.

2. Enforcement Manual Guidance

The NRC Enforcement Manual is also periodically revised to reflect changes to the Policy, operating experience, and stakeholder input.

- On March 3, 2017, OE issued Revision 10 to the manual to incorporate several changes needed to reflect current enforcement practices and to provide clarifying guidance. One of the changes is a revision to Section 2.5.2, "Civil Penalty Assessment Process," to eliminate an inconsistency between the Policy and the manual regarding the criteria to be used when considering past NRC escalated actions for determining the amount of proposed CPs. The staff made this change in response to Staff Requirements Memorandum (SRM)-SECY-15-0163, "Proposed Revisions to the U.S. Nuclear Regulatory Commission Enforcement Policy," dated September 21, 2016.

- The Commission recently issued an SRM directing the staff to improve the guidance associated with relaxing orders based on adequate protection, and in 2017, OE led the effort to develop the new generic criteria to support relaxing, rescinding, or withdrawing orders applicable to not only adequate protection, but all orders issued pursuant to 10 CFR 2.202, "Orders" (typically enforcement related). The new guidance was developed, provided to the Commission for information, and is now included in the Enforcement Manual.

- The office also developed manual guidance for the program offices for use in providing information to licensees during the enforcement process when there is no associated inspection or investigation. This guidance is intended to increase the efficiency of the program in processing such cases.

Enforcement Guidance Memoranda

OE issues EGMs to provide temporary guidance on the interpretation of specific provisions of the Enforcement Policy. During CY 2017, the office issued one revision to an EGM, summarized below. The full text of all publicly available EGMs (Appendix A to the Enforcement Manual) are on the NRC's public Web site, https://www.nrc.gov/reading-rm/basic-ref/enf-man/app-a.html.

- On February 7, 2017, the staff issued Revision 1 to EGM-15-002, "Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance." This EGM provides guidance for exercising enforcement discretion for tornado-generated missile noncompliances and applies to operating power reactor licensees. Revision 1 incorporates lessons learned during the implementation of the original EGM and allows licensees, on a case-by-case basis, to request an extension of the applicable enforcement discretion timeframe.

B. Enforcement Program Initiatives

In CY 2017, OE engaged in several activities designed to enhance and continuously improve the agency's Enforcement Program. Some of the ongoing program activities include completing reviews and self-assessments, developing internal office procedures, maintaining adequate staff knowledge and supporting training, mentoring new staff members by more experienced staff, and conducting counterpart meetings.

1. Reviews and Assessments

For many years, OE routinely performed one or two assessments to verify the execution of the Enforcement Program within a regional or program office. The primary focus of these reviews was to ensure that the agency was implementing the Enforcement Program consistently. The assessments also offered an opportunity to share "best practices" between the regions and to enhance knowledge management for the enforcement process. The assessments typically focused on nonescalated enforcement actions and processes, which do not normally have significant NRC Headquarters involvement.

For the second straight year, OE did not perform a regional Enforcement Program assessment. OE considered limitations in available travel funds for a team of five or six members, along with other cost-cutting measures implemented under Project AIM, and concluded that deferring the planned program reviews for 2017 would make the best use of agency resources at this time.

Although a regional assessment was not performed this year, the enforcement staff conducted several assessments in CY 2017, including the following:

- A senior enforcement specialist reviewed enforcement documents entered in ADAMS. The purpose of this review was to determine whether documents related to enforcement actions are properly placed in ADAMS such that they can be retrieved easily and promptly (typically by the time a case is administratively closed). Before ADAMS became the official agency record repository, a hardcopy of enforcement case-related documents was maintained in designated files generally referred to as the "orange files." These documents included, as applicable, the strategy form, enforcement action worksheet, choice letter, enforcement notifications, NOVs, and orders. The review found that about 16 percent of the documents reviewed (approximately one of six) were found in ADAMS but incorrectly profiled; many of these documents were still labeled as "draft" instead of Official Agency Records. Headquarters enforcement specialists were reminded that all documents are to be entered in ADAMS before administrative closure of a case and that the staff should periodically verify that the documents are profiled properly.

- From July to December 2017, OE conducted an audit of confirmatory action letters (CALs). The purpose of the audit was to verify that the issuance, tracking, and closure of CALs complied with OE's policies and procedures. The audit consisted of the review of issued CALs from 2013 through 2017 and included assessment of related guidance documents to ascertain whether the administration of CALs was adequate. The audit also included determining if the Enforcement Action Tracking System (EATS), the centralized tracking tool for CALs, was appropriately maintained. OE concluded that CALs have generally been issued in accordance with its guidance and that the issued CALs were entered into EATS; however, the audit revealed the need for enhancements to EATS and other guidance changes.

- In response to the issuance of an escalated enforcement action to Louisiana Energy Services that did not meet agency timeliness goals for CY 2017, a senior enforcement specialist from a regional office not involved in this action performed an extensive and independent review of this case to determine what lessons could be learned from the dispositioning of the case. The review focused on staff actions to process the enforcement action (e.g., enforcement panels, internal NRC deliberations, correspondence); identified activities that did not appear to meet NRC timeliness standards; identified gaps in the processing of this case, including the circumstances that may have caused the delays; and recommended several potential process improvements. The nonpublic report was issued in early CY 2018.

2. Continuous Improvement and Organizational Effectiveness

Activities and accomplishments associated with continuous improvement and organizational effectiveness this year included the following:

- OE participated in a working group to develop a means to distribute OI reports and exhibits in an electronic format rather than through paper copies. In November 2017, OI began to use an accessible, but secure (limited view), SharePoint library website to distribute substantiated case reports. With the

library up and running, OE began development on a means to integrate its OI reports tracking system to more easily navigate to the new library site.

- OE contributed to the Agency Effectiveness Review of the Inspection Findings Review Board pilot program, which was conducted during fiscal year 2017. The regional enforcement staffs provided 2 members to the 12-member review team, and OE provided 1 member. The team reviewed materials associated with the regions' execution of the pilot and met to discuss the successes and failures of the process and a proposed path forward. The team is drafting a report for the Commission with recommendations for the program.

- In cooperation with the Office of Nuclear Material Safety and Safeguards (NMSS) and OGC, OE drafted a first-of-a-kind adequate protection order associated with a bankruptcy case led by the U.S. Department of Justice. The case involved FMRI, a subsidiary of Reorganized Fansteel, Inc., the holder of an NRC byproduct/source/special nuclear material license. Fansteel is responsible for the decommissioning of a site in Muskogee, OK, where it operated a rare metal extraction facility until December 1989. The NMSS staff was concerned about the company's ability to maintain safe operations at the site given the potential bankruptcy. OE also drafted and supported the issuance and subsequent relaxation of certain conditions of the order after the NRC received further assurances that sufficient funding was available for safe operations at the facility.

- OE participated in several working groups resolving diverse agency issues associated with (1) enforcement discretion related to reactor vessel baffle bolt, (2) procedural compliance concerning a significant condition adverse to quality, and (3) review of a proposed Nuclear Energy Institute document providing guidance on a universal corrective action program.

