

Appendix C

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF ALABAMA
NORTHERN DIVISION

JEFFERY LEE,	)	
	)	
Plaintiff,	)	
	)	
v.	)	CASE NO. 2:25-cv-680-ECM
	)	[WO]
GREG LOVELACE, Commissioner,	)	
Alabama Department of Corrections, <i>et al.</i> ,	)	
	)	
Defendants.	)	

MEMORANDUM OPINION and ORDER

I. INTRODUCTION

This case is before the Court on remand from the United States Court of Appeals for the Eleventh Circuit to address whether Plaintiff Jeffery Lee’s (“Lee”) proposed alternative method of execution—firing squad—is feasible, is readily implemented, and significantly reduces the substantial risk of serious harm caused by the Alabama Department of Corrections’ (“ADOC”) nitrogen hypoxia protocol (the “Protocol”). *See generally Lee v. Comm’r, Ala. Dep’t of Corr.*, 2026 WL 1651147 (11th Cir. June 8, 2026) (per curiam).

After a three-day bench trial, the Court found that the Protocol causes one to three minutes of severe air hunger but ultimately concluded that the Protocol did not constitute cruel and unusual punishment in violation of the Eighth Amendment. *Lee v. Lovelace*, 2026 WL 1493098, at *24–25 (M.D. Ala. May 28, 2026). The Eleventh Circuit disagreed and concluded that the Protocol causes “a substantial risk of serious harm.” *Lee*, 2026 WL

1651147, at *8. The Eleventh Circuit remanded with explicit instructions to immediately address whether Lee’s proposed alternative method significantly reduces that substantial risk of serious harm. *Id.* Following the issuance of the Eleventh Circuit’s mandate, Lee moved this Court to enter judgment in his favor or, in the alternative, to stay his execution. (Doc. 185). The State opposes that motion.¹ (Doc. 186). On this record, and given the Eleventh Circuit’s legal conclusion that the Protocol poses an unconstitutional risk of pain, the Court finds that Lee has shown by a preponderance of the evidence that firing squad is feasible, readily implemented, and significantly reduces the substantial risk of serious harm posed by the Protocol, and that the State failed to proffer a legitimate penological reason not to adopt it. Accordingly, the Court enters judgment in Lee’s favor and denies his motion to stay his execution as moot.

II. JURISDICTION AND VENUE

The Court has original subject matter jurisdiction over this case pursuant to 28 U.S.C. § 1331. Personal jurisdiction and venue are uncontested, and the Court concludes that venue properly lies in the Middle District of Alabama. *See* 28 U.S.C. § 1391.

III. PROCEDURAL HISTORY AND BACKGROUND

The Court summarized the relevant procedural history and background in its May 28, 2026 Memorandum Opinion and Order, *see Lee*, 2026 WL 1493098, and does not repeat it here. The Court sets forth below the relevant evidence presented at trial regarding

¹ Because the Defendants are state officials sued in their official capacities, the Court refers to them as the State.

Lee’s proposed firing squad alternative, in particular Dr. James Williams’ (“Dr. Williams”) expert testimony.²

A. Firing Squad

Five states—including Utah—authorize execution by firing squad.³ At trial, Lee introduced Utah’s and the United States Army’s (“U.S. Army”) firing squad protocols into evidence.⁴ (*See* doc. 173-46 (Utah’s protocol); doc. 174-35 (U.S. Army protocol)). Lee’s proposal largely tracks Utah’s firing squad protocol, which was used as recently as 2010.⁵ (*Compare* doc. 40 at 20–22, paras. 70–72, *with* doc. 173-46 at 55, 89–92); *see Boyd v. Warden, Holman Corr. Facility*, 856 F.3d 853, 881 n.4 (11th Cir. 2015) (Wilson, J., concurring) (taking judicial notice of the fact that Utah executed Kirk Johnson by firing squad in 2010). Below, the Court summarizes how Lee’s proposed alternative would proceed.

² As discussed below, the Court also heard testimony from various ADOC employees, including former-Commissioner John Q. Hamm (“Hamm”), Deputy Commissioner Charles Williams (“Charles Williams”), and Warden Terry Raybon (“Raybon”) regarding Lee’s proposed firing squad protocol and whether the ADOC could feasibly and readily implement such a protocol.

³ The other four states are Idaho, Mississippi, Oklahoma, and South Carolina. *See* IDAHO CODE § 19-2716; MISS. CODE § 99-19-51; OKLA. STAT. tit. 22, § 1014; S.C. CODE § 24-3-530. Lee’s proposed alternative and Dr. Williams’ expert opinion do not rely on the Idaho, Mississippi, Oklahoma, or South Carolina protocols.

