Department of Energy
Washington, DC 20585

January 15, 2026

Mr. Dutch Conrad
President and Project Manager
Mid-America Conversion Services, LLC
1020 Monarch St., Suite 300
Lexington, Kentucky 40513

NEA-2026-01 (Final Notice of Violation)

Dear Mr. Conrad:

Pursuant to Section 234A of the Atomic Energy Act of 1954, as amended, 42 United States Code § 2282a, and the U.S. Department of Energy (DOE) regulations in 10 Code of Federal Regulations (C.F.R) Part 820, *Procedural Rules for DOE Nuclear Facilities*, DOE is issuing this Final Notice of Violation (FNOV) to Mid-America Conversion Services, LLC (MCS) for violations of DOE's nuclear safety requirements. The FNOV is based on the DOE Office of Enforcement's investigation summary dated August 31, 2023, as well as a thorough review of all evidence submitted by MCS, including their April 22, 2024, reply to the Preliminary Notice of Violation (PNOV), that was issued by DOE on February 20, 2024.

MCS's reply to the PNOV contested all three Severity Level II violations, including the characterizations, classifications, and proposed civil penalty amounts. MCS stated that the PNOV was based on a misunderstanding of the underlying facts, MCS's procedures, and corrective actions. MCS requested that DOE either withdraw each violation or reclassify each violation as Severity Level III with a significant penalty reduction, referencing MCS's stated similarities between its violations and those at other DOE and National Nuclear Security Administration sites, as well as the corrective actions already completed or planned by MCS.

DOE thoroughly evaluated MCS's reply (see Enclosure 1) and all additional information provided. The FNOV is provided as Enclosure 2.

Pursuant to 10 C.F.R. § 820.25, *Final notice of violation*, subsection (b)(2), MCS must file with the Docketing Clerk (enforcementdocketclerk@hq.doe.gov) within 30 days of receiving this FNOV one of the following replies: (1) a waiver of further proceedings; (2) a request for an on-the-record adjudication; or (3) a notice of intent to seek judicial review.

If MCS files a waiver of further proceedings, then the FNOV shall be deemed a Final Order enforceable against MCS, and MCS must pay the civil penalty as set forth in the

Final Notice of Violation within 60 days of the filing of the waiver unless the Director of Enforcement grants MCS additional time to pay (see Enclosure 3 for additional information on payment of the penalty).

Should MCS file a request for an on-the-record adjudication, the enforcement adjudication commences, and the Docketing Clerk shall notify the Energy Secretary, who shall appoint an Administrative Law Judge to be the Presiding Officer. Should MCS file a notice of intent to seek judicial review, the FNOV shall be deemed a Final Order enforceable against MCS.

Sincerely,

Robin M. Keeler
Acting Director
Office of Enforcement
Office of Enterprise Assessments

Enclosures: DOE Analysis of MCS's Reply to the PNOV
Final Notice of Violation (NEA-2026-01)
Electronic Funds Transfer Instructions

cc: Reinhard Knerr, PPPO
Carisa Kremin, Mid-America Conversion Services, LLC

Enclosure 1

DOE Analysis of MCS's Reply to the PNOV

PNOV Section I.A: Management Processes

The PNOV listed five examples of MCS's failure to comply with Title 10 C.F.R. § 830.122, subsection (a), *Criterion 1—Management/Program*. DOE's analysis of each of MCS's statements, as provided in their reply, is given below.

I.A.1 Monthly and Annual Inspections

MCS states that "MCS developed operational procedures to prevent staff from deviating from safe work practices" and that "[r]egardless of whether an order is issued, MCS policy is clear that approved technical procedures, such as Procedure 0507 [enclosed with the reply], which requires inspection of the crane prior to use, are not to be disregarded in executing the work approved by the order." However, MCS's management processes were inadequate in preventing workers from being directed to perform a series of work orders at a time when they could not be accomplished in accordance with technical procedures. MCS's reply focuses on the workers' error in following this inappropriate direction and does not acknowledge or address the inadequacies in its management processes that resulted in conflicting direction being provided to workers. Ultimately, MCS's work planning failed to prevent the operation of the crane.

I.A.2 Stop Work Requests

MCS states that "[t]he ultimate issue here is that the workers in question disregarded all applicable procedures in operating the crane." MCS also states that the individual responsible for conducting the pre-job brief "did not print or review the procedures with his team during the pre-job briefing, nor did he supervise the activity or assign a specific individual to perform the crane inspection." However, MCS does not address that the involved workers did not question the disregard for procedures, the inadequate pre-job briefing, or the lack of specific direction and supervision. Failure to question these conditions is inconsistent with stop work requirements. While there are several possible reasons for this, such as workers not recognizing the unsafe nature of these actions, perceiving the results as acceptable, or feeling unable to stop work, the situation illustrates a failure in MCS's implementation of its established management processes, which failed to prevent the operation of the crane.

I.A.3 Worker Training

MCS states that its employees "chose to ignore their training and applicable procedures and operated the crane without confirming the inspection date." MCS also states that "the worker training included all necessary elements to ensure safe operations, had the employees acted in accordance with the training they had each completed." However, MCS, as part of its management process, is not only responsible for providing the training, but also for ensuring its

effectiveness in practice and that work is performed in accordance with that training. The employees' failure to adhere to training and procedures, leading to the crane's operation beyond its inspection date, demonstrated a failure in MCS's management process to ensure effective implementation of training requirements.

I.A.4 Crane Checklists

MCS states that "training for qualifying to operate a crane, along with MCS [procedures] require the use of checklists which direct the operator to verify the inspection date of the equipment prior to use." However, MCS, as part of its management process, is responsible for ensuring the effectiveness of its training, procedures, and checklists. Specifically, two checklists were not used because of an assumption that they had already been completed and, as noted above in section I.A.2, this was not questioned by the workers involved. This demonstrates that MCS had not adequately implemented the management practices necessary to ensure the use of checklists, which were ineffective at preventing the operation of the crane.

