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DINO_AVE CBRN is a Form of Contact

Informed Risk Acceptance for Commanders

By Captain Kassi Gulliford

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The *Task & Purpose* article, "Here is the training that the Army says is no longer mandatory," immediately caught the attention of every overtasked and undermanned leader in the Army.[1] The Department of War (DoW) has reduced the number of mandatory annual training requirements from 27 to 16. As a result, several courses are now optional, including both individual and unit-level chemical, biological, radiological, and nuclear (CBRN) training.

Commanders can now assume risk on these optional training requirements, freeing up valuable time for other priorities. But this raises an important question: do we truly need annual CBRN training when those skills could be refreshed during pre-deployment or rotation train-ups instead?

Emphatically, I say yes!

The title of this article is a nod to the mnemonic device (direct, indirect, non-hostile, obstacle, CBRN, aerial, visual, electromagnetic [and influence] [DINOCAVE]) used to memorize the forms of contact as listed in Army doctrine publication 3-90, *Offense and Defense*.[2] Do we choose how the enemy makes contact? When commanders elect not to conduct this training, are they fully informed of the risk to force and mission they are accepting? What does CBRN contact look like? What downstream effects does it have on Soldiers and the mission?

This article serves a dual purpose: to emphasize why every commander should prioritize CBRN training and to advocate for its thorough integration throughout the training cycle.

CBRN is an Environment

CBRN represents four distinct areas—chemical, biological, radiological, and nuclear— each with unique threat profiles. While the hazard can often be traced back to a specific event, once released, it becomes a condition of the battlefield.

CBRN readiness is not simply about how fast Soldiers can don their masks—it is about their ability to continue the mission under CBRN conditions. Can Soldiers perform critical tasks such as loading and reloading a weapon, programming a radio, or operating a vehicle while wearing mission-oriented protective posture (MOPP) gloves? Can they move effectively in MOPP gear? Can they conduct foot marches in overboots?

CBRN training, when fully integrated, is not a singular annual training. It should recur throughout the training cycle in different ways, from sergeants' time training to collective exercises.

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CBRN Threats

CBRN threats fall into two main categories: weaponized and industrial.When most people envision a CBRN strike, they picture the weaponized threats—perhaps imagining a World War I–era trench with white smoke billowing out of it. It could look like that.Or it could look like an odorless, tasteless, colorless gas that releases concurrent to an artillery strike. Are your Soldiers prepared to simultaneously react to two forms of contact?

Industrial threats are chemical, biological, or radiological materials that are not primarily intended to be weapons. Industrial chemicals and materials have strict guidelines for storage, transport, and use to prevent unintentional injury or death. You have likely seen this in your own motor pool and supply cages. Ammo handlers, unit movement officers (UMOs), and hazardous material (HAZMAT) officers are well acquainted with this side of the CBRN world.

Industrial hazards are the type of threat that Soldiers are most likely to encounter. Whether the hazard was introduced by way of enemy fire, natural disaster, or routine accident, the presence of toxic industrial chemicals (TICs), toxic industrial biologicals (TIBs), toxic industrial radiologicals (TIRs), or toxic industrial materials (TIMs) creates a CBRN environment.

Ukraine Examples

Despite being a signatory of the Chemical Weapons Convention (CWC), Russia deployed the choking agent chloropicrin on Ukrainian forces. This chemical weapon was widely used in World War I and is prohibited under the CWC. While not deadly, it can cause severe respiratory distress and irritation to the eyes, lungs, and skin. Russian forces have denied the use of chemical weapons.[3]

There are relevant recent examples of both weaponized and industrial CBRN incidents in Ukraine. Europe's largest nuclear power plant, the Zaporizhzhia Nuclear Power Plant, located in Ukraine's Zaporizhzhia region, has been under Russian occupation since early 2022. The plant supports six reactors and ranks among the ten largest nuclear power stations in the world. Since the onset of occupation, operations have been partially suspended. While the plant no longer generates power for the region, the offline reactors still house radioactive materials and must remain partially online to prevent nuclear meltdown in the remaining active reactor.

Due to the plant's proximity to the front lines, multiple drone and artillery attacks made direct contact with the outer and support structures of the reactors. Inspectors from the International Atomic Energy Agency (IAEA) have confirmed and inspected the damage from these attacks, stating that while the damage was minimal, "this is a serious incident with potential to undermine [the] integrity of the reactor's containment system."[4] The gentle language of the IAEA inspector could leave the impression that a failing containment system is akin to a fence missing a few pickets. To be clear—it is not.