3. Knowledge Management

Activities associated with training and the transfer of knowledge included the following:

- Enforcement Counterpart Meeting. The regional and Headquarters enforcement staff held a combined counterpart meeting on November 14–16, 2017, to discuss ways to improve the enforcement process and enhance communications among staff. Representatives from OGC also participated with the enforcement staff from NRC Headquarters and the regional offices. Presentations addressed ways to improve the enforcement panel decisionmaking process, provided an overview of the new electronic OI Reports portal in SharePoint, identified potential revisions to the Enforcement Policy and revisions to temporary guidance in the Enforcement Manual, and considered ways to increase consistency within the Enforcement Program among the regions and program offices. In addition, a representative from the Committee to Review Generic Requirements provided backfitting "reset training" to all members of the staff. The meeting resulted in several action items to explore ways to improve the program.

- OE provided training related to the Enforcement Program and ADR to a variety of audiences, including foreign assignees (specifically, Japanese and South African delegations visiting Headquarters) and a university law school class.

- OE continued an initiative to create 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 full 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 Policy throughout its history.

- OE sponsored several rotational assignment opportunities for Headquarters and Regional staff as well as supported rotations to other offices for personal growth and development.

C. Regional Accomplishments

In CY 2017, 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 2018 Focus Areas

During CY 2018, OE plans to address the following focus areas:

- Address the actions identified during the 2017 Enforcement Counterparts Meeting and the recommendations arising from the independent assessment of a 2017 complex enforcement action to include adherence to interim milestones, decision making, and guidance enhancement.

- In cooperation with OI and OGC, implement a revised process for tracking and reporting potential enforcement actions that could challenge the Statute of Limitations.

- Complete in-process enforcement policy and guidance updates (e.g., FLEX, fitness-for-duty, civil penalty updates).

- Assess the current process and guidance for denied and disputed violations to identify enhancements to improve the efficiency and effectiveness of the process.

- In cooperation with OGC, OI and OCIO, continue to efforts to streamline electronic distribution of investigative reports and exhibits.

- Continue knowledge management activities and further develop internal office procedures to enhance reliability of enforcement program implementation and decision making.

- Work with program offices on areas of focus arising from the Transformation Task group.

Appendix A—Summary of Cases Involving Civil Penalties*

Civil Penalties Issued to Operating Reactor Licensees

None

Civil Penalties Issued to Materials Licensees

Somascan, Incorporated EA-16-255
Hato Rey, PR

On April 5, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a notice of violation and proposed imposition of a civil penalty (NOV/CP) in the amount of $7,000 to Somascan, Inc., for a Severity Level (SL) III problem associated with two violations. The violations involved Somascan's failure to notify the NRC of its license expiration, to begin and complete decommissioning of its site in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 30.36, "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas," and to secure from unauthorized removal or access licensed material that is stored in an unrestricted area in accordance with 10 CFR 20.1801, "Security of Stored Material." Specifically, on April 30, 2013, Somascan's license expired, and Somascan did not notify the NRC within 60 days of its license expiration and did not begin and complete decommissioning of its site. Additionally, since November 21, 2012, Somascan has had no direct control over access to the facility or the sealed source that was stored inside the facility.

Hayre McElroy & Associates, LLC EA-16-258
Redmond, WA

On May 11, 2017, the NRC issued an NOV/CP in the amount of $7,000 to Hayre McElroy and Associates, LLC, for SL III violations involving the failure to implement 10 CFR 30.3(a) and 10 CFR 150.20(a) and (b). Specifically, during calendar years 2011 through 2015, under its general license for activities in non-Agreement States or in areas of exclusive Federal jurisdiction within Agreement States, the licensee stored portable gauges in Hawaii for longer than the limit of 180 days in each calendar year without possessing an NRC specific license. The licensee also failed to file an amended NRC Form 241, "Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction or Offshore Waters," or letter to identify locations where work was performed and not identified on the initial NRC Form 241.

Kim Engineering, Inc. EA-15-124
Silver Spring, MD

On May 25, 2017, the NRC issued an NOV/CP in the amount of $7,000 to Kim Engineering, Inc., for an SL III violation. The violation involved a repeat failure to file NRC Form 241 at least 3 days before engaging in licensed activities within NRC jurisdiction, as required by 10 CFR 150.20, "Recognition of Agreement State Licenses." Specifically, between January 5, 2015, and August 14, 2015, Kim Engineering, a licensee of the State of

* Cases involving security-related issues are not included.

Maryland, used portable gauges containing licensed material within areas of exclusive Federal jurisdiction on numerous occasions without filing for reciprocity with the NRC as required by 10 CFR 150.20.

Allen County Cardiology EA-17-048
Fort Wayne, IN

On September 5, 2017, the NRC issued an NOV/CP in the amount of $7,000 to Allen County Cardiology for an SL III problem involving two violations. Specifically, between August 8 and October 13, 2016, the licensee failed to conduct (1) surveys in radiopharmaceutical preparation and administration areas at the end of each day of use and (2) weekly wipe tests required by the facility's license and 10 CFR 20.2103, "Records of Surveys." Additionally, the licensee failed to comply with 10 CFR 30.9, "Completeness and Accuracy of Information," when the nuclear medicine technologist created inaccurate records required by 10 CFR 20.2103 to falsely indicate that the surveys and wipe tests had been performed.

Qal-Tek Associates, LLC EA-17-101
Idaho Falls, ID

On December 12, 2017, the NRC issued an NOV/CP in the amount of $22,400 to Qal-Tek Associates, LLC, for an SL II problem. The violations involved the failure to comply with 10 CFR 71.5(a), which requires licensees that deliver licensed material to a carrier for transport to comply with the applicable U.S. Department of Transportation requirements in 49 CFR Parts 171 to 180. Specifically, Qal-Tek shipped five radioactive sources in a single 10-gallon steel drum shipping container. Three of these sources were also located in an inner lead container (commonly referred to as a "pig"). The shipment went through several airports without incident from Idaho Falls to a temporary jobsite in New York City. For the return transport of the sources to Idaho Falls on April 11, 2017, a licensee radiation safety officer prepared the package in the same manner as the initial shipment, but the lid of the pig opened during transport. As a result, three of the sources moved from the pig into the surrounding sealed steel drum. Dose rates measured at 1 meter and on contact exceeded NRC regulatory limits; however, the NRC's analysis concluded that a member of the public was unlikely to have received a dose in excess of regulatory limits.

CTI and Associates, Inc. EA-17-147
Novi, MI

On December 28, 2017, the NRC issued an NOV/CP in the amount of $7,000 to CTI and Associates, Inc., for an SL III violation. The violation involved the failure to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage, or to use a minimum of two independent physical controls to form a tangible barrier to secure a portable gauge from unauthorized removal whenever the gauge is not under the licensee's control and constant surveillance. The NRC requires these measures in 10 CFR 20.1802, "Control of Material Not in Storage," and 10 CFR 30.34(i). Specifically, on August 9, 2017, a portable gauge was located in the back of a pickup truck with no barriers and without constant surveillance of the device.