⁴ The Court pretermits discussion of the U.S. Army protocol because Lee’s expert and proposed supplemental findings of fact rely heavily on Utah’s protocol. (*See* doc. 173-40 at 16–21 (Dr. Williams’ expert report); doc. 147 at 49:9–12 (Dr. Williams’ trial testimony (“I rely heavily on the Utah state protocol for executions.”))); doc. 167-1 at 36, para. 76) (Lee’s proposed supplemental findings of fact)).

⁵ Lee introduced a redacted copy of Utah’s firing squad protocol into evidence at trial. (*See* doc. 173-46).

First, a member of the execution team would restrain the condemned inmate to a chair placed “between stacked sandbags.” (Doc. 40 at 20, para. 71). Next, an execution team member would place a hood over the inmate’s head and a target over his heart. (*Id.*). The firing squad team leader would then direct the execution team to stand at attention twenty-one feet from the condemned inmate. (*Id.* at 21, para. 72). Five trained marksmen armed with .30-caliber rifles would take aim and fire. (*Id.*). If, after the first volley, the condemned “is obviously conscious,” the warden “shall immediately instruct the firing squad team leader to prepare the weapons and fire again.” (Doc. 40 at 21–22, para. 72; *see also* doc. 173-46 (Utah’s protocol)).

B. Dr. James Williams

Dr. Williams is an emergency physician, and much of his practice involves treating patients injured by gunshot wounds. (Doc. 147 at 5:21–6:8). At trial, he was accepted as an expert in emergency and family medicine, gunshot wounds, firearms, and ballistics. (*Id.* at 8:6–12). Dr. Williams testified to a reasonable degree of medical certainty that execution by firing squad: (1) causes a quick and painless death; and (2) is feasible and readily implemented. (*Id.* at 8:15–23). His opinion that firing squad causes a quick and painless death is based on scientific literature, his clinical experience treating gunshot victims in the emergency room, and his own experience being shot. (*Id.* at 27:16–28:7 (clinical experience); *id.* at 30:1–17 (personal experience); *id.* at 36:10–11, 37:16–24 (scientific literature); *see also* docs. 173-55, 173-90).

Dr. Williams opines that an execution by firing squad directed at the cardiac bundle⁶—the area of the body that includes the heart and great vessels—will very likely cause immediate disruption of blood flow to the brain, resulting in loss of consciousness within three to five seconds and death shortly thereafter. (Doc. 147 at 31:18–32:10, 36:15–37:9). Dr. Williams further opines that an inmate shot in the heart is unlikely to feel pain in the three to five seconds before he loses consciousness. (*Id.* at 18:7–15, 29:1–3). He bases this opinion on two related phenomena: (1) the delay in the brain’s processing of novel stimuli into a subjective experience such as pain; and (2) the effects of “neural stunning.” (*Id.* at 15:1–26:25). Dr. Williams testified that the 2025 firing squad execution of Mikal Mahdi (“Mahdi”)⁷ in South Carolina does not change his opinions because it was one purportedly botched execution out of forty-six firing squad executions in the United States since 1860. (Doc. 147 at 69:23–70:4, 71:7–18, 106:18–19).⁸

⁶ For simplicity, this Opinion will refer to the cardiac bundle as the “heart” with the understanding that it also includes the great vessels.

⁷ Pathologists have opined that the riflemen largely missed Mahdi’s heart and that Mahdi remained conscious for approximately thirty to sixty seconds after he was shot. (*See* doc. 147 at 103:16–25, 104:15–25 (Dr. Williams’ testimony); doc. 173-189 at 7).

⁸ On cross-examination, the State questioned Dr. Williams regarding Mahdi’s firing squad execution. (*See generally* doc. 147 at 88:13–104:9). During his testimony, Dr. Williams revealed that he is “currently retained by counsel for Mr. Mahdi and his estate” as a consulting expert for a potential lawsuit. (*Id.* at 75:4–7, 84:9–15). Dr. Williams has not been paid for his services and does not expect to be paid unless and until a lawsuit is filed, which had not occurred at the time of trial. (*Id.* at 84:7–8, 122:7–19). Although best practices counsel in favor of disclosing potential conflicts, any prejudice to the State was ameliorated through vigorous cross-examination and probing questions regarding Dr. Williams’ potential bias. (*See, e.g., id.* at 122:7–123:23). As noted above, Lee did not offer South Carolina’s protocol as his proposed alternative. (*See, e.g.,* doc. 147 at 53:6–54:2 (Dr. Williams’ testimony that there are significant differences between South Carolina’s firing squad protocol and Utah’s that renders South Carolina’s protocol inferior)). The Court denied the State’s oral motion to strike Dr. Williams’ testimony. (*See id.* at 75:14–18, 78:23–79:2). Having personally observed Dr. Williams’ testimony, the Court further finds that he was credible.