I.A.5 Communication and Oversight

MCS states that the "PNOV errantly alleges that MCS's Management Processes failed to prevent the operation of the crane beyond its required inspection date, but MCS had robust management processes in place and could not have reasonably anticipated the human performance failures that led to the crane operation beyond its inspection date." MCS also states that it "evaluates identified issues on a quarterly basis and documents the results in a Quarterly Trend Analysis. Procedural noncompliance is one of the areas evaluated during this review. If a trend is identified, appropriate corrective actions are initiated to correct and prevent recurrence." MCS also states that "[t]his issue, where employees knowingly ignored procedural controls, is an isolated occurrence – it happened one time and has not happened again." However, the quarterly trend analysis failed to identify systemic issues, including workers rescheduling work in ways that led to unimplementable direction, non-compliance with procedures, and inadequate pre-job briefings. Furthermore, inadequacies in these processes have been demonstrated by the violations discussed above (e.g., issuance of unimplementable direction, lack of adherence to conduct of operations principles, and failure of management to identify and correct these issues). As a result, MCS's interfaces, communications processes, and management oversight (i.e., management processes) failed to prevent the operation of the crane.

Severity Level Determination

In MCS's reply to the PNOV, MCS states that the operation of the crane beyond its inspection date was not a result of "a procedural or programmatic breakdown, but rather an isolated human performance event which occurred <u>one time, was promptly addressed,</u> and has not happened again [emphasis in original]." MCS goes on to state that "MCS had no prior notice of a potential problem and there was no prior history to cause MCS to believe that its robust management procedures and trainings would be ignored by its employees" and that "there was no release or harm to the public or MCS employees." Based on these

statements, MCS concludes that "a Severity Level II assignment is wholly inappropriate." However, these statements do not sufficiently address the following points for several reasons.

First, categorization of this event as "isolated" is inappropriate as this event was not the failure of a single person, but rather a failure of an entire team including the MCS management representatives tasked with ensuring that workers perform their work tasks in compliance with all DOE Nuclear Safety Requirement (see PNOV section I.A). DOE expects that contractors operating its facilities will have management and supervisory systems in place that ensure all activities at DOE facilities are carried out in compliance with DOE Nuclear Safety Requirements, regardless of who performs them. This expectation is stated in 10 C.F.R. Part 820, *Appendix A to Part 820 – General Statement of Enforcement Policy*, § IX 1.d:

> DOE expects the contractors which operate its facilities to have the proper management and supervisory systems in place to assure that all activities at DOE facilities, regardless of who performs them, are carried out in compliance with all DOE Nuclear Safety Requirements. Therefore, contractors are normally held responsible for the acts of their employees and subcontractor employees in the conduct of activities at DOE facilities. Accordingly, this policy should not be construed to excuse personnel errors.

Second, prior notice is one of many factors considered during the determination of Severity Level and is not specifically required to meet the criteria for a Severity Level II violation. For this event, the multiple failures at all levels of the organization demonstrates a significant lack of attention or carelessness towards the underlying issues that allowed this event to occur.

Finally, actual harm is not required to meet the criteria for a Severity Level II violation. Furthermore, this approach is inconsistent with 10 C.F.R. Part 820, *Appendix A to Part 820 – General Statement of Enforcement Policy*, § IX.6.a, which states:

> If a contractor simply reacts to events that disclose potentially significant consequences or downplays noncompliances which did not result in significant consequences to workers, the public, and the environment, such contractor actions do not lead to the improvement in nuclear safety contemplated by the Act.

MCS's management processes proved inadequate in preventing the crane's operation beyond its required inspection due date. Left uncorrected, such management process weaknesses could have resulted in a catastrophic crane failure or other adverse impact to the public or worker safety at the Portsmouth Depleted Uranium Hexafluoride Conversion (DUF6) facility.

Civil Penalty Mitigation

MCS states that "[t]he civil penalty assessed for the alleged Management Process violation should be mitigated based on MCS's timely identification of the procedural violations and

corrective actions taken to prevent recurrence. MCS promptly identified that the crane had been operated outside of its inspection date the day after the violation occurred." While DOE acknowledges MCS promptly identified the crane's operation beyond its inspection date, this was a symptom of the underlying noncompliance, which MCS did not identify. Specifically, the pattern of systemic issues within management processes (as discussed above) was not identified before the event. Therefore, mitigation for self-identification is not warranted.

DOE may further reduce the base civil penalty by an additional 50 percent for prompt and comprehensive corrective action. However, since MCS failed to identify or adequately address underlying noncompliances, mitigation for corrective action is not warranted.

PNOV Section I.B: Training and Qualification

The PNOV listed two examples of MCS's failure to comply with Title 10 C.F.R. § 830.122, subsection (b), *Criterion 2—Management/Personnel Training and Qualification*. DOE's analysis of each of MCS's positions provided in their reply is given below.

I.B.1 Qualified Workers

MCS states that "[i]n all cases, MCS had a qualified individual in line of sight of the transfer who could fulfill the control room notification to stop the transfer." This statement appears to rely on MCS's statement during the Enforcement Conference that "[a] comparison of the Operations Supervisor qualification card and the Task to Training Matrix (TTM), for the field operator, the HFS [hydrofluoric acid storage system] Operator and all other watch stations will show all the elements for knowledge, skills, and abilities for these lower-level positions are in fact required for the PORTS [Portsmouth Gaseous Diffusion Plant] Operations Supervisor position," and that, as a result, "Operations Supervisors are fully qualified in the HFS area and other areas as well and therefore meet the requirements of the TSR [technical safety requirement] and are minimum staffing qualified."