Civil Penalties Issued to Fuel Cycle Facility Licensees

None

Civil Penalties Issued to New Reactor Licensees

None

Civil Penalties Issued to Decommissioning and Low-Level Waste Licensees

None

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Appendix B—Summary of Escalated Notices of Violation without Civil Penalties*

Notices of Violation Issued to Operating Reactor Licensees

PSEG Nuclear, LLC EA-16-184
Hope Creek Generating Station

On February 6, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a notice of violation (NOV) to PSEG Nuclear, LLC, for a 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," associated with a White significance determination process (SDP) finding. Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions and procedures and shall be accomplished in accordance with these instructions and procedures. During spring 2016, PSEG failed to follow a procedure to detect and act upon water intrusion into the lubricating oil reservoir for the high-pressure core injection system. Subsequently, high-pressure core injection, a safety-related system, became inoperable for an extended period because of undetected water in the oil. Additionally, the extended period of inoperability exceeded the outage time of 14 days allowed in the high-pressure core injection system technical specifications (TSs). This NOV documented both violations.

Exelon Generation Company, LLC EA-16-236
Dresden Nuclear Power Station

On February 27, 2017, the NRC issued an NOV to Exelon Generation Company, LLC, for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with a White SDP finding at Dresden Nuclear Power Station, Unit 3. Criterion III requires, in part, that design control measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculation methods, or by the performance of a suitable testing program. Specifically, from June 2002 until July 2016, Exelon failed to verify the adequacy of the design of a high-pressure coolant injection auxiliary oil pump required for the successful operation of the high-pressure injection system and subject to the requirements of Appendix B to 10 CFR Part 50.

Entergy Operations, Inc. EA-16-247
Arkansas Nuclear One

On February 27, 2017, the NRC issued an NOV to Entergy Operations, Inc., for a violation of TSs, associated with a White SDP finding at Arkansas Nuclear One, Unit 2. The TSs requires, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, "Quality Assurance Program Requirements," Appendix A, issued February 1978. Specifically, Entergy failed to properly pre-plan and perform maintenance on a diesel generator inboard bearing because of inadequate work instructions.

* Cases involving security-related issues are not included.

Exelon Nuclear EA-16-241
Oyster Creek Nuclear Generating Station

On April 13, 2017, the NRC issued an NOV to Exelon Nuclear for a violation of TS 6.8.1, "Procedures and Programs," at Oyster Creek associated with a White SDP finding. Specifically, Exelon failed to properly implement a procedure for rebuilding and reassembling an electromagnetic relief valve. The maintenance instruction directed reinstallation of a lever plate with previously removed lock washers. By failing to reinstall the lock washers, the licensee caused excessive friction between the solenoid frame and the cutout switch lever plate, causing the cutout switch lever to become bound in the energized position and rendering the valve unable to perform its safety-related function. Additionally, this incorrect reassembly resulted in the relief valve being inoperable for greater than the outage time allowed in the TS for the automatic depressurization system.

Southern Nuclear Operating Co. EA-17-014
Vogtle Electric Generating Plant

On April 25, 2017, the NRC issued an NOV to Southern Nuclear Operating Co. for its failure to maintain the effectiveness of an emergency plan and have a standardized emergency action level scheme in use based on facility system and effluent parameters at Vogtle Electric Generating Plant, Units 1 and 2. This is a violation of 10 CFR 50.47(b)(4) and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50 and is associated with a White SDP finding. Specifically, the emergency classifications for a general emergency and site area emergency contained effluent radiation monitor threshold values that differed from the correct values on 42 occasions. The licensee was relying on these radiation monitors to determine the magnitude and continuously assess the impact of the release of radioactive materials, as well as providing criteria for determining the need for notification and participation of local and State agencies.

PSEG Nuclear, LLC EA-16-251
Hope Creek Generating Station

On May 3, 2017, the NRC issued an NOV to PSEG Nuclear, LLC, for a Severity Level (SL) III violation at the Hope Creek Generating Station associated with the failure to follow site procedures, resulting in a reactor scram. An investigation conducted by the NRC Office of Investigations determined that the technician deliberately failed to implement a procedure for a surveillance activity of safety-related equipment when the technician made an error while performing a surveillance test and deliberately attempted to correct the error rather than comply with the procedural guidance to stop and inform management. Specifically, the technician, who was performing a surveillance test on the redundant reactivity control system, inadvertently selected the wrong system channel to test. Rather than immediately stopping and informing the job supervisor, as required by the procedure, the technician deliberately attempted to correct the error by selecting the proper channel.

DTE Energy Company EA-17-012
Fermi, Unit 2

On May 11, 2017, the NRC issued an NOV to DTE Energy Company for a violation of 10 CFR 50.54(q)(2) at Fermi, Unit 2, associated with a White SDP finding. Contrary to the requirements, DTE Energy failed to maintain the effectiveness of its emergency plan and to use adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency. Specifically, the licensee failed to maintain the ability to accurately declare an Emergency Action Level Classification RG-1.1 and to develop and issue accurate protective action recommendations during the implementation of the site's emergency plan in response to a rapidly progressing accident.

Energy Northwest EA-17-028
Columbia Generating Station

On July 6, 2017, the NRC issued an NOV to Energy Northwest for a violation associated with a White SDP finding identified during an inspection at Columbia Generating Station. The White finding, an issue of low to moderate safety significance, involved Energy Northwest's failure to ship a Type B quantity of radioactive material in a container that was approved or tested for that purpose. The significance of this event was based on the increased risk to the public and the accident hazard posed when a Type B quantity of radioactive material was shipped in a container that was not approved or tested for that purpose. The violation involves the failure to transport low specific activity material in accordance with the condition that the external dose rate may not exceed an external radiation level of 10 millisieverts per hour (1 rem/hour) at 3 meters (10 feet) from the unshielded material. Specifically, the licensee transported a package as low specific activity material with an external radiation level of 21 millisieverts per hour (2.1 rem/hour) at a distance of 3 meters (10 feet) from the unshielded material.

STP Nuclear Operating Company EA-16-216
South Texas Project

On August 18, 2017, the NRC issued an SL III NOV to STP Nuclear Operating Company for violations of 10 CFR 50.9, "Completeness and Accuracy of Information," and 10 CFR 50.48, "Fire Protection." Specifically, the NOV involved two examples of failing to implement fire protection program written procedures for fire watches and three examples of failing to ensure that fire protection documents were complete and accurate in all material respects.

FirstEnergy Nuclear Operating Company EA-17-043
Perry Nuclear Power Plant

On August 24, 2017, the NRC issued an NOV to FirstEnergy Nuclear Operating Company for a violation of 10 CFR Part 50, Appendix B, at Perry Nuclear Power Plant, associated with a White SDP finding. Contrary to the requirements, FirstEnergy failed to conduct adequate design control of a modification to the electrical circuitry for emergency start of the site's standby diesel generators. Specifically, the licensee failed to evaluate the effect of a shorted diode on the emergency start circuitry. Additionally, there is an associated violation of TS 3.8.1, "AC Sources Operating," for one standby diesel generator being inoperable for greater than the allowed outage time of 14 days.