Dr. Williams further opines that execution by firing squad is feasible and can be readily implemented by the ADOC. (*See* doc. 147 at 55:22–56:3). He explains that a firing squad execution can either be done outdoors or indoors, as in Utah, (*id.* at 54:5–8), and that the weapons and materials required to conduct firing squad executions indoors—including .30-caliber rifles, sandbags, and steel plates—are “[v]ery commonly available,” (*see, e.g., id.* at 50:21–51:1, 54:8–55:18).

IV. LEGAL STANDARDS

A. Bench Trial

“In an action tried on the facts without a jury . . . the court must find the facts specially and state its conclusions of law separately.” FED. R. CIV. P. 52(a)(1). In a bench trial, “it is the exclusive province of the judge . . . to assess the credibility of witnesses and to assign weight to their testimony.” *Childrey v. Bennett*, 997 F.2d 830, 834 (11th Cir. 1993); *see also Sidman v. Travelers Cas. & Sur.*, 841 F.3d 1197, 1201 (11th Cir. 2016) (explaining, in the bench trial context, that “the district court has the advantage of observing the witnesses and evaluating their credibility firsthand,” and that “[t]he credibility of a witness is in the province of the factfinder” (alteration in original) (first quoting *Fischer v. S/Y NERAIDA*, 508 F.3d 586, 592 (11th Cir. 2007), then quoting *Crystal Ent. & Filmworks, Inc. v. Jurado*, 643 F.3d 1313, 1320 (11th Cir. 2011))). Additionally,

“[a] trial judge sitting without jury is entitled to great latitude concerning the admission or exclusion of evidence.” *Wright v. Sw. Bank*, 554 F.2d 661, 663 (5th Cir. 1977).⁹

B. Method of Execution Claims

To prevail on his method of execution claim, Lee must show by a preponderance of the evidence that (1) the Protocol creates a substantial risk of severe pain; and (2) “there is an alternative [method of execution] that is feasible, readily implemented, and in fact significantly reduces a substantial risk of severe pain.” *Nance v. Comm’r, Ga. Dep’t of Corr.*, 169 F.4th 1312, 1318 (11th Cir. Mar. 19, 2026) (quoting *Barber v. Governor of Ala.*, 73 F.4th 1306, 1318 (11th Cir. 2023)). If Lee makes these showings and the State refuses to adopt his proposed alternative “without a legitimate penological justification,” then Lee’s Eighth Amendment claim succeeds. *See Baze v. Rees*, 553 U.S. 35, 52 (2008) (plurality op.) (“If a State refuses to adopt [a feasible, readily implemented, and less painful] alternative in the face of these documented advantages, without a legitimate penological justification for adhering to its current method of execution, then a State’s refusal to change its method can be viewed as ‘cruel and unusual’ under the Eighth Amendment.”).

V. DISCUSSION

Because the Eleventh Circuit concluded that the Protocol poses a substantial risk of severe pain, *Lee*, 2026 WL 1651147, at *8, the issues before the Court are whether the

⁹ In *Bonner v. City of Prichard*, 661 F.2d 1206, 1209 (11th Cir. 1981) (en banc), the Eleventh Circuit adopted as binding precedent all decisions of the former Fifth Circuit handed down prior to the close of business on September 30, 1981.

firing squad is feasible, readily implemented, and significantly reduces the substantial risk of severe pain posed by the Protocol, and whether the State has refused to adopt it without a legitimate penological reason. *See Bucklew*, 587 U.S. at 134; *Nance*, 169 F.4th at 1318. Because each of those issues resolves in Lee’s favor on this record, the Court concludes that the Protocol violates the Eighth Amendment. The Court addresses each issue in turn and then addresses the specific injunctive relief Lee seeks in this case.

A. Feasible and Readily Implemented

“[A]n inmate must show that his proposed alternative method is not just theoretically ‘feasible’ but also ‘readily implemented.’” *Bucklew*, 587 U.S. at 141 (quoting *Glossip v. Gross*, 576 U.S. 863, 877 (2015)). “This means the inmate’s proposal must be sufficiently detailed to permit a finding that the State could carry it out ‘relatively easily and reasonably quickly.’” *Id.* (citation omitted).