However, the qualification of supervisors to DUF6-X-TPD-OPS-001-F08, *PORTS Conversion Facility Operations Supervisor Qualification Card*, Revision 2, dated February 28, 2020, does not provide the same level of training or qualification required for workers performing the responsibilities of the HFS operator technician. For example, the technician qualification requires eight 4-hour shifts as an HFS operator and four HFS loadout evolutions. In contrast, the supervisor qualification does not require any shifts specific to hydrofluoric acid (HF) loadout.

Additionally, while the supervisor qualification requires the same job performance measures (JPMs) as the technician qualification, some supervisors had not completed the JPMs required to demonstrate the skills necessary to perform HF operations safely. For example, DUF6-X-JPM-HFS-0928A, *PORTS HF Storage System JPM*, Revision 0, identifies that the "preferred [Mode of Accomplishment (MOA)] is to 'Perform (P)' the specific task step" and that "[a]ny deviation from the identified MOA…must be approved by the Training Program Manager and Functional Manager and documented on the JPM Task Qualification Sheet." However, one supervisor's HF storage system JPM evaluation used "discuss" as the MOA

(the least preferred option) without obtaining the required approvals. Other JPMs for supervisors also used non-preferred MOAs and lacked one or both necessary signatures for the training program manager and functional manager. In one case, no records were provided that demonstrated that the individual performing the role of supervisor was qualified to DUF6-X-TPD-OPS-001-F08.

Therefore, supervisors were not adequately trained or qualified to perform HFS loadout operations or fulfill Specific Administrative Control 5.5.3.4k without workers qualified as HFS operator technicians.

I.B.2 Maintenance Supervisor Qualification

MCS states that "[a] Maintenance Supervisor was found to have an incomplete qualification card during the performance of the TSR Surveillance activities, but his qualification status was not safety significant as he did not perform the work" and that "there is not a possibility of a nuclear safety violation with regard to the Maintenance Supervisor's qualifications since he did not even perform the surveillance." MCS also states that "[i]n this instance, the Maintenance Supervisor performed the pre-job brief within the scope of his role as a supervisor, and the actual surveillance activity was completed by four qualified mechanics."

However, these statements contradict DUF6-U-TPD-MNT-001, *Maintenance Training Program Description*, Revision 0, August 31, 2021, section 5, *Initial Training Requirements*, which states that "[w]hile in the process of completing training on tasks and activities for which they are <u>not</u> fully qualified, the trainee will work under the direct supervision of someone who is qualified. They <u>cannot</u> sign off on any required approvals or signatures [emphasis in original]." The maintenance supervisor was not fully qualified until over two weeks after the TSR surveillance was completed, as evidenced by the functional manager's certification that the "trainee has completed all the qualification requirements and is qualified to independently fulfill the responsibilities as a Maintenance Supervisor."

Contrary to this prohibition, the individual signed the work order as "Work Supervisor," certifying that "[b]ased upon my personal review of this work package and inspection of the work site, the work and retest specified in this package has been satisfactorily completed and required documentation is attached." As the work specified was described as a TSR surveillance requirement, its satisfactory completion directly impacts nuclear safety.

Additionally, even if this work did not have a direct impact on nuclear safety, MCS's statement that "[i]n accordance with DUF6-U-TRN-0001 5.3.3.9.f [which was enclosed with the reply], supervisors may fulfill roles without having a fully complete qualification card. The Maintenance Supervisor had completed sufficient trainings to establish the knowledge, skills, and competencies necessary to *supervise* the work in accordance with MCS procedure [emphasis in original]" is inconsistent with the applicable requirements for several reasons.

First, the referenced requirement does not discuss supervisors; it states that "[p]ersonnel may fill management positions while completing the applicable training requirements for the position." The difference between supervisors and management positions is significant, as

DUF6-U-TRN-0001, *Training and Qualification*, Revision 5, dated May 18, 2022, (enclosed with the reply), identifies that its purpose is to "implement requirements from U.S. Department of Energy (DOE) Order (O) 426.2, *Personnel Selection, Training, Qualification and Certification Requirements for DOE Nuclear Facilities*." DOE Order 426.2, attachment 2, *Definitions*, defines supervisors as:

> [I]ndividuals who are responsible for the quantity and quality of work performed and who direct the actions of operators…or maintenance personnel….Their duties include ensuring that work is performed in compliance with procedures, policies, and industrial safety practices.

This is significantly different from the DOE Order 426.2 definition of a manager, which does not include responsibilities for directing the actions of operators or maintenance personnel in the compliant performance of work. Specifically, a manager is defined as:

> [A] person whose assigned responsibilities include one or more of the following: nuclear safety, operational efficiency and reliability, control of onsite emergencies, and any other activities necessary to safeguard the health and safety of the workforce, the general public, and the environment. Operational responsibilities include prioritizing and assessing facility activities including modifications, and overseeing the operating organization. . . .

Second, and as identified above, DUF6-U-TPD-MNT-001, *Maintenance Training Program Description*, Revision 0, August 31, 2021, section 5, *Initial Training Requirements*, states that "[w]hile in the process of completing training on tasks and activities for which they are not fully qualified, the trainee will work under the direct supervision of someone who is qualified. They cannot sign off on any required approvals or signatures [emphasis in original]." The maintenance supervisor was not fully qualified as a "Supervisor/Manager" until two weeks after the performance of the TSR surveillance when the functional manager certified that the "trainee has completed all qualification requirements and is qualified to independently fulfill responsibilities." Significantly, as of the date of the TSR surveillance, the supervisor had not completed the required readings directly applicable to the safe conduct of work including (but not limited to) the worker safety and health program, general safety rules, electrical safety, or personal protective equipment.

Finally, the version of the *Training and Qualification* procedure (dated May 18, 2022) provided by MCS in its reply was not applicable at the time of the TSR surveillance, which occurred on April 26, 2022.