Duke Energy Corporation EA-17-122
Catawba Nuclear Station, Unit 2

On October 16, 2017, the NRC issued an NOV to Duke Energy Corporation for a violation of TS 5.4.1.a, "Procedures," and 10 CFR Part 50, Appendix B, that were associated with a White SDP finding at Catawba Nuclear Station, Unit 2. Specifically, the licensee failed to develop adequate preventive maintenance strategies for the emergency diesel generator (EDG) excitation system. As a result, a condition adverse to quality associated with elevated diode temperatures was uncorrected. This caused the 2A EDG output breaker to trip open during monthly surveillance testing.

Exelon Generation Company EA-17-098
Clinton Power Station

On November 27, 2017, the NRC issued an NOV to Exelon Generation Company for a violation of 10 CFR Part 50, Appendix B, Criterion III, at Clinton Power Station, associated with a White SDP finding. Contrary to the requirements, Exelon failed to review for suitability of application replacement relays essential to the safety-related functions of the Division 1 EDG room ventilation fan. Specifically, Exelon failed to evaluate the change in the actual dropout voltages for replacement relays associated with the Division 1 EDG room ventilation fan resulting in the safety-related fan becoming inoperable during undervoltage conditions. Additionally, there is an associated violation of TS 3.8.1, "AC Sources—Operating," for one standby diesel generator being inoperable for longer than the allowed outage time of 14 days.

Notices of Violation Issued to Materials Licensees

Rozell Testing Laboratories, LLC EA-16-164
Branson, MO

On January 11, 2017, the NRC issued an NOV to Rozell Testing Laboratories, LLC, for an SL III violation. The violation involved the failure to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal when the portable gauges were not under the control and constant surveillance of the licensee as required by 10 CFR 30.34(i). Specifically, as of May 19, 2016, the licensee used only one independent physical control, a locked cabinet, to secure the portable gauge from unauthorized removal during business hours when the gauge was not under the control and constant surveillance of the licensee.

White Earth Department of Transportation EA-16-180
White Earth, MN

On January 17, 2017, the NRC issued an NOV to White Earth Department of Transportation for an SL III violation of both 10 CFR 20.1801, "Security of Stored Material," and 10 CFR 30.34(i). The violation involved the failure to secure licensed material from unauthorized removal or access, with a minimum of two independent physical controls that form tangible barriers, while the portable gauge was stored in a controlled or unrestricted area and not under the control and constant surveillance of the licensee. Specifically, from May 14, 2016, to August 9, 2016, the licensee stored a portable gauge in an unlocked storage cabinet in an unsecured garage during normal business hours, and no individuals were continuously present to maintain control or constant surveillance.

American Engineering Testing, Inc. EA-16-152
St. Paul, MN

On January 18, 2017, the NRC issued an NOV to American Engineering Testing, Inc., for an SL III violation of 10 CFR 34.41(a). The violation involved the failure to ensure that, whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has met, at a minimum, the requirements of 10 CFR 34.43(c). On February 1, 2015, the radiographer performed radiography without another qualified individual present.

Wyoming Medical Center EA-16-231
Casper, WY

On January 23, 2017, the NRC issued an NOV to Wyoming Medical Center for an SL III violation for the failure to implement the requirements of 10 CFR 35.40(b)(6). Specifically, this regulation requires, in part, that a licensee prepare written directives after implantation but before completion of the procedure for brachytherapy, including use of low-, medium-, and pulsed-dose rate remote afterloaders, where the written directive contains the radionuclide, treatment site, number of sources, and total source strength and exposure time (or total dose). On 15 occasions, between January 15 and December 22, 2015, the licensee completed written directives after implantation that did not include the number of sources and the total source strength as required, and some of these directives did not specify the radionuclide and total dose.

XCEL NDT, LLC EA-16-232
Clifton, KS

On January 25, 2017, the NRC issued an NOV to XCEL NDT, LLC, for an SL III problem involving failure to implement 10 CFR 34.43(c) and 10 CFR 34.41(a). Specifically, XCEL NDT failed to meet the requirements in 10 CFR 34.43(c) when it permitted an individual to act as a radiographer's assistant on September 22, 2016, and the individual had not developed competence to use, under the personal supervision of the radiographer, the radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments by successfully completing a written test on these subjects and a practical examination on the use of the hardware. On the same day, the requirements of 10 CFR 34.41(a) were not met when XCEL NDT performed radiography at a location other than a permanent radiographic installation with a radiographer who was not accompanied by at least one qualified individual who has met the requirements of 10 CFR 34.43(c).

Thrasher Engineering, Inc. EA-16-224
Bridgeport, WV

On January 26, 2017, the NRC issued an NOV to Thrasher Engineering, Inc., for an SL III violation. The violation involved a failure to control and maintain constant surveillance or failure to use two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal as required by 10 CFR 20.1802, "Control of Material Not in Storage," and 10 CFR 30.34(i). Specifically, on September 13, 2016, a gauge containing licensed material was left unattended and uncontrolled in the back of a

pickup truck at a temporary jobsite. The keys to the vehicle, vehicle camper top, and transport case were left inside the cab of the vehicle while the cab was unlocked.

Spectrum Health Hospitals EA-16-214
Grand Rapids, MI

On February 2, 2017, the NRC issued an NOV to Spectrum Health Hospitals for an SL III violation involving the failure to implement written procedures that provided high confidence that an administration of yttrium-90 microspheres was in accordance with the written directive, as required by 10 CFR 35.41(a)(2). Specifically, on April 27, 2016, the licensee did not follow its procedure to verify the catheter position before administration of the yttrium-90 microspheres. As a result, a medical event occurred as the patient received a dose in an unintended treatment segment.

Botsford General Hospital EA-16-066
Farmington Hills, MI

On March 1, 2017, the NRC issued an SL III violation to Botsford General Hospital for failure to satisfy 10 CFR 35.41(a)(2), which requires, in part, that the licensee develop, implement, and maintain written procedures for any administration requiring a written directive to provide high confidence that each administration is in accordance with the written directive. Specifically, as of July 10, 2014, the licensee's written procedures for such administrations did not contain sufficient information to ensure that the proper treatment plan is loaded into the treatment system before administration. The failure to provide clear written procedures was a contributing factor to a medical event involving patient treatment.

Premier Technology, Inc. EA-16-191
Blackfoot, ID

On March 31, 2017, the NRC issued an NOV to Premier Technology, Inc., for an SL III violation for failure to implement 10 CFR 34.47(a) and 10 CFR 34.47(g)(2). Specifically, 10 CFR 34.47(a) requires, in part, that a licensee may not permit any individual to act as a radiographer or radiographer's assistant, unless at all times during the radiographic operations, each individual wears, on the trunk of his or her body, a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter. On May 18, 2015, licensee personnel performing radiographic operations removed the alarm ratemeter from the trunk of their bodies because they assumed they could use the ratemeter to fulfill the radiation survey requirements of 10 CFR 34.49, "Radiation Surveys." The licensee also failed to implement the requirements of 10 CFR 34.47(g)(2), in part, when one of the same alarm ratemeters was set to alarm at a present dose rate of 100 millisieverts/hour (10 rem/hour) instead of the required setting of 5 millisieverts/hour (500 millirem/hour).

