

April 13, 2026
Sandra Ely, Chair
New Mexico Environment Improvement Board
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

Re: EIB 25-81(R): Petition to Amend 20.4.1 NMAC and 20.4.3 NMAC (Hazardous Waste Regulations) and to Adopt 20.13.3 NMAC – Aqueous Film Forming Foam Containing Intentionally Added Per- and Polyfluoroalkyl Substances

Dear Chair Ely:

National Technology & Engineering Solutions of Sandia, LLC (“NTESS”), the management and operating (“M&O”) contractor for Sandia National Laboratories (“Sandia”), appreciates the opportunity to submit comments to the New Mexico Environment Improvement Board (“EIB” or “Board”) on the New Mexico Environment Department’s (“NMED”) Petition to Amend 20.4.1 NMAC and 20.4.3 NMAC and to Adopt 20.13.3 NMAC.

NTESS supports NMED’s objective of reducing unnecessary environmental releases of aqueous film forming foam (“AFFF”) containing intentionally added per- and polyfluoroalkyl substances (“PFAS”) and shares the Department’s commitment to protecting public health and the environment. However, as currently drafted, proposed 20.13.3 NMAC presents two significant problems that require correction before adoption.

First, the rule restricts AFFF use to “emergency purposes only,” but defines that term in a way that would inadvertently prohibit controlled laboratory research — the very work needed to understand AFFF’s effects on human health, the environment, and critical infrastructure, and to develop the technologies necessary to eliminate PFAS contamination.

Second, the rule’s definition of “emergency purposes” in proposed Section 20.13.3.7.A NMAC *expressly excludes* “the use of firefighting foam in fire suppression systems.” This exclusion is illogical and dangerous. Automated fire suppression systems exist for one purpose and one purpose only: to respond to emergencies. The types of fires these systems are designed to fight—Class B flammable liquid fires involving fuels, solvents, and other hydrocarbons—are among the most dangerous fire scenarios in existence, and conventional suppressants such as water are, quite simply, ineffective against them (and can actually make them worse). Categorically excluding automated suppression systems from the definition of “emergency purposes” would prohibit the use of AFFF in the exact scenario the rule purports to allow: an urgent, life-threatening fire.

NTESS respectfully requests that the Board amend proposed 20.13.3 NMAC to (1) include a narrow exemption for the use of AFFF in controlled laboratory research environments and (2) revise the definition of “emergency purposes” in Section 20.13.3.7.A to include the activation of

fire suppression systems. This comment explains why both amendments are necessary, why they are consistent with the rule's protective purposes, and proposes specific text revisions.

I. About Sandia National Laboratories

Sandia is a multimission federally funded research and development center ("FFRDC") sponsored by the National Nuclear Security Administration ("NNSA") and managed and operated by NTESS, a wholly owned subsidiary of Honeywell International, Inc., under a long-term management and operating contract. Sandia is dedicated to advancing science, technology, and engineering solutions for the nation's most pressing security challenges, including nuclear deterrence, nonproliferation, energy security, and defense systems.

Directly relevant to this proceeding, and among other things, Sandia is actively developing technologies to eliminate PFAS contamination at both large and small scales and methods to detect PFAS in aqueous samples more quickly and efficiently. This work requires the controlled, limited use of relatively small quantities of AFFF in laboratory settings.

II. The Proposed Rule Inadvertently Prohibits Beneficial Research

Proposed Section 20.13.3.6.C NMAC states the rule's objective of limiting AFFF use to "emergency purposes only." Section 20.13.3.7.A NMAC defines "emergency purposes" as the use of AFFF "to extinguish flammable liquid fires in urgent, life threatening situations such as fuel spills or mobile vehicle (e.g. aircraft) incidents." This restriction is reinforced by the certification requirement in Section 20.13.3.9(1) NMAC, which mandates that each annual inventory include a "[c]ertification that the products are set aside for emergency purposes only," and by the labeling requirement in Section 20.13.3.10.A NMAC, which requires containers to be labeled "For Emergency Use Only. Contains PFAS."

NTESS acknowledges that AFFF use is primarily intended for emergency response.

However, the rule as drafted does not account for any other use of AFFF, including controlled laboratory research. No exemption, exception, or variance mechanism exists for scientific or research purposes.

This omission creates a significant unintended consequence.

By prohibiting all non-emergency uses, the rule would prevent the very research needed to:

- Understand the health and environmental effects of AFFF and PFAS;
- Evaluate the effects of AFFF exposure on materials used in critical national security infrastructure;
- Develop PFAS destruction and remediation technologies; and

- Advance detection methods for PFAS in environmental media.

This outcome is at odds with the rule’s stated purpose of protecting public health and the environment.

III. A Narrow Research Exemption Is Consistent with the Rule’s Protective Purpose

The environmental and health risks associated with AFFF arise from large-scale releases into the environment—firefighting exercises, training activities, and emergency deployments that discharge foam directly to soil, waterways, or drainage systems. According to Mr. Nance’s testimony, for example, a single training exercise at a military installation can result in a multi-decadal remediation project costing millions of dollars. Those are the scenarios the proposed rule purports to target.