Severity Level Determination

MCS states that "even if a violation is deemed to have occurred, it in no way rises to the level of a Severity Level II violation. [These violations] would have been an inadvertent rather than an intentional action. Neither of these matters could possibly be considered grossly negligent, deceptive, or wilful (sic) behavior." However, 10 C.F.R. Part 820, Appendix A, § VI.b does not define Severity Level II violations as grossly negligent, deceptive, or willful; to the contrary, it defines these types of violations as "a significant lack of attention or carelessness toward responsibilities of DOE contractors for the protection of public or worker

safety which could, if uncorrected, potentially lead to an adverse impact on public or worker safety at DOE facilities." The examples provided in the FNOV demonstrate a pattern of carelessness in MCS's conduct of training and qualifications, aligning with this definition. Additionally, MCS's statement that "there was no release or harm to the public or MCS employees" misses the fact that actual harm is not required to meet the definition of a Severity Level II violation.

Civil Penalty Mitigation

As a basis for why the civil penalty should be mitigated, MCS states that "[i]n response to this matter, MCS developed and issued [a management brief that] addressed control of trainees and the limitations associated with trainees performing work. In addition, MCS performed an effectiveness review of personnel by interviews to verify the level of knowledge with respect to trainee control." However, consistent with 10 C.F.R. Part 820, *Appendix A to Part 820 – General Statement of Enforcement Policy*, § IX.6.a:

> When the occurrence of an event discloses noncompliances that the contractor could have or should have identified before the event, DOE will not generally allow a reduction in civil penalties for self-identification, even if the underlying noncompliances were reported to DOE.

In this case, the pattern of systemic qualification weaknesses and failures in training implementation documented in this FNOV (and previously the PNOV) was not identified by MCS as underlying regulatory non-compliances prior to the Office of Enforcement's involvement. These were conditions that MCS, through its own quality assurance and management systems, should have proactively identified and corrected through its contractor assurance program. Therefore, no mitigation for self-identification is warranted.

DOE may further reduce the base civil penalty by an additional 50 percent for prompt and comprehensive corrective action. However, in this case, MCS has not substantially addressed the underlying noncompliances discussed in the FNOV (and previously the PNOV). Consequently, no mitigation for corrective action is warranted.

PNOV Section I.C: Quality Improvement

The PNOV listed four examples of MCS's failure to comply with Title 10 C.F.R. § 830.122, subsection (a), *Criterion 1—Management/Program*. DOE's analysis of each of MCS's positions provided in their reply are given below.

I.C.1 Crane Operation Beyond Inspection Due Date

MCS states that it was not "only focused on the human performance issue" because one of the four identified causal factors in the apparent cause evaluation (ACE) was "related to a management system that could have been improved, and MCS updated applicable Procedure 0203.3 [which was enclosed with the reply] to add guidance for tagging out cranes that go beyond their required inspections accordingly." However, this update did not address the underlying conditions necessary to prevent the operation of the crane. Specifically, MCS

revised the procedure to require personnel performing the checklist to tag out the crane if it "is found to have gone beyond its monthly or annual inspection date." This is the same checklist that MCS employees disregarded. Therefore, this change does not "minimize the effects of human performance failures" as required by the MCS Conduct of Operations Manual.

Furthermore, this procedure revision transfers the responsibility for identifying existing unsafe conditions to workers, rather than implementing management processes to prevent these unsafe conditions from occurring (e.g., through using adequate scheduling or tagging out equipment before the inspections lapse). This transfer of responsibility is inconsistent with the MCS Quality Assurance Program, which identifies "[l]ine management responsibility for safety" as a guiding principle, and the MCS Integrated Safety Management System Plan (DUF6-PLN-04, Revision 5, dated November 2, 2022), which states that "[l]ine management is directly responsible for the safe and efficient conduct of work to ensure the protection of the public, the workers, and the environment."

MCS also states that "the Fact Finding [which was enclosed with the reply and shows that] MCS did consider other management systems that could have been improved." However, while MCS acknowledges certain areas for improvement, MCS does not fully address the implications of being aware of a noncompliant condition (e.g., a management process that allows for improper scheduling of maintenance, as discussed in section I.C.1 of the FNOV) without taking corrective action to prevent recurrence. This failure to act on the broader issue constitutes an additional noncompliance.

By focusing primarily on the specific causes that led to the crane operation rather than addressing the underlying issues that allowed it to occur (e.g., management process weaknesses in work planning, procedures, conduct of operations, training, and stop work), MCS's reply does not sufficiently identify the comprehensive set of underlying causes of the condition. Therefore, MCS has not taken action to prevent recurrence.

Furthermore, as discussed in the prior paragraph, some of MCS's corrective actions would not have addressed or prevented this specific event. As a result, MCS's quality improvement process failed to correct the underlying conditions that led to the operation of the crane beyond its inspection date.

I.C.2 Human Performance

MCS states that it had "determined through its Causal Analysis [which was enclosed with their reply] that the order did not cause the operator to choose to disregard operator training and procedural requirements for inspecting the crane prior to use." However, MCS's causal analysis does not identify the underlying causes for why several MCS employees did not adhere to both their training and the procedural requirements for inspecting the crane. Additionally, MCS does not address that the creation and approval of the incorrect timely order caused a contradiction with established technical procedures and that both the preparer and the approver of the timely order are required to prevent such conflicts from occurring (as discussed in section I.A.1 of the FNOV). This lack of acknowledgment or corrective action

is inconsistent with the MCS Conduct of Operations Manual, which states that "[m]anagement systems are designed to minimize the effects of human performance failures." MCS's quality improvement process failed to address the weaknesses in its management processes to minimize the effects of human performance failures that resulted in the operation of the crane.

I.C.3 Apparent Cause Evaluation

This example has been combined with I.C.2.