Lee’s proposed alternative passes muster. In his amended complaint, after noting that the firing squad is an authorized method of execution in five states (indeed, one that is currently in use), Lee drew up a blueprint for the State to follow that largely tracks Utah’s current firing squad protocol:

- “[T]he prisoner shall be seated in a chair set up between stacked sandbags to prevent bullets from ricocheting. A designated person on the execution team shall pin a target over the prisoner’s heart and a hood over the prisoner’s head.”
- “The firing squad shall be comprised of five trained marksmen, one of whom is the firing squad team leader. The firing squad shall set up at a distance of [twenty-one] feet from the inmate, armed with .30-caliber rifles. One of the rifles shall be loaded with blanks so that it is unknown which firing squad member kills the prisoner.”

- “The warden or his designee shall order the firing squad team leader to begin the cadence for the firing squad to fire. The firing squad team leader shall ready the weapons in a controlled and safe manner.”
- “If the prisoner appears to be unconscious [after the first volley], the warden or his designee shall call for the medical examiner to enter the execution chamber and check the prisoner’s vital signs. . . . If the prisoner is obviously conscious, the warden or his designee shall immediately instruct the fir[ing] squad team leader to prepare the weapons and fire again.”

(Doc. 40 at 20–22, paras. 71–72; *see* doc. 173-46 at 55, 62, 89–92 (Utah’s protocol)).

These procedures are to be “repeat[ed] . . . until no vital signs are detected.” (Doc. 40 at 22, para. 72; *see* doc. 173-46 at 91–92).

Lee also presented the testimony of Dr. Williams. Dr. Williams testified that multiple states use firing squad as a method of execution, and firing squad’s prevalence is due, at least in part, to the ease with which it can be accomplished. (*See* doc. 147 at 49:25–50:11 (“A military tribunal or an officer capriciously may say, this soldier needs to be executed. The means of execution could be assembled in a . . . minute or two, and the execution could be carried out quickly and expeditiously.”)). He also opined that the firing squad protocol Lee proposes—involving five shooters firing four live rounds from .30-caliber rifles at a target placed over the inmate’s heart—would be effective. (*See id.* at 50:12–51:24). And he stated that he was familiar with Alabama’s rifle qualification course and that “anyone who could shoot that course of fire and achieve a score of [eighty] percent or more . . . is going to be capable of performing a firing squad execution effectively.” (*Id.* at 52:11–17).

The State concedes that it can “procure guns and ammunition of a variety of calibers.” (Doc. 148 at 29). Still, it claims that, for various reasons, “[f]iring squad is not feasible and readily available.” (*Id.*). The Court is not persuaded.

The State argues that firing squad is not readily implemented because it is not presently an authorized method of execution under Alabama law. (*Id.* (citing ALA. CODE §§ 15-18-82, 15-18-82.1)). But that argument has been rejected by the Supreme Court—twice. *See Bucklew*, 587 U.S. at 139–40 (“An inmate seeking to identify an alternative method of execution is not limited to choosing among those presently authorized by a particular State’s law.”); *Nance v. Ward*, 597 U.S. 159, 164 (2022) (“The prisoner may, for example, ‘point to a well-established protocol in another State as a potentially viable option.’” (quoting *Bucklew*, 587 U.S. at 140)). After all, “the Eighth Amendment is the supreme law of the land, and the comparative assessment it requires can’t be controlled by the State’s choice of which methods to authorize in its statutes.” *Bucklew*, 587 U.S. at 140.

The thrust of the State’s remaining arguments is that implementing a firing squad protocol would take time—time to (1) develop its own firing squad protocol, (2) construct a proper facility, and (3) source volunteers to serve on the execution team. (Doc. 148 at 30–33). This Court has previously considered and rejected these same arguments:

If a condemned inmate may point to another state’s protocol as a “viable option” even if it is not currently authorized in his jurisdiction—and the Supreme Court says he can—it necessarily follows that there would be some incidental delay involved in implementing the “new” method in the inmate’s jurisdiction. Thus, it cannot be the case that the firing squad is not readily implemented merely because the State is not presently or immediately prepared to carry out a firing squad

execution. To conclude otherwise would render the Supreme Court’s guidance a dead letter.