ADCO Services, Inc. EA-16-281
Tinley Park, IL

On May 30, 2017, the NRC issued an NOV to ADCO Services, Inc., for an SL III violation. The violation involved the failure to have the individual specifically named on the NRC license fulfill the duties of the radiation safety officer (RSO) as required by License Condition 11 of the NRC license. Specifically, on or about November 21, 2014, the RSO stopped fulfilling the duties and responsibilities as RSO, and the licensee did not appoint another individual who was qualified to fulfill the RSO duties and responsibilities.

JANX Integrity Group EA-16-130
Parma, MI

On June 1, 2017, the NRC issued an NOV to JANX Integrity Group for three violations grouped as a problem. The violations involved the deliberate failure to (1) conduct radiographic operations at a temporary jobsite with at least two qualified individuals, as required by 10 CFR 34.41(a), (2) survey the radiographic exposure device and guide tube after each exposure when approaching the device, as required by 10 CFR 34.49(b), and (3) perform visual and operability checks on the radiographic exposure device, as required by 10 CFR 34.31(a). Specifically, during an inspection on January 19–21, 2017, JANX informed the inspector that, during observations of work activities on September 18, 2015, radiographic operations were deliberately performed without two qualified individuals being present. One of the qualified individuals was in the cab of the truck facing away from the radiographic operations and was therefore unable to observe operations.

Guam Medical Imaging Center EA-17-026
Tamuning, GU

On June 6, 2017, the NRC issued an NOV to Guam Medical Imaging Center for an SL III problem for failure to implement the requirements of 10 CFR 35.40(a) and 10 CFR 35.41(a). Specifically, between November 5, 2013, and January 9, 2017, the licensee prepared written directives for the administration of iodine-131 and radium-233 that were not dated and signed by an authorized user before administration. The licensee also used verbal authorization of written directives in place of developing, implementing, and maintaining written procedures to provide high confidence that administrations complied with the written directive.

Guam Regional Medical City EA-17-036
Dededo, GU

On June 6, 2017, the NRC issued an NOV to Guam Regional Medical City for SL III violations of 10 CFR 30.3(a) and License Condition 11 of NRC Materials License 56-35371-01. Specifically, on January 10, 2017, the individual named on the license was no longer the RSO. Also, from December 2014 through October 2016, the licensee received and possessed licensed material (sealed sources) that was not authorized on an NRC license.

P4 Production, LLC EA-16-267
Soda Springs, ID

On June 13, 2017, the NRC issued an NOV to P4 Production, LLC, for an SL III problem associated with violations of three license requirements addressing fixed nuclear gauge activities that resulted in unnecessary radiation exposure to two members of the public. Specifically, the licensee permitted contract workers to perform fixed nuclear gauge installation and dismantling without the required training on November 18, 2015; June 15, 2016; and September 27, 2016. Additionally, the source was not shielded as required, and this resulted in a contractor's extremity coming into contact with the radiation beam. The licensee failed to ensure that any employee or contractor who was working on or near a nuclear source complete required coordination with the plant RSO, who did not review the circumstances of the work to be performed, evaluate any exposure-related safety

or health concern, or take preventive measures when dosimetry readings exceeded 2 millirem per hour.

ERP Federal Mining Complex, LLC EA-17-062
Fairview, WV

On June 21, 2017, the NRC issued an NOV to ERP Federal Mining Complex, LLC, for an SL III problem associated with two related violations. The first violation involved a failure to assign a specific individual to fulfill the duties and responsibilities of RSO as required by NRC License Condition 12. Specifically, on January 25, 2017, the individual named as the RSO in Condition 12 of the NRC license resigned from employment, and the licensee did not submit an amendment request for the new RSO until April 26, 2017. The second violation involved a failure to control and maintain constant surveillance of the licensed material as required by 10 CFR 20.1802. Specifically, on February 5, 2017, a fixed gauge was left without any monitoring until it was transferred to a secured storage location on February 9, 2017.

Cameco Resources/Power Resources, Inc. EA-16-262
Casper, WY

On June 28, 2017, the NRC issued an NOV to Cameco Resources for licensed activities as Power Resources, Inc. An SL III problem was identified for failure to implement (1) Amendment 21 of License SUA-1548 and (2) 10 CFR 71.5(a) requirements to comply with U.S. Department of Transportation requirements in 49 CFR Part 172, “Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans,” and 49 CFR Part 173, “Shippers—General Requirements for Shipments and Packagings.” Specifically, between 2013 and 2016, the licensee (1) underreported the radioactivity present for 42 pond water and 10 barium sulfate sludge shipments, (2) failed to identify the activity for Class 7 materials on its shipping papers, (3) incorrectly labeled its shipments, (4) did not identify shipments as Low Specific Activity-II, and (5) failed to use a Type-II industrial package.

Hill’s Pet Nutrition EA-17-063
Richmond, IN

On July 27, 2017, the NRC issued an NOV to Hill’s Pet Nutrition for an SL III violation of 10 CFR 31.5(c)(3). Specifically, on November 28, 2016, the licensee permitted the removal of licensed fixed gauges by two of its contractor employees who were not licensed to do so and did not complete the removal in accordance with the label instructions.

Geo-Logic Associates, Inc. EA-17-027
Ontario, CA

On August 14, 2017, the NRC issued an NOV to Geo-Logic Associates, Inc. (GLA) for an SL III problem involving three related violations. The first violation involved the failure to limit activities involving radioactive materials in non-Agreement States to 180 days in calendar year (CY) 2014 as required by 10 CFR 150.20(b). Specifically, between February 20 and December 31, 2014, GLA used radioactive materials authorized by 10 CFR 150.20, “Recognition of Agreement State Licenses,” in Guam (a non-Agreement State and an area of NRC jurisdiction) for a period longer than 180 days in CY 2014. The second violation involved the failure to possess and use byproduct material except as authorized in a specific

or general license issued in accordance with 10 CFR 30.3, "Activities Requiring License." Specifically, during CY 2015 and CY 2016, GLA possessed and used byproduct materials in Guam and Saipan, both non-Agreement States and areas of NRC jurisdiction, and these activities were not authorized in a specific or general license issued in accordance with the NRC's regulations. The third violation involved the failure to file a submittal to the NRC at least 3 days before engaging in activities under NRC jurisdiction for the first time in CY 2017, as required by 10 CFR 150.20(a). Specifically, GLA engaged in activities starting on January 1, 2017, and filed its submittal containing NRC Form 241, "Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction or Offshore Waters," on January 26, 2017 (26 days after engaging in activities for the first time in CY 2017.