I.C.4 Worker Confusion

The MCS reply states that "Procedure 0507 and Procedure 0203-3 implement different controls for different activities, so any variances in the implementing controls between these two procedures did not appear to have any causal impact on the outcome." However, this statement is inconsistent with MCS's procedures, which (as cited in the FNOV) identify that Procedure 0507 requires compliance with Procedure 0203-3. This created a direct contradiction in procedural requirements regarding inspection extensions: Procedure 0203-3 included provisions for a 25 percent extension for surveillances, while Procedure 0507, as referenced, did not explicitly allow such an extension for crane operations. This inconsistency inherently undermined the clarity of operational guidance. While MCS revised procedure 0203-3 to remove the extension provision, it was not documented as one of the causal factors identified in the ACE.

Severity Level Determination

MCS states that the "severity level assigned to the Quality Improvement violation is not consistent with applicable regulations" and that "[t]he actions MCS took in response to this issue can in no way be considered to reflect a 'significant lack of attention or carelessness' toward the protection of the public or worker safety." MCS bases this conclusion on the statement that "[i]mmediately upon identifying issue, MCS conducted an in-depth Fact Finding [which was enclosed with the reply] with eleven people working to identify the factors that contributed to the incident and subsequently performed its Causal Analysis [which was enclosed with the reply] and implemented multiple corrective actions."

While MCS notes the timeliness of its reply, its causal analysis did not demonstrate the thoroughness required, nor did its corrective actions adequately address the identified deficiencies. This is consistent with 10 C.F.R. Part 820, *Appendix A to Part 820 – General Statement of Enforcement Policy*, § IX.3.a:

> The single most important goal of the DOE enforcement program is to encourage early identification and reporting of nuclear safety deficiencies and violations of DOE Nuclear Safety Requirements by the DOE contractors themselves rather than by DOE, and the prompt correction of any deficiencies and violations so identified.

Several factors that were neither fully identified or adequately corrected contributed to the event. These included weaknesses in management processes related to work planning, procedures, conduct of operations, training, and stop work. Additionally, MCS did not identify that multiple workers did not stop or question the appropriateness of unimplementable work scheduling, inadequate procedural compliance, or inadequate pre-job briefings, all of which ultimately allowed the operation of the crane.

MCS also states in its reply that "[t]he assignment of a Severity Level II violation here is not consistent with the facts or EA [Office of Enterprise Assessments] action in matters involving other contractors" and that "there was no release, no harm to the public, and no harm to MCS employees and yet this matter was assigned a Severity Level II." However, MCS does not address the fact that actual harm is not needed to meet the definition of a Severity Level II (nor even Severity Level I) violation. The determination of the severity level considers multiple factors beyond actual harm. MCS's position is inconsistent with 10 C.F.R. Part 820, *Appendix A to Part 820 – General Statement of Enforcement Policy*, § IX.6.a, which states:

> If a contractor simply reacts to events that disclose potentially significant consequences or downplays noncompliances which did not result in significant consequences to workers, the public, and the environment, such contractor actions do not lead to the improvement in nuclear safety contemplated by the Act.

Civil Penalty Mitigation

MCS's reply states that "[t]here are several mitigating factors that should have been considered in determining the amount of the civil penalty assessed for the alleged Quality Improvement violation. The cover letter to the PNOV states that MCS did not conduct a causal analysis or take appropriate corrective actions to prevent recurrence, which is not accurate. MCS initiated an in-depth Causal Analysis [which was enclosed with MCS's April 22, 2024, response] on September 23, 2021." However, DOE's reference in the PNOV pertains to the three cited violations (e.g., management processes, training and qualification, and quality improvement), which are distinct from the procedural noncompliance related to the crane operation that was the focus of MCS's causal analysis. MCS has not provided evidence that they have conducted a causal analysis of these broader violations in their reply to the PNOV. Therefore, the statement in the PNOV that "MCS has not acknowledged these nuclear safety deficiencies [and that] they have not conducted a causal analysis or taken appropriate corrective actions to prevent recurrence" remains accurate.

Therefore, as MCS did not identify (or report) these violations, reducing the base civil penalty for prompt reporting of a violation is not appropriate in this case. Similarly, no mitigation for corrective action is warranted because MCS failed to address these noncompliances through its corrective action system in a timely manner.

Enclosure 2

Final Notice of Violation

Mid-America Conversion Services, LLC
Portsmouth Depleted Uranium Hexafluoride Conversion Facility

NEA-2026-01

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with allegations of nuclear safety deficiencies at the Portsmouth Depleted Uranium Hexafluoride Conversion (DUF6) facility that occurred between 2019 and 2022 revealed multiple violations of DOE nuclear safety requirements by Mid-America Conversion Services, LLC (MCS). MCS manages and operates the Portsmouth DUF6 facility for the DOE Office of Environmental Management's Portsmouth Paducah Project Office (PPPO). The allegations concerned inadequate hazards analyses, inadequate causal analyses of events, inadequate processes for planning and scheduling work, and the performance of work by unqualified workers. These deficiencies did not pose a risk to the public or to workers outside the immediate vicinity of the Portsmouth DUF6.

DOE provided MCS with an investigation summary dated August 31, 2023, and convened an enforcement conference with MCS's representatives on November 2, 2023, to discuss the investigation summary's findings and MCS's response. DOE issued a Preliminary Notice of Violation (PNOV), NEA-2024-01, on February 20, 2024.

MCS replied to the PNOV on April 22, 2024, and contested all three Severity Level II violations, including the characterizations, classifications, and proposed civil penalty amounts. MCS asserted that the PNOV was based on a misunderstanding of the underlying facts, MCS's procedures, and corrective actions. MCS requested that DOE either withdraw each violation or reclassify each violation with a significant penalty reduction, referencing the corrective actions MCS had already implemented and plans to implement. DOE has thoroughly evaluated MCS's response and has provided the analysis in Enclosure 1.