Boyd v. Hamm, 2025 WL 2884410, at *22 (M.D. Ala. Oct. 9, 2025). Suffice it to say that if an inmate can propose an alternative method that is not presently authorized by the law of the executing state, then the “‘incidental delay’ involved in changing a procedure”—which the Supreme Court has recognized “may take some real work”—is not enough to invalidate that method as a suitable alternative. *Nance*, 597 U.S. at 170. What’s more, several ADOC employees testified that the ADOC *could* carry out a firing squad execution, if the Alabama Legislature authorized it. (*See, e.g.*, doc. 146 at 229:4–22 (Hamm’s testimony that the ADOC could “train people to use .30-caliber rifles for firing squad if approved by the legislature” and could procure the required materials); *id.* at 230:9–13 (Hamm’s testimony that the ADOC could modify space at Holman Correctional Facility¹⁰ to carry out executions by firing squad)).

In sum, Lee has provided Alabama with a “pathway forward,” *see Nance*, 597 U.S. at 169, and thus he has satisfied his burden to show that firing squad is feasible and readily implemented. *Cf. Bucklew*, 587 U.S. at 141–42 (concluding that the plaintiff’s “bare-bones proposal f[ell] well short of” the relevant standard because he “presented *no evidence* on essential questions” (emphasis added)).

¹⁰ Executions in Alabama are carried out at Holman Correctional Facility (“Holman”).

B. Significant Reduction of Substantial Risk of Severe Pain

The Eleventh Circuit determined that the Protocol poses a substantial risk of severe pain. *See Lee*, 2026 WL 1651147, at *7 (“In our view, the overall suffering described by the district court, which lasts for one to three minutes, presents a substantial risk of serious harm over and above death itself.”). The question is whether the firing squad will significantly reduce that risk. *See Nance*, 597 U.S. at 164. On this record, Lee has made that showing. To show how the Court reached this conclusion, the Court compares the evidence proffered by Lee with the State’s evidence to the contrary.

1. Lee’s Evidence

Lee relies primarily on the testimony of Dr. Williams, who credibly opined that death by firing squad is quick and painless, rendering the inmate unconsciousness in three to five seconds and before he can perceive any pain. Dr. Williams’ expertise is twofold. He is an emergency physician who has treated “[m]any thousands” of gunshot wounds. (Doc. 147 at 5:21–6:5). He is also a firearms expert, boasting “lifelong experience as a shooter and hunter” and “extensive training in the use of defensive firearms in the law enforcement and civilian context[s].” (*Id.* at 7:15–8:2). As indicated above, he also bases his opinions on scientific literature and his own experience being shot.

Dr. Williams testified that execution by firing squad would rapidly induce a deep state of unconsciousness. A .30-caliber bullet “deliver[s] something in the area of 2,000 foot-pounds of energy,” which Dr. Williams likened to “being struck by a three-quarter-ton truck.” (*Id.* at 20:3–9). The firing squad protocol that Lee proposes calls for four .30-

caliber bullets—four three-quarter-ton trucks—to be fired at the heart simultaneously. When the bullets strike the heart, according to Dr. Williams, the result will be an immediate and total loss of blood flow to the brain, producing unconsciousness within three to five seconds. (*Id.* at 31:18–32:10, 35:6–9, 105:11–25).

But Dr. Williams also opines that execution by firing squad is painless. In support of his opinion that an inmate would not feel pain, Dr. Williams cites two phenomena: (1) the delay in the brain’s processing of novel stimuli into a subjective experience such as pain; and (2) the effects of “neural stunning.” (*Id.* at 15:1–26:25; doc. 173-40 at 6–9). Regarding the processing delay, Dr. Williams testified as follows: Pain is a noxious stimulus that is “transmitted to the brain via sensory nerves.” (Doc. 173-40 at 5). But pain is not felt instantaneously upon exposure to a noxious stimulus. (Doc. 147 at 16:15–18:15). Rather, the stimulus must travel from the sensory nerves to the cerebral cortex, where the individual perceives the stimulus as pain. (*Id.* at 16:15–17:22). And when a stimulus is novel, the brain’s processing delay is substantially longer, potentially “several seconds.” (*Id.* at 15:4–21, 18:7–15). Because multiple bullets striking the heart is “a novel neurological stimulus,” the inmate’s brain will not complete the processing required to experience pain in the three to five seconds before he loses consciousness. (*Id.* at 18:7–15, 29:1–3).