Geo-Engineering & Testing, Inc. EA-17-025
Tamuning, GU

On August 18, 2017, the NRC issued an NOV to Geo-Engineering and Testing, Inc., for an SL III violation involving the failure to implement 10 CFR 30.41(b). Specifically, on or about July 22, 1998, the licensee transferred a portable nuclear gauge to a member of the public who did not meet any of the authorized transfers identified in 10 CFR 30.41(b).

Cardinal Health Nuclear Pharmacy EA-17-096
Dublin, OH

On September 14, 2017, the NRC issued an NOV to Cardinal Health Nuclear Pharmacy for an SL III violation of 10 CFR 20.1801 related to the licensee's failure to secure molybdenum-99/technetium-99 generators on February 28, 2017.

Coastal Wireline Services, Inc. EA-17-097
Pearland, TX

On September 14, 2017, the NRC issued an NOV to Coastal Wireline Services, Inc., for an SL III violation. The violation involved the failure to file NRC Form 241 at least 3 days before engaging in licensed activities under NRC jurisdiction, as required by 10 CFR 150.20. Specifically, between May 16 and 20, 2017, and on approximately the same dates in May 2016, Coastal Wireline Services, a licensee of the State of Texas, used iodine-131 within NRC jurisdiction without filing the required documentation with the NRC.

Washington University EA-17-082
St. Louis, MO

On September 21, 2017, the NRC issued an NOV to Washington University for an SL III violation associated with a medical event. The NRC conducted an inspection on February 1 and 2, 2017, at the university's St. Louis campus and determined that a medical event had occurred on April 8, 2016, and the licensee staff had sufficient information on April 16, 2016, to discover the event and make the appropriate notification to the NRC; however, the licensee did not notify the NRC until January 31, 2017. Specifically, the administration of radiation from an yttrium-90 microspheres treatment resulted in a dose that exceeded 0.5 sieverts (50 rem) to a patient's tissue and was 50 percent or more of the dose expected from the administration to tissue other than the treatment site, as defined in the written directive. This is a medical event as defined in 10 CFR 35.3045(a)(3).

Michiana Hematology Oncology, PC EA-17-091
South Bend, IN

On October 31, 2017, the NRC issued an NOV to Michiana Hematology Oncology, PC, for an SL III problem relating to NRC licensing requirements. The violations involved (1) the failure to have an individual named on the license perform the duties and responsibilities of RSO for the period of October 29, 2016, to April 16, 2017, as required by License Condition 11 of NRC License No. 13-32719-01, and (2) the failure to notify the NRC no later than 30 days after the RSO permanently discontinued performance of duties under the license as required by 10 CFR 35.14(b)(1). Specifically, the RSO listed on the license left the licensee's employment on October 28, 2016, and Michiana Hematology Oncology did not notify the NRC of this departure until January 25, 2017, when it requested an amendment to its license to change the RSO. The license was amended to name a new RSO on April 18, 2017.

Board of Light and Water, City of Marquette EA-17-125
Marquette, MI

On November 8, 2017, the NRC issued an NOV to the Board of Light and Water, City of Marquette, MI, for an SL III violation. The violation involved the licensee's failure to assign a specific individual to fulfill the duties and responsibilities of RSO, as required by NRC License Condition 12. Specifically, on May 5, 2017, the individual named as the RSO in Condition 12 of NRC License No. 21-20174-01, left the licensee's employment, and the licensee did not submit an amendment request for the new RSO until September 19, 2017.

Terracon Consultants, Inc. EA-17-079
Olathe, KS

On November 15, 2017, the NRC issued an NOV to Terracon Consultants, Inc., for an SL III violation of 10 CFR 20.1802. Specifically, on December 21, 2016, the licensee failed to maintain constant surveillance of a portable gauge when the technician walked away from the gauge to inspect another part of the jobsite. The violation resulted in a steel drum roller damaging the gauge.

Midwest Engineering and Testing, Inc. EA-17-118
Champaign, IL

On November 21, 2017, the NRC issued an NOV to Midwest Engineering and Testing, Inc., for an SL III violation. The violation involved a failure to control and maintain constant surveillance or failure to use two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal as required by 10 CFR 20.1801 and 10 CFR 30.34(i). Specifically, on June 22, 2017, the licensee's technician placed the gauge containing licensed material in a construction trailer and left the site without using the locking mechanism on either of the trailer's two doors. As a result, no barriers secured the gauge from unauthorized removal.

Construction Consulting and Testing EA-17-148
Waterville, OH

On December 18, 2017, the NRC issued an SL III NOV to Construction Consulting and Testing for failing to meet the requirements of 10 CFR 20.1801 and 10 CFR 30.34(i).

Specifically, on multiple occasions between July 29 and August 10, 2017, the licensee stored a portable gauge in an unlocked location without a minimum of two independent physical controls that form tangible barriers to secure the device while not under the licensee's control and constant surveillance.

Avera McKennan Hospital EA-17-104
Sioux Falls, SD

On December 21, 2017, the NRC issued an NOV to Avera McKennan Hospital for an SL III problem involving violations of 10 CFR 71.5(a), which require the licensee to comply with the U.S. Department of Transportation (DOT) requirements of 49 CFR Part 172 and 49 CFR Part 173. Specifically, on multiple occasions between March 2013 and December 2015, Avera McKennan transported licensed material in a container that did not meet the DOT requirements for a suitable transport package. In addition, the material was transported without the required package marking or labeling and required shipping papers.

K & S Engineers, Inc. EA-17-157
Highland, IN

On December 21, 2017, the NRC issued an NOV to K & S Engineers, Inc., for an SL III violation. The violation involved a failure to control and maintain constant surveillance and failure to use two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal, as required by 10 CFR 20.1801 and 10 CFR 30.34(i). Specifically, on several occasions, including July 25, 2017, the licensee stored a portable gauge in an unlocked storage room with one lock securing the gauge case lid and a single chain with one lock securing one handle on the gauge case to a workbench. The keys to the padlock on the gauge case and the padlock on the single chain were located on the workbench approximately 1 foot away from the gauge, and no individuals were continuously present to maintain control or constant surveillance.

Notices of Violation Issued to Fuel Cycle Facility Licensees

Louisiana Energy Services, LLC EA-15-218
Eunice, NM

On March 3, 2017, the NRC issued an NOV to the Louisiana Energy Services, LLC (doing business as URENCO USA (UUSA)) uranium enrichment facility in Eunice, NM, for an escalated problem involving aspects of the security program related to the security events. An investigation conducted by the NRC Office of Investigations determined that one violation was caused, in part, by the deliberate misconduct of UUSA and contractor employees. Because some of the violations were closely related to the same security events and were attributed to common root and contributing causes, the NRC grouped the violations into major areas to appropriately characterize the significance of the security events and convey the appropriate message.

Notices of Violation Issued to New Reactor Licensees

None

Civil Penalties Issued to Decommissioning and Low-Level Waste Licensees

None

Notices of Violation Issued to Individuals

Appendix D discusses NOVs issued to individuals.