Pursuant to Section 234A of the Atomic Energy Act of 1954, as amended, and DOE regulations set forth in 10 Code of Federal Regulations (C.F.R.) Part 820 (Part 820), *Procedural Rules for DOE Nuclear Activities*, DOE hereby issues this Final Notice of Violation (FNOV) to MCS. The violations included deficiencies in: (1) management processes, (2) training and qualification, and (3) quality improvement. DOE has grouped and categorized the violations as three Severity Level II violations.

Severity Levels are explained in Part 820, Appendix A, *General Statement of Enforcement Policy*. Paragraph VI(b) states that "Severity Level II violations represent a significant lack of attention or carelessness toward responsibilities of DOE contractors for the protection of public or worker safety which could, if uncorrected, potentially lead to an adverse impact on public or worker safety at DOE facilities."

In consideration of the lack of mitigation as detailed in Enclosure 1, DOE imposes a total civil penalty of $393,000.

As required by 10 C.F.R. § 820.25(a) and consistent with Part 820, appendix A, this FNOV concisely states the determined violations, designated penalties, and further actions necessary by or available to the respondent. Citations specifically referencing the quality assurance criteria of 10 C.F.R. § 830.122 also constitute violations of § 830.121(a), which requires compliance with those quality assurance criteria.

I. VIOLATIONS

A. Management Processes

Title 10 C.F.R. § 830.121, *Quality Assurance Program (QAP)*, subsection (b), states that "[t]he contractor responsible for a DOE nuclear facility must:… (4) [c]onduct work in accordance with the QAP."

Title 10 C.F.R. § 830.122, subsection (a), *Criterion 1—Management/Program*, requires contractors to "(1) [e]stablish an organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the work. (2) Establish management processes, including planning, scheduling, and providing resources for the work."

DUF6-PLN-003, Project Quality Assurance Plan, Revision 3, December 23, 2020, section 2, *Quality Assurance Program*, states that DUF6 management is responsible for "establishing effective interfaces and communication processes with both the internal and external organizations…assessing the adequacy and effectiveness of training programs for their areas of responsibility." It also states that "DUF6 management regularly assesses the adequacy and effective implementation of the [quality assurance] program" and that management's "participation is essential to the success of the quality improvement process because they are in a position to both evaluate the organization as a total system and to effect needed change."

DUF6-U-CON-0001, *Conduct of Operations Manual*, Revision 3, July 8, 2020, section 1.3.4.i, *Requirements*, states that "[m]anagement systems are designed to minimize the effects of human performance failures."

Title 10 C.F.R. § 830.122, subsection (h), *Criterion 8—Performance/Inspection and Acceptance Testing*, requires contractors to "(1) [i]nspect and test specified items, services, and processes using established acceptance and performance criteria."

DUF6-PLN-003, *Project Quality Assurance Plan*, Revision 3, December 23, 2020, section 10, *Inspections*, states that "inspections required to verify conformance of an item or activity to specified requirements or continued acceptability of items in service shall be planned and executed."

DUF6-X-OPS-0507, *Cylinder Movement Operations*, Revision 2, September 16, 2019, section 8.1, *Cylinder Handling Crane Operations*, states that "[e]quipment that is past due for inspection **shall not** be operated [emphasis in original]."

Contrary to these requirements, MCS management processes (e.g., work planning, procedures, conduct of operations, training, stop work) failed to prevent the operation of crane X-0-CHS-CN-002 beyond its required inspection due date and minimize the effects of human performance failures. Specific examples include:

1. MCS scheduled required monthly and annual inspections of the crane to take place on the morning of Wednesday, September 22, 2021. However, in an effort to complete several work orders (i.e., 2101927, 2101932, 2101933, 2101953, and 2102209) earlier than scheduled, MCS directed these work orders be moved from the Wednesday night shift to the Monday (September 20, 2021) night shift by approving the *DUF6 Conversion Project Daily (Shift) Orders*, dated September 20, 2021. DUF6-U-CON-0001, section 15.3, *Requirements*, states that "Timely Orders [which includes Daily (Shift) Orders] specify appropriate orders such as direction/authorization to…perform specific maintenance actions [and] Timely Orders shall not be used to replace of circumvent approved technical procedures." However, contrary to this requirement, MCS's issuance of these Daily (Shift) Orders was both inappropriate and inconsistent with technical procedures, as the required inspections were not scheduled to be complete at the time workers were directed and authorized by these orders to perform the work.

2. The conflicting direction created by the issuance of the Daily (Shift) Order, dated September 20, 2021, did not result in a "time-out" prior to the operation of the crane as required by DUF6-U-CON-0001, section 16, *Responsibilities*, subsection 16.2.3, *Personnel*, which requires that workers "stop the work or request a time-out" if a procedure, as written, "will produce unsafe or unsatisfactory results."

3. MCS management failed to ensure the effectiveness of worker training identified in BWCS-U-OJT-OPS-0507, *Crane Operator OJT* [on the job training], Revision 0, to prevent the operation of a crane beyond its required inspection due date.

4. MCS management failed to ensure the effective implementation of two checklists, DUF6 Form 3746, *Overhead Crane, Monorail and Hoist Checklist*, and DUF6 Form 3749, *Lifting Fixture Checklist*, to prevent the operation of a crane beyond its required inspection due date.

5. MCS management failed to establish effective interfaces and communication processes and provide adequate management oversight to ensure effective implementation of the QAP as evidenced by the examples above.

Collectively, these noncompliances constitute a Severity Level II violation.
Base Civil Penalty – $131,000.
Imposed Civil Penalty – $131,000.

B. Training and Qualification

Title 10 C.F.R. § 830.122, subsection (b), *Criterion 2—Management/Personnel Training and Qualification*, requires contractors to "(1) [t]rain and qualify personnel to be capable of performing their assigned work."

DUF6-PLN-003, Revision 5, November 29, 2021, and Revision 6, May 11, 2022, section 2, *Quality Assurance Program*, both state that "[o]perations and [m]aintenance personnel who perform routine operational and maintenance inspection and testing activities are qualified in accordance with DOE Order 426.2 *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*, [April 21, 2010,] as implemented through DUF6-PLN-027, *Personnel Selection, Training, and Qualification Management Plan*."