The 2011 Fukushima Daiichi nuclear disaster serves as a modern example of a nuclear meltdown. The earthquake and subsequent tsunami caused chemical explosions and a nuclear meltdown in three of the plant's reactors.[5] As of today, approximately 880 tons of melted nuclear fuel and structural debris remain on site, along with over 1.4 million tons of irradiated wastewater. Fourteen years later, radiation levels inside the compromised reactors remain so high that electronic components in the robots being used to aid cleanup are failing. Experts estimate it will take a century to fully mitigate this nuclear disaster.[6]

AI Generated Graphic of Fukushima Daiichi

Anyone in your targeting cell may be able to identify that a nuclear power plant is a bad target. But what other common industrial staples pose a nuclear risk?

For example, X-ray machines are not limited to medical facilities. They are also used in security environments where baggage screening is required and in hospital nuclear medicine departments, colleges, and research facilities with radiological labs. Equipment containing built-in radiation sources is safe when properly used, stored, and transported. However, these sources pose serious hazards if the equipment is damaged or destroyed by an explosion.

CBRN Training

Reviewing the procedures for donning and doffing masks and MOPP gear, as well as operating joint chemical agent detectors (JCADs) and radiation detection, indication, and computation (RADIAC) sets, is entirely achievable in the weeks leading up to a deployment or rotation. What cannot be achieved in that short time frame is getting Soldiers accustomed to operating in MOPP gear without experiencing degraded performance. MOPP gloves and overboots challenge Soldier dexterity and agility, making routine tasks difficult. The thermal burden of MOPP gear requires acclimatization. Soldiers must be trained on the proper carrying, storage, and accessibility of this personal protective equipment (PPE) to ensure that they know where it is and how to react to contact. Can you don your mask in nine seconds if it is in the bottom of your ruck, tied down to the outside of your truck? CBRN skills are like any other basic Soldier skills—they must be trained consistently to be executed under pressure.

For units that choose to forego CBRN training, deficiencies may not be immediately apparent. Initially, organizational memory will be strong enough to offset the lack of recent training. However, these deficits will become more apparent as time goes on. Deficiencies will surface during major collective training events where CBRN is already integrated, such as gunnery exercises and collective training center (CTC) rotations. Soldiers from units that deprioritize CBRN training will be underprepared.

Additionally, the CBRN shoots listed in the weapons tables—regardless of execution—are factored into the annual Standards in Training Commission (STRAC) allocations. If these shoots are no longer required, ammunition allocations may be adjusted accordingly.

Chemical Units

Operational decontamination is a company-level task. Battalions own this task because it is the fastest way to regenerate combat power after a CBRN incident. Your Soldiers are to be trained and appointed to this additional duty. The M26 Decontamination Apparatus is organizationally assigned to your unit and can be repaired by the same mechanics who maintain your other generators. Your CBRN noncommissioned officer in charge and staff chemical officer train and certify the operators and decontamination lines annually. During the military decision-making process, potential decontamination sites are identified to prepare your team for all forms of contact. Your organization possesses all the resources needed to conduct rapid decontamination operations and return safely to the fight.

Chemical units are there to provide support in larger-scale incidents and for specialized CBRN tasks that nonchemical units are not equipped to conduct. However, not all chemical platoons have decontamination capabilities. The CBRN platoons within brigade combat teams (BCTs) serve primarily as CBRN reconnaissance elements. These platoons have no decontamination capabilities at all.

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Before delegating tasks, commanders must have a clear understanding of the capabilities of the supporting units.

Conclusion

The June 2025 update to Army regulation (AR) 350-1 identifies the first Lieutenant Colonel (or equivalent O5) in your chain as the waiver authority for CBRN training in units that are not deploying.7 Commanders who choose to waive these requirements must be fully informed of the risk they are accepting.

The world of CBRN and counter weapons of mass destruction is an entire field of academic study, an Army branch, and a functional area. If it is not your area of expertise, you can find yourself out of depth very quickly. Commanders have advisors for this reason. There are staff chemical officers at every echelon. Engage the senior chemical officers on your installation to discuss the risks and benefits of delaying, reducing, or waiving CBRN training before making a decision that will impact unit readiness in ways you cannot predict.

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Endnotes

1 *Patty Nieberg*, "Here is the training that the Army says is no longer mandatory," Task & Purpose, April 1, 2025.
2 Department of the Army, Army Doctrine Publication (ADP) 3-90: Offense and Defense (Washington, DC: Government Publishing Office, 2019).
3 *Matt Murphy*, "Russia using chemical choking agents in Ukraine, US says", BBC, 2024
4 *John Aikman*, "IAEA Report on Zaporizhzhia Nuclear Power Plant," International Atomic Energy Agency, 2024.
5 " Fukushima 10 years on: How the 'triple disaster' unfolded," BBC, 2021.
6 *Mari Yamaguchi*, "'Nervous and rushed': Massive Fukushima plant cleanup work involves high radiation and stress" Associated Press, 2025.
7 Department of the Army, Army Regulation (AR) 350-1: Army Training and Leader Development (Washington, DC: Government Publishing Office, 2025).