Regarding the effects of neural stunning, Dr. Williams testified as follows: When a person is shot, the bullet “stretche[s], compresse[s], and otherwise disrupt[s]” all the nerves “near to the impact of the bullet,” thereby “stunning” the nerves and preventing the

transmission of neural impulses of pain. (*Id.* at 26:4–16). This disruption of neural impulses or “stunning” lasts “several hours if not days.” (*Id.* at 24:11–17, 26:19–25; *see also* doc. 173-60). Because of neural stunning, an inmate executed by firing squad will be unconscious and dead long before he can process the pain from the gunshot wounds. (Doc. 147 at 26:2–25). Thus, due to the twin phenomena of delayed processing and neural stunning, an inmate executed by firing squad would lose consciousness without perceiving *any pain*. (*Id.* at 26:19–25; *see also id.* at 28:23–29:3 (Dr. Williams reiterating that a condemned inmate would experience no conscious pain)). Dr. Williams’ testimony on these points was as consistent as it was credible. (*See id.* at 18:5–15, 19:12–22, 69:11–18).

2. The State’s Evidence

Before trial, Dr. Antognini opined that an inmate executed by firing squad would consciously suffer severe pain for eight to ten seconds due to “shattering of bone and damage to the spinal cord.” (Doc. 173-141 at 26, para. 47). Dr. Antognini purportedly relied in part on South Carolina’s execution of Mahdi to bolster his opinion that death by firing squad would be extremely painful. (*Id.* at 26–27, para. 47; *see also* doc. 149 at 62:22–64:4). At trial, Dr. Antognini conceded that nothing in his expert report supported his contention that an inmate executed by firing squad would consciously suffer severe pain for eight to ten seconds after bullet entry. (*See* doc. 149 at 102:3–9). Dr. Antognini agreed that he did not cite any scientific articles in support of his theory, either. (*Id.* at 102:10–13). Dr. Antognini could not identify the names of any studies or authors he relied on to form his opinion that an inmate’s consciousness would persist for eight to ten seconds after

being shot. (*Id.* at 102:14–17). Considering Dr. Antognini’s concessions, the Court excluded Dr. Antognini’s opinions regarding pain caused by a firing squad execution. (*Id.* at 102:18–103:14).

3. Firing Squad Significantly Reduces a Substantial Risk of Severe Pain

On this record, Dr. Williams’ testimony is credible, persuasive evidence that an inmate executed by Lee’s proposed firing squad protocol would experience no pain. The State offered no admissible evidence to the contrary. Of course, the Court need not accept expert testimony solely because it goes un rebutted. *See Eason v. Weaver*, 484 F.2d 459, 460 (5th Cir. 1973) (“The weight to be accorded unimpeached expert opinion evidence is solely for the judge sitting without a jury.”). But the Court is persuaded by Dr. Williams’ testimony, which is based on his extensive experience and supported by science. The undersigned acknowledges that its finding—getting shot multiple times in the heart causes a painless death—is not intuitive. Nevertheless, having listened to the witnesses’ testimony and reviewed all the parties’ materials, the record in this case supports this finding.

The Protocol causes one to three minutes of severe air hunger, which the Eleventh Circuit concluded is a substantial risk of serious harm. *Lee*, 2026 WL 1651147, at *8. On this record, the firing squad produces a painless death.¹¹ This difference is “clear and

¹¹ In *Hoffman v. Westcott*, a divided panel of the Fifth Circuit, in a preliminary injunction posture, rejected a challenge to Louisiana’s nitrogen hypoxia protocol in which the plaintiff, as here, proposed firing squad as an alternative method. 131 F.4th 332, 335–36 (5th Cir. 2025). The Eleventh Circuit concluded that the Fifth Circuit’s reasoning on the first prong (whether nitrogen hypoxia presents a substantial risk of severe pain) is inapplicable given this Court’s factual findings. *Lee*, 2026 WL 1651147, at *7. *Hoffman*’s reasoning on the second prong (whether firing squad significantly reduces that risk) is also inapposite on this record, as the record in *Hoffman* indicated that nitrogen hypoxia was painless and that firing squad was not. *See* 131 F.4th at 336. The Court agrees with the Fifth Circuit that the Eighth Amendment “does not require State officials to favor more painful methods of execution over less painful ones.” *Id.* But the

considerable,” *see Bucklew*, 587 U.S. at 143, and the Court therefore finds that Lee’s proposed firing squad protocol “significantly reduce[s] a substantial risk of severe pain,” *Glossip*, 576 U.S. at 877 (quoting *Baze*, 553 U.S. at 52).