DUF6-PLN-027, Revision 0, August 13, 2019, section 6.1, *General Requirements*, states that "[t]he training requirements leading to qualification for personnel who can impact the safety basis are documented in each training program's TPD [training program description] and the associated qualification cards/profiles" and that "[q]ualification may be granted only after all requirements listed in the associated qualification card/profile have been satisfactorily completed." The associated qualification card for a Portsmouth hydrofluoric acid system (HFS) operator is DUF6-X-TPD-OPS-001-F04, *PORTS HFS Operator Technician Qualification Card*, Revision 4, October 21, 2020. The qualification requirements for supervisors are defined in DUF6-U-TPD-SM-001-F01, *Supervisor/Manager Qualification Card*, Revision 7, August 23, 2021, which contains a job performance requirement for the hydrogen fluoride (HF) storage system and includes loadout operations. The job performance requirements are defined in DUF6-U-TRN-0001-F-27, Revision 1, May 2017, Module Number DUF9-X-JPM-HFS-9028B, Revision 0, *PORTS HF Sampling [Job Performance Measure (JPM)]*. The qualification requirements for maintenance supervisors are defined in DUF6-X-TPD-MNT- 001-F09, *PORTS Maintenance Supervisor Qualification Card*, Revision 3, September 29, 2020.

DUF6-X-TSR-002, *Technical Safety Requirements* [TSRs] *for the DUF6 Conversion Facility, Piketon, Ohio*, Revision 18, September 24, 2020, section 5.2.1.1.e, states that management is responsible for "[e]nsuring that personnel conducting Conversion Facility activities meet established training requirements for their positions."

DUF6-X-TSR-002, section 5.3, *Minimum Staffing*, subsection 5.3.4, states that "[q]ualified operators shall be present at the Conversion Facility in accordance with Table 5.3.4-1 to perform the credited safety responses…when the associated processes are being performed." For HF loadout, the credited safety response is defined by Specific Administrative Control (SAC) 5.5.3.4K, which states that "[w]hen HF transfers to a tanker or railcar are occurring, an operator in the line of sight of the transfer line shall upon an indication of a leak: (1) notify the control room operator to stop the transfer or (2) actuate the HF Storage Tank Area transfer shutdown button." Table 5.3.4-1, *Minimum Staffing for Safety*, requires one qualified operator in the HF storage tank area during HF loadout and one qualified operator in the control room. The note states that the "operator performing the HF transfer

observation in the field cannot be the same operator performing other field responses and is only required during HF loadout."

DUF6-U-CON-0001, section 5.3, *Requirements*, subsection 3.d, states that "[t]raining activities and trainee operation of equipment is suspended immediately during emergencies or unanticipated abnormal conditions, or when deemed appropriate for safety or operational conditions."

DUF6-U-TPD-MNT-001, *Maintenance Training Program Description*, Revision 0, August 31, 2021, section 5, *Initial Training Requirements*, states that "[w]hile in the process of completing training on tasks and activities for which they are not fully qualified, the trainee will work under the direct supervision of someone who is qualified. They cannot sign off on any required approvals or signatures [emphasis in original]."

Contrary to these requirements, MCS failed to ensure that its workers were trained and qualified to perform their assigned work. Specific examples include:

1. MCS did not ensure that a qualified worker was present during HF loadout activities or while implementing SAC 5.5.3.4K, which requires a qualified worker in the line of sight of the transfer line to ensure that the HF transfer is stopped in the event of a leak. MCS did not meet these requirements on at least five separate occasions, as documented in HF loadout checklists DUF6-X-OPS-0402-F01-073122, HF-X-22-0006, HF-X-22-0007, HF-X-22-0011, and HF-X-22-0014. On each of these occasions, training records indicate that none of the workers present held qualification under DUF6-X-TPD-OPS-0001-F04, *PORTS HFS Operator Technician Qualification Card*.

2. MCS did not ensure that a worker was qualified as maintenance supervisor before the completion of TSR surveillance requirements (SRs) for the Condenser Room HF Vapor Detection System, which included monthly calibration of each HF detector (SR 4.3.2.1) and annual functional testing of local and control room alarms (SR 4.3.2.2 and SR 4.3.2.3). The worker signed MCS work order 2201090 as "Work Supervisor" certifying that "[b]ased upon my personal review of this work package and inspection of the work site, the work and retest specified in this package has been satisfactorily completed and required documentation is attached." This issue was originally identified by PPPO during a readiness assessment conducted in May and June 2022 and documented in PPPO-22-IR-101844, *Final Report for the Startup of the Depleted Uranium Hexafluoride Conversation Facility in Piketon, OH*, dated July 2022.

Collectively, these noncompliances constitute a Severity Level II violation.
Base Civil Penalty – $131,000.
Imposed Civil Penalty – $131,000.

C. Quality Improvement

Title 10 C.F.R. § 830.122(c), *Criterion 3—Management/Quality Improvement*, requires that a contractor's QAP "(1) [e]stablish and implement processes to detect and prevent quality problems. (2) Identify, control, and correct items, services, and processes that do not meet established requirements. (3) Identify the causes of problems and work to prevent recurrence as part of correcting the problem."

DUF6-PLN-003, *Project Quality Assurance Plan*, Revision 3, December 23, 2020, section 16, *Corrective Action*, states that "conditions adverse to quality shall be identified promptly and corrected as soon as possible."

DUF6-PLN-145, *Contractor Assurance System Description*, Revision 4, May 26, 2021, section 6.2, *Issue Evaluation/Cause Identification, Adverse (SL-2) CAQ* [condition adverse to quality] *(Medium Significance Level)*, states that "[i]t is essential that management understands the causes of the issue and considers the extent of condition that caused the issue."