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Appendix C—Summary of Orders*

Orders Issued to Operating Reactor Licensees

Tennessee Valley Authority EA-17-022
Watts Bar Nuclear Plant

On July 27, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a confirmatory order (CO) to Tennessee Valley Authority (TVA) for a violation identified during the staff's performance of a Problem Identification and Resolution inspection at Watts Bar Nuclear Plant. The CO is the result of a violation for failure to implement a 2009 Adverse Employee Action Process CO. The Problem Identification and Resolution inspection was conducted as followup to a chilled work environment letter that had been issued to Watts Bar Nuclear. The new order requires TVA to confirm proper implementation of all past orders, implement independent oversight for the Adverse Employee Action Process, and take additional actions to understand and improve safety culture.

Dominion Nuclear Connecticut, Inc. EA-17-077
Millstone Power Station

On November 21, 2017, the NRC issued a CO to Dominion Nuclear Connecticut, Inc., to formalize commitments made as a result of an alternative dispute resolution (ADR) mediation session held on September 20, 2017. The commitments were made as part of a settlement agreement between Dominion and the NRC based on evidence gathered during an investigation in which the NRC had identified multiple examples of two apparent violations. The violations involved a now-former contract security officer who was employed by G4S Secure Solutions, USA, Inc., as an armorer at Millstone. This individual deliberately failed to (1) perform required maintenance of site weapons and (2) properly conduct monthly inventories of out-of-service weapons. The NRC also determined that the contract security officer deliberately falsified records related to both of these issues. Because licensees are responsible for the actions of their employees and contractors, the NRC concluded that the contract security officer's actions placed Millstone in violation of NRC requirements and the NRC-approved Millstone Security Plan. In response to the incident, Dominion 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 notice of apparent violations.

Orders Issued to Materials Licensees

Homestake Mining Company EA-16-114
Grants, NM

On March 28, 2017, the NRC issued a CO to Homestake Mining Company of California (HMC) confirming commitments reached as part of an ADR mediation session. The session was associated with five apparent violations identified during an NRC records review: (1) implementation of the Reinjection Program in a manner inconsistent with HMC's ground

* Cases involving security-related issues are not included.

water Corrective Action Program, (2) discharge of liquid effluents from the Reverse Osmosis Plant in excess of the site ground water protection standards established in the license, (3) failure to report to the NRC the results of all effluent monitoring required by the license, (4) failure to obtain monthly composite samples as required by the license, and (5) the discharge of liquid effluents containing byproduct material to land application areas without first obtaining NRC approval. The licensee agreed to take a number of actions, in addition to steps already taken, including but not limited to (1) a third-party review of the HMC root cause protocol that is used to complete several conditions of the order, (2) a root cause analysis, (3) an assessment of all HMC activities to determine if they are being conducted in compliance with NRC requirements and an independent third-party review of the assessment, (4) submission of a revised ground water corrective action plan, (5) training on requirements, (6) completion of an analysis of the reinjection system impact on the time estimated for completion of the Corrective Action Program, (7) adjustment of operations toward compliance with ground water protection standards, (8) implementation of a corrective action program, and (9) development of a land application assessment of impacts. In consideration of the HMC commitments identified in the CO, the NRC agreed not to pursue any further enforcement action based on the apparent violations.

Somascan, Incorporated EA-16-255
Hato Rey, PR

On June 27, 2017, the NRC issued an order imposing a civil monetary penalty to Somascan, Inc., in the amount of $7,000. The order was necessary because Somascan had not responded to an April 5, 2017, notice of violation and proposed imposition of a civil penalty in the amount of $7,000 for a Severity Level III problem involving the licensee's failures to notify the NRC of its license expiration, to begin and complete decommissioning of its site in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 30.36, "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas," and to secure from unauthorized removal or access in accordance with 10 CFR 20.1801, "Security of Stored Material," licensed material that is stored in an unrestricted area. As of the date of the order, Somascan had not paid the proposed civil penalty of $7,000 and had taken no action to comply with the NRC requirements.

Orders Issued to Fuel Cycle Facility Licensees

Westinghouse Electric Company, LLC EA-17-058
Hopkins, SC

On August 9, 2017, the NRC issued a CO to Westinghouse Electric Company, LLC, to formalize commitments reached as part of an ADR mediation session involving violations at the Columbia Fuel Fabrication Facility. The NRC identified the following four apparent violations, all of which were considered for escalated enforcement in accordance with the NRC's Enforcement Policy: (1) failure to ensure that criticality accident sequences remain highly unlikely, as required by 10 CFR 70.61(b), (2) failure to ensure that under normal and credible abnormal conditions, all nuclear processes were subcritical including use of an approved margin of subcriticality, as required by 10 CFR 70.61(d), (3) failure to establish adequate management measures to ensure that items relied on for safety perform their function when needed, as required by 10 CFR 70.62(d), and (4) failure to make a 1-hour report, as required by Appendix A, "Reportable Safety Events," paragraph (a)(4) to 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material." As part of the settlement

agreement, Westinghouse agreed to take a number of actions in addition to those already completed. These additional actions include (1) conducting an additional nuclear safety culture survey, (2) implementing improvements to reduce uranium carryover from the calciner scrubbers, (3) making additional design changes to reduce uranium carryover from the filtration system, (4) developing and implementing additional methods to monitor system parameters that are early indicators of an abnormal accumulation in the conversion area process off-gas scrubber from a process upset that could challenge the accumulation rate or criticality safety mass limits, and (5) developing and implementing a criticality safety basis/items relied on for safety database to help maintain the proper flowdown of the safety basis into implementing documents. In recognition of these actions, the NRC agreed to refrain from proposing a civil penalty and issuing a notice of violation.

Global Nuclear Fuel-Americas, LLC EA-17-090
Wilmington, NC

On December 14, 2017, the NRC issued a CO to Global Nuclear Fuel-Americas, LLC (GNF-A) to formalize commitments reached as part of an ADR mediation session involving violations at the facility in Wilmington, NC. The NRC identified the following five apparent violations, all of which were considered for escalated enforcement in accordance with the NRC's Enforcement Policy: (1) failure to make or cause to be made surveys of scrap metal piping before its release and transportation as required by 10 CFR 20.1501(a), (2) failure to comply with applicable U.S. Department of Transportation regulations appropriate to the mode of transport of contaminated materials as required by 10 CFR 71.5(a), (3) failure to notify the NRC as required by 10 CFR 20.1906(d)(1) when removable radioactive surface contamination exceeds the limits of 10 CFR 71.87(i), (4) failure to monitor a package as required by 10 CFR 20.1906(c), and (5) failure to maintain records of surveys as required by 10 CFR 20.2103(a). As part of the settlement agreement, GNF-A agreed to take a number of actions in addition to those already completed. These additional actions include, but are not limited to (1) installing a vehicle portal monitor with a sensitivity to detect vehicle surface radiation levels specified in 10 CFR 20.1301(a)(2), (2) conducting a nuclear safety culture assessment of the GNF-A organization by an independent third party experienced with NRC nuclear safety culture and safety-conscious work environment policies, (3) conducting a benchmark assessment of the GNF-A Radiation Protection Program with at least two external radiation protection program organizations in the fuel cycle industry, and (4) expanding its Difference of Professional Opinion Process to include all technical safety matters related to GNF-A licensed activities. In recognition of these actions, the NRC agreed to refrain from proposing a civil penalty and issuing a notice of violation.