C. Legitimate Penological Reasons

Lee’s Eighth Amendment claim faces a final hurdle. The State “may refuse to adopt a prisoner’s proposed alternative method of execution for a legitimate penological reason.” *Nance v. Comm’r, Ga. Dep’t of Corr.*, 59 F.4th 1149, 1155–56 (11th Cir. 2023). The Constitution “affords a ‘measure of deference to a State’s choice of execution procedures’ and does not authorize courts to serve as ‘boards of inquiry charged with determining ‘best practices’ for executions.” *Bucklew*, 587 U.S. at 134 (quoting *Baze*, 553 U.S. at 51 & nn.2–3). That includes, for example, where an inmate requests an alternative that is “untried and untested,” as a state can legitimately “choos[e] not to be the first to experiment with a new method of execution.” *Id.* at 142 (quoting *Baze*, 553 U.S. at 41). Of course, such an argument would have no purchase here, where the proposed alternative has been in use for centuries. *Cf. Wilkerson v. Utah*, 99 U.S. 130 (1878); (doc. 173-40 at 14 (Dr. Williams’ expert report (“Death by [firing squad] . . . has been a common means of military execution since at least the Napoleonic era.”))).

The State articulates two penological reasons for refusing to adopt Lee’s method: (1) the ADOC cannot reliably source volunteers “willing and capable of serving in a firing

Eleventh Circuit has concluded that, on *this* record, nitrogen hypoxia poses a substantial risk of severe pain, and this Court finds that the firing squad does not.

squad”; and (2) the ADOC may be unable to procure materials used in firing squad executions.¹² (*See* doc. 148 at 31–33; doc. 149 at 137:17–19). Neither reason is persuasive.

1. Execution Volunteers

The State contends that it would be unable to execute Lee by firing squad because the ADOC cannot reliably locate volunteers “willing and capable of serving in a firing squad.” (Doc. 148 at 31). The State asserts that it would not only face staffing shortages but also raises concerns regarding the ability for volunteer marksmen to effectively administer death by firing squad. The Court addresses each of these arguments in turn.

Citing Hamm’s testimony, the State points out that the ADOC cannot compel ADOC staff to participate in a firing squad execution. (*See* doc. 146 at 237:16–238:3). Notwithstanding the State’s argument, Hamm and Charles Williams both testified that if firing squad were an approved method of execution, the ADOC would be able to train and staff an execution team capable of executing an inmate by firing squad. (*See id.* at 229:1–11 (Hamm’s trial testimony); *id.* at 256:25–258:1 (Charles Williams’ trial testimony)). And the State’s concern regarding the use of volunteers would apply to all methods of execution—the State cannot compel staff to participate in *any* execution, regardless of the method. (*See id.* at 237:16–238:3). The inability to compel participation apparently has not presented an issue in the past, and the State has identified no reason it would pose one

¹² In its closing argument at trial, the State also claimed an interest in “preserving the dignity of the proceedings.” (*See* doc. 149 at 137:17–19). However, the State did not elaborate or present evidence regarding how an execution by firing squad would inhibit this interest. Thus, to the extent the State relies on this asserted legitimate penological interest, the Court finds it unavailing on this record.

now. (*See* doc. 173-40 at 13 (Dr. Williams expert report) (stating that “there are roughly 14,000 sworn law enforcement officers in the state of Alabama”)).

The State also asserts that even if it could find five volunteers, those volunteers would be unable to meet the “exacting degree of proficiency necessary for a firing squad execution.” (Doc. 148 at 32). The Alabama Peace Officers Standards Training Commission (“APOSTC”) scores law enforcement officers’ (including ADOC personnel) marksmanship on a numerical scale. (*See* doc. 146 at 236:20–237:8 (Hamm’s trial testimony); doc. 148 at 32 (the State’s proposed findings of fact and conclusions of law)). Officers are required to receive a score of “at least a 70 to pass” with “100 [being] the top score.” (Doc. 146 at 236:20–237:3). Dr. Williams opined that any APOSTC qualified marksman “is . . . capable of performing a firing squad execution effectively.” (Doc. 147 at 52:14–17). But, on cross-examination, Dr. Williams—consistent with Utah’s protocol—testified that the ADOC would need to locate “riflemen who can shoot considerably more accurately than” the minimum APOSTC certification. (*Id.* at 113:1–7). Dr. Williams conceded that he could not testify regarding whether this heightened shooting requirement would limit the number of qualified marksmen in Alabama but testified that Utah’s volunteer pool did not shrink as a result of the heightened skill requirement. (*Id.* at 113:21–23). In any event, even if the ADOC chose to use marksmen who were more skilled than required, Hamm and Charles Williams testified that the ADOC would be able to staff a firing squad execution team with five capable shooters. The Court credits their testimony.