DUF6-U-QAP-0005, *Issues Management*, Revision 4, January 20, 2021, section 5.8.1, *Investigation and Causal Analysis*, requires the "completion of a causal analysis commensurate with the significance level of the issue." In the case of conditions adverse to quality, "an ACE [apparent cause evaluation] in accordance with Attachment C, *Causal Analysis Guidance*" is required.

DUF6-U-CON-0001, *Conduct of Operations Manual*, Revision 3, July 8, 2020, section 1.3.4.i, *Requirements*, states that "[m]anagement systems are designed to minimize the effects of human performance failures."

Contrary to these requirements, MCS failed to adequately determine and prevent recurrence of the causal factors for the operation of crane X-0-CHS-CN-002 beyond its required inspection due date, as evidenced by the following:

1. MCS concluded that the operation of the crane beyond its required inspection due date "was solely the result of a human performance issue; MCS had the correct procedures in place to prevent this issue had they been properly followed." However, this does not minimize the effects of human performance failures, as required by DUF6-U-CON-0001. By focusing almost exclusively on the human performance issue, MCS failed to identify or address the other management processes that failed to prevent the incorrect operation of the crane, such as the failures in work planning, procedures, conduct of operations, training, and stop work as discussed in section I.A.

2. MCS did not correct the weakness in its work planning process that allowed the issuance of the Daily (Shift) Orders that were both inappropriate and inconsistent with technical procedures (as discussed in section I.A.1) through its causal analysis or corrective action processes. This condition was identified in the MCS fact finding, FF-X-21002, *Crane Operated Beyond the Annual Inspection Date*, dated September 21, 2021, which states

that "[t]he Operations Manager and Lead Facility Manager looked ahead on the schedule and were trying to get the surveillances completed. Once the crane LOTO [lockout/tagout] permit was released, they moved them ahead on the night orders to get them completed. This was an oversight as the cranes were past their annual inspection. In hindsight, they shouldn't have made it to night orders."

3. DUF6-U-ACE-21-006 did not identify or address the worker confusion regarding DUF6-X-OPS-0507, Revision 2, and DUF6-U-SHP-0203-3, *Hoisting and Rigging, Overhead Inspection and Crane*, Revision 0, May 24, 2017. DUF6-X-OPS-0507, section 8.1, states that "[e]quipment that is past due for inspection **shall not** be operated [emphasis in original]." However, DUF6-X-OPS-0507 also states in section 7.1, Precautions, that "[a]ll hoisting and rigging activities shall be performed in accordance with DUF6-U-SHP-0203 *Hoisting and Rigging*." DUF6-U-SHP-0203-3, *Hoisting and Rigging – Overhead Crane Inspection and Operations*, Revision 0, May 24, 2017, section 5.3, *Inspections*, contradicts DUF6-X-OPS-057, stating that "[e]ach inspection should be performed at the specified frequency, with a maximum extension of **25 percent** of the interval between any **two** consecutive surveillances [emphasis in original]." During the investigation, workers indicated that they believed the 25 percent extension applied to the scheduled surveillances, because they thought those surveillances were required by the TSRs. MCS management identified that those surveillances are often referred to as TSR surveillance but are not.

Collectively, these noncompliances constitute a Severity Level II violation.
Base Civil Penalty – $131,000.
Imposed Civil Penalty – $131,000.

II. Final Notice of Violation

Pursuant to 10 C.F.R. § 820.25(b)(2), MCS is hereby obligated to file within 30 days after the filing of this Final Notice: (i) A waiver of further proceedings, (ii) A request for an on-the-record adjudication; or (iii) A notice of intent to seek judicial review.

If MCS waives further proceedings, the FNOV shall be deemed a Final Order enforceable against the respondent. MCS must pay the civil penalty set forth in this FNOV within 60 days of the filing of waiver unless the Director of Enforcement grants additional time. The total civil penalty of $393,000 must be remitted by electronic funds transfer (EFT) or automated clearing house (ACH) transfer to the Department of Energy through the U.S. Treasury. The Office of Enforcement should be copied at enforcementdocketclerk@hq.doe.gov when the electronic payment is submitted to the U.S. Treasury. Instructions for remitters sending payments in U.S. dollars via EFT or ACH transfer are in Enclosure 3.

If MCS files a request for an on-the-record adjudication of the civil penalty in accordance with 10 C.F.R. § 820.27, MCS must also file a written answer to the FNOV at the same time the request for an on-the-record adjudication is filed. The answer must clearly and directly admit, deny or explain each of the factual allegations contained in the FNOV with regard to which MCS has any knowledge, information or belief. Where MCS has no knowledge, information or belief of a particular factual allegation and so states, the allegation is deemed denied. The answer shall

also state the circumstance or argument that is alleged to constitute the grounds of defense and the facts that the respondent intends to place at issue. (See 10 C.F.R. §§ 820.28 through 820.32 for additional procedural requirements for on-the-record adjudications).

If MCS files a Notice of Intent to seek judicial review of the FNOV, the FNOV shall be deemed a Final Order enforceable against MCS, in which case, MCS must pay the civil penalty set forth in this FNOV within 60 days of filing the notice of intent to seek judicial review. (See Enclosure 3 for additional information on how to pay the civil penalties imposed by this FNOV).

Pursuant to 10 C.F.R. § 820.33, *Default order*, subsection (a), if MCS fails to file (i) a waiver of further proceedings; (ii) a request for an on-the-record adjudication; or (iii) a notice of intent to seek judicial review within 30 calendar days after the date of filing of this FNOV or fails to comply with any other provision of 10 C.F.R. Part 820, the Director of Enforcement may pursue a Default Order.

Please submit the filing to enforcementdocketclerk@hq.doe.gov.

Robin M. Keeler
Acting Director
Office of Enforcement
Office of Enterprise Assessments

Washington, D.C.
This 15th day of January, 2026