However, controlled laboratory research involves a fundamentally different risk profile:

- AFFF is used in de minimis quantities—typically milliliters, not the hundreds or thousands of gallons associated with field use.
- Research is conducted in enclosed, controlled laboratory environments with absolutely no environmental release pathways.
- All AFFF used in research is collected and managed as hazardous waste upon completion, consistent with Sandia’s existing hazardous waste management procedures under RCRA and state regulations.

Because laboratory research does not result in environmental releases, exempting it from the emergency-use-only restriction would not undermine the rule’s objectives. To the contrary, it would advance them by allowing the scientific community to generate the data needed to support effective regulation and remediation of PFAS.

IV. The Definition of “Emergency Purposes” Must Include Fire Suppression Systems

A. The Proposed Definition Expressly Excludes Fire Suppression Systems

Proposed Section 20.13.3.7.A NMAC defines “emergency purposes” as the use of AFFF “to extinguish flammable liquid fires in urgent, life threatening situations such as fuel spills or mobile vehicle (e.g. aircraft) incidents.” The definition then provides: “For purposes of this subsection, ‘emergency purposes’ does not include training, testing, or *the use of firefighting foam in fire suppression systems.*” (Emphasis added.)

While NTESS agrees that there are plausible logical reasons for why training and testing should not qualify as emergency uses, grouping fire suppression systems with those categories is a clear and fundamental error. Training and testing are planned, discretionary activities that occur outside of any emergency. Fire suppression systems are the opposite: they activate *only* when an emergency occurs. They are, by design and function, emergency response equipment.

B. The Exclusion Creates an Internally Inconsistent and Dangerous Result

The proposed definition permits AFFF use “to extinguish flammable liquid fires in urgent, life threatening situations”—but simultaneously prohibits fire suppression systems from doing exactly that. This creates an internal contradiction. If a flammable liquid fire erupts in a facility equipped with an AFFF-based suppression system, the rule would permit – and, indeed, require – a human firefighter to be placed in harm’s way in order to manually deploy AFFF to fight the same fire, and yet would prohibit an automated system — engineered for precisely this scenario — from doing so.

This result is not merely illogical; it is dangerous.

The types of fires that AFFF is designed to combat—Class B flammable liquid fires involving fuels, solvents, and other hydrocarbons—are extraordinarily hazardous. They spread rapidly, resist conventional water-based suppression, and can escalate to catastrophic proportions within seconds. Indeed, the application of water to a flammable liquid fire can spread the burning liquid and make the fire dramatically worse. Automated fire suppression systems exist precisely because these fires are too fast-moving and too dangerous to rely solely on manual response. Prohibiting these systems from deploying AFFF during an actual emergency could very well cost lives.

C. NMED’s Rationale Does Not Justify the Exclusion

In his testimony, Mr. Nance states that NMED’s “rationale for prohibiting the use of these foams in training, testing, and fixed suppression systems is rooted in the documented, catastrophic impacts this substance has already had on New Mexico’s health, welfare, and economy.” NMED Exhibit 5. Mr. Nance further asserts that “fluorine-free alternatives are readily available.”

NTESS does not dispute the seriousness of PFAS contamination or the desirability of transitioning to fluorine-free alternatives where they are effective and available.

However, NMED’s rationale conflates several distinct categories of use that present materially different risk-benefit profiles. The environmental harms Mr. Nance describes—the contamination of groundwater near Cannon Air Force Base, the culling of dairy cattle, the PFAS contamination at Lake Holloman—all presumably resulted from routine, repeated, large-volume uses of AFFF: training exercises, equipment testing, and similar planned activities. They did not result, and could not have possibly resulted, from the activation of fire suppression systems during actual emergencies.

Moreover, the assertion that fluorine-free alternatives are “readily available” for fire suppression systems oversimplifies a complex engineering question. Many existing fire suppression systems were designed and engineered for AFFF. Converting these systems to fluorine-free foam requires more than simply swapping one product for another; it may require system redesign, retesting, and recertification to ensure that the replacement foam is compatible with the system’s hardware and effective against the specific fire hazards the system is designed to address. These transitions take time, and in the interim, facilities must not be left without effective fire protection.

Effective rulemaking demands intellectual honesty. Do we honestly believe a facility can simply decommission its existing fire suppression system while awaiting conversion?

Finally, there is a fundamental distinction between a planned, discretionary discharge of AFFF (such as training or testing) and the emergency activation of a fire suppression system. In a training exercise, the operator makes a deliberate choice to release PFAS-containing foam into the environment when alternatives are available and no lives are at stake. In an automated activation, the system responds to a genuine threat to life, safety, and property. The rule should recognize this distinction rather than treating both categories identically.