Orders Issued to New Reactor Licensees

None

Orders Issued to Decommissioning and Low-Level Waste Licensees

None

Orders Issued to Individuals

Mr. Curtis Thompson IA-16-059

On February 2, 2017, the NRC issued Mr. Curtis Thompson an order prohibiting involvement in NRC-licensed activities for 1 year. Mr. Thompson engaged in deliberate misconduct, in violation of 10 CFR 30.10(a)(1), by placing his former employer, American Engineering Testing, Inc., in violation of 10 CFR 34.41(a) when he performed industrial radiography without being accompanied by a second qualified individual. During the investigation, Mr. Thompson did not accept responsibility for his actions. He testified that he felt extremely pressured by a client of his former employer, and it was more important to complete the work than to follow NRC regulations. Mr. Thompson will be prohibited from any involvement in NRC-licensed activities for 1 year and will be required to notify the NRC, for 1 year after the 1-year prohibition has expired, within 20 days following acceptance of his first employment offer involving NRC-licensed activities.

Mr. Casey Pooler IA-16-075

On February 15, 2017, the NRC issued Mr. Casey Pooler an order prohibiting his involvement in NRC-licensed activities for 3 years and a Severity Level III notice of violation. While employed at Seabrook Station, Mr. Pooler engaged in deliberate misconduct, in violation of 10 CFR 50.5(a)(1), by placing his former employer, NextEra Energy Seabrook, LLC, in violation of 10 CFR 73.55(k)(2). In 10 CFR 73.55(k)(2), the NRC requires licensees to ensure that all firearms, ammunition, and equipment necessary to implement the site security plans and protective strategy are in sufficient supply, are in working condition, and are readily available for use. During an investigation, Mr. Pooler met with an Office of Investigations agent where he stated that he believed he placed foreign materials inside the barrel of his assigned weapon. He told the agent that he did not know why he did it and adamantly stated that he was not trying to hurt anyone or to assist anyone with gaining access to the site. Mr. Pooler acknowledged that it was reasonable to assume that he did not come forward about what he had done because he was afraid of being fired. Mr. Pooler also affirmed that he was not aware of adverse issues with any other weapons or equipment at the site. Mr. Pooler will be prohibited from any involvement in NRC-licensed activities for 3 years and will be required to notify the NRC, for 1 year after the 3-year prohibition has expired, within 20 days following acceptance of his first employment offer involving NRC-licensed activities.

Toby Lashley IA-16-049

On June 1, 2017, the NRC issued an order prohibiting Mr. Toby Lashley from involvement in NRC-licensed activities. Mr. Lashley (a former radiographer) caused his employer, JANX Integrity Group, to be in violation of 10 CFR 34.41(a) when Mr. Lashley failed to accompany another radiographer during radiographic operations. Mr. Lashley will be prohibited from any involvement in NRC-licensed activities for 1 year and will be required, for 1 year after the 1-year prohibition has expired, to notify the NRC within 20 days following acceptance of his first employment offer involving NRC-licensed activities.

Appendix D—Summary of Escalated Enforcement Actions against Individuals*

Orders

Appendix C discusses orders issued to individuals during 2017.

Notices of Violation

Mr. Roy Taylor IA-17-028

On March 1, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a Severity Level (SL) III notice of violation (NOV) to Mr. Roy Taylor for failing to comply with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 30.10(a)(2), which states, in part, that any employee of a licensee may not deliberately submit to a licensee information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC. Specifically, on July 10, 2014, Mr. Taylor deliberately provided false information in a posttreatment report to Botsford General Hospital that a medical procedure had gone forward as planned, when it had not.

Mr. Pieter van der Heide IA-16-029

On March 3, 2017, the NRC issued an NOV to Mr. Pieter van der Heide for an escalated violation involving aspects of the security program related to the security events at Louisiana Energy Services, LLC (doing business as URENCO USA) uranium enrichment facility in Eunice, NM. An investigation conducted by the NRC Office of Investigations determined that a deliberate violation of NRC requirements occurred. Specifically, Mr. van der Heide's deliberate actions caused Louisiana Energy Services, the licensee, to be in violation of NRC requirements for security-related matters and Mr. van der Heide to be in violation of 10 CFR 70.10(a)(1).

Mr. Eli Dragomer IA-17-004

On May 11, 2017, the NRC issued an SL III NOV to Mr. Eli Dragomer for violations of 10 CFR 55.53(i) and 10 CFR 50.5(a)(2). Specifically, for the first violation, Mr. Dragomer failed to comply with a condition imposed by the Commission on his senior reactor operator license. For the second violation, Mr. Dragomer deliberately submitted to Entergy information that he knew to be incomplete or inaccurate in some respect material to the NRC. These two related violations were characterized as an SL III problem.

Mr. Kevin Lashley IA-16-050

On June 1, 2017, the NRC issued an SL III NOV to Mr. Kevin Lashley for two violations of NRC requirements. The violations involved Mr. Lashley's actions as a qualified assistant radiographer while employed by JANX Integrity Group, where he deliberately failed to (1) survey the radiographic exposure device and the guide tube with a survey instrument

* Cases involving security-related issues are not included.

after each exposure when approaching the device as directed in 10 CFR 34.49(b) and (2) conduct operability checks of the radiography exposure device before use as required in 10 CFR 34.31(a).

Mr. Devin Caraza IA-17-030

On November 8, 2017, the NRC issued an SL III NOV to Mr. Devin Caraza for violating the requirements of 10 CFR 50.5(a)(1) and 10 CFR 55.49, "Integrity of Examinations and Tests." Mr. Caraza, while employed as a licensed reactor operator by Florida Power & Light's (FP&L) Turkey Point Nuclear Generating Plant, engaged in deliberate misconduct that would have caused FP&L to be in violation of 10 CFR 55.49, if FP&L had not detected the misconduct. Specifically, Mr. Caraza attempted to compromise the integrity of a biennial written requalification examination, an examination required by 10 CFR 55.53, "Conditions of Licenses."

Mr. Mark Sperlich IA-17-111

On December 21, 2017, the NRC issued an SL III NOV to Mr. Mark Sperlich for a violation of 10 CFR 71.8(b)(1) when he deliberately placed his employer, Avera McKennan Hospital, in violation of 10 CFR 71.5(a), which requires that the licensee comply with the U.S. Department of Transportation requirements in 49 CFR 173.410(f), 172.200(a), 172.300(a), and 172.400(a). Specifically, from March 2013 through December 2015, Mr. Sperlich deliberately failed to properly package shipments of bulk technetium-99m vials when he transported the material in a lead container that was placed in a plastic bag. He also deliberately failed to describe the hazardous material on shipping papers, mark each package containing the material, and label packages for shipment.

Appendix E—Summary of Escalated Enforcement Actions against Nonlicensees (Vendors, Contractors, and Certificate Holders)*

Orders Issued to Nonlicensees

None

* Cases involving security-related issues are not included.

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