D. The Exclusion Creates a Regulatory Conflict

Many facilities in New Mexico—including airports, fuel depots, military installations, industrial plants, and research laboratories such as Sandia—rely on AFFF-based fire suppression systems to protect personnel and property from flammable liquid fires. These systems are often legally required by applicable industry standards and facility-specific safety requirements. If the proposed rule is adopted as drafted, these facilities would face an irreconcilable conflict: fire safety codes and standards require them to maintain operational fire suppression systems, while proposed 20.13.3 NMAC would prohibit those same systems from activating.

Is this truly what we want for airports and other important facilities of our state?

No facility should be forced to choose between complying with fire safety requirements and complying with environmental regulations—especially when the use in question is, by any ordinary understanding of the term, an emergency use.

V. National Security Implications

Sandia’s AFFF-related research is mission-critical to national security. Sandia uses AFFF in limited, controlled quantities. This work is performed pursuant to Sandia’s obligations as a federal contractor with the NNSA.

The proposed rule, as drafted, would prevent Sandia from completing this work. Therefore, NTESS urges the Board to consider these national security implications when evaluating the need for a research exemption.

VI. Requested Revisions to Proposed 20.13.3 NMAC

NTESS respectfully requests the following specific revisions:

A. Revisions to Accommodate Controlled Laboratory Research

1. **Section 20.13.3.7.A NMAC (Definition of “Emergency Purposes”)**. Add “controlled laboratory research” as a permissible use of AFFF alongside emergency use. Alternatively, add a new defined term and subsection providing that the restrictions on non-emergency use do not apply to the use of AFFF in de minimis quantities in controlled environments where all AFFF is collected and managed as hazardous waste.
2. **Section 20.13.3.9(1) NMAC (Certification)**. Revise the certification requirement to exclude facilities conducting controlled laboratory research from the requirement. Alternatively, allow facilities conducting laboratory research to certify that products are set aside for “emergency and/or laboratory research purposes only.”
3. **Section 20.13.3.9(8) NMAC (Logging Requirements)**. Revise the logging requirement so that controlled laboratory uses of AFFF are excluded. Alternatively, provide that such uses may be recorded in annual aggregate reports rather than on a per-use basis. Laboratory research may involve numerous – but very, *very* small – aliquots over the course of a months, and per-event logging imposes a disproportionate administrative burden without a corresponding environmental benefit.
4. **Section 20.13.3.9 NMAC (24-Hour Notification)**. Revise the 24-hour notification requirement to provide that no notification to NMED is required when AFFF is used in a controlled laboratory environment. As an alternative, NTESS may support a requirement to include laboratory AFFF usage in periodic (e.g., annual) compliance reports to NMED (although we believe this would needlessly increase administrative burden on both research laboratories and the NMED).

B. Revision to the Definition of “Emergency Purposes” to Include Fire Suppression Systems

1. **Section 20.13.3.7.A NMAC**. Delete the phrase “or the use of firefighting foam in fire suppression systems” from the second sentence. As revised, the exclusion would read: “For purposes of this subsection, ‘emergency purposes’ does not include training or testing.” This preserves the prohibition on planned, discretionary uses of AFFF while ensuring that fire suppression systems can fulfill their intended purpose of responding to actual (and extremely dangerous) emergencies.

2. **Alternatively**, if the Board is concerned about incentivizing the indefinite retention of AFFF in fire suppression systems, the Board could add a time-limited transition provision. For example: “The use of AFFF in fire suppression systems constitutes an emergency purpose through [**date certain – in several years**], after which all fire suppression systems must be converted to fluorine-free alternatives.” This approach would hopefully allow facilities a reasonable period to complete the engineering, testing, and recertification work necessary for conversion while ensuring that no facility is left without effective fire protection in the interim (which would be a terrible idea and needlessly risk property, safety, and human lives).

These revisions are narrowly tailored.

They preserve all substantive regulatory requirements—including waste management, storage, inventory, labeling, recordkeeping, and reporting obligations—and do not in any way diminish the protections the rule affords to public health and the environment.

VII. Conclusion

Sandia’s work exemplifies the intersection of environmental stewardship and national security. The laboratory is simultaneously developing technologies to assist with PFAS contamination and conducting research to ensure the safety and reliability of materials critical to the nation’s defense. Both of these missions require the controlled, limited use of AFFF in laboratory settings.

At the same time, the rule’s express exclusion of fire suppression systems from the definition of “emergency purposes” creates a dangerous regulatory gap. Automated fire suppression systems *are* emergency response equipment. They activate only during emergencies. Excluding them from the definition of permissible emergency use is internally contradictory, creates an irreconcilable conflict with fire safety codes, and could jeopardize the safety of personnel at facilities across New Mexico.

NTESS respectfully requests that the Board amend proposed 20.13.3 NMAC to (1) include an exemption for controlled laboratory research and (2) remove the exclusion of fire suppression systems from the definition of “emergency purposes.” Neither amendment would compromise the rule’s environmental and public health objectives; both would strengthen them.

We appreciate the Board’s careful consideration of these comments and the practical implications of the proposed rule for research, laboratory operations, and fire safety in New Mexico. NTESS welcomes the opportunity to discuss these comments further or to provide additional information as the Board may require.

Respectfully submitted,

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