Finally, the State contends that Dr. Williams’ testimony that “glitches” may occur during firing squad executions constitutes a legitimate penological reason to reject Lee’s proposed alternative—in other words, it submits that the risk that a firing squad may go awry is a sufficient reason to reject it entirely. (Doc. 148 at 32–33). The State cites Mahdi’s recent execution in South Carolina as an example of a firing squad execution gone wrong. (*Id.*). It is true, as Dr. Williams conceded, that even a method that dates to the Napoleonic era can be botched.¹³ (*See* doc. 173-40 at 14; doc. 147 at 110:2–8). Nonetheless, on this record the State’s concern about potential problems with firing squad executions is unavailing for several reasons. First, Lee’s proposed method relies heavily on Utah’s protocol, which is meaningfully different than South Carolina’s. (*See* doc. 147 at 53:15–23 (Dr. Williams noting that South Carolina’s protocol uses fewer and different-caliber bullets)). Second, assuming without deciding that Mahdi’s execution was “botched,” an “isolated mishap alone” does not render the firing squad constitutionally suspect. *See Baze*, 553 U.S. at 50 (noting that the Supreme Court had previously “upheld a second attempt at executing a prisoner by electrocution after a mechanical malfunction had interfered with the first attempt” (citing *Louisiana ex rel. Francis v. Resweber*, 329 U.S. 459 (1947))). Further, the State fails to adequately identify any unique concerns regarding the efficacy of firing squad—a method that Dr. Williams opines rarely results in botched executions. (Doc. 147 at 71:9–18).

¹³ The Court expresses no view as to whether Mahdi’s execution was “botched.”

2. Supply Concerns

The State also expresses concern that it would be unable to easily procure and maintain the materials necessary to carry out executions by firing squad. (*See* doc. 148 at 31–32). In support, the State asserts that execution by firing squad faces similar “supply concerns” that “have hampered the use of lethal injection.” (*Id.* at 32). In recent years, death penalty opponents have successfully “pressured pharmaceutical companies to refuse to supply the drugs used to carry out” lethal injection executions. *Glossip*, 576 U.S. at 870. In response, many states, including Alabama, have moved away from methods of execution that require reliance on third party suppliers. *See Frazier v. Hamm*, 2025 WL 361172 at *13 (M.D. Ala. Jan. 31, 2025). Courts have found that supply-chain difficulties can constitute legitimate penological reasons to move away from methods of execution that require such reliance. *See id.*; *see also Price v. Comm’r, Dep’t of Corr.*, 920 F.3d 1317, 1327 (11th Cir. 2019) (per curiam) (noting that “[n]o supply concerns exist for nitrogen”). But here, the State does not identify which materials necessary to carry out firing squad executions would be subject to “supply concerns,” (*see* doc. 148 at 31–32), so the Court must assume that the State’s concern applies to rifles, ammunition, and the materials necessary to fortify an execution chamber, such as sandbags, lumber, and some form of a ballistic barrier. (*See* doc. 173–40 at 18–19). To the extent these are the State’s concerns—and, again, the State has not adequately articulated what, exactly, its concerns on this point are—the Court finds them unavailing. It is true that death penalty opponents have successfully lobbied certain pharmaceutical companies into refusing to provide Alabama

with lethal injection drugs. But the State has presented no evidence that this same concern exists as to the materials necessary to carry out firing squad executions.

And importantly, Dr. Williams and *the State's own witnesses* testified that the materials required to carry out an execution by firing squad could be readily procured. Indeed, the State concedes that it can “procure guns and ammunition of a variety of calibers.” (Doc. 148 at 29). And materials such as bullet-proof glass are “commonly used in construction,” thus undermining any supply chain concerns. (*See, e.g.*, doc. 147 at 54:16–23 (Dr. Williams’ trial testimony)). Nor has the State presented evidence that its current supply of firearms and ammunition are insufficient to carry out firing squad executions. (*See* doc. 173-40 at 18 (Dr. Williams noting that “[s]ervice rifles of the types currently used by Alabama law enforcement agencies . . . would be suitable for firing squad executions”)).

Although the State cites the unreliability of supply as a reason for refusing to implement firing squad, the State is inconsistent on this point. In its proposed findings of fact and conclusions of law, the State notes that on April 24, 2026, the Department of Justice (“DOJ”) released a report “recommending policy changes within the Federal Bureau of Prisons as to capital punishment” wherein the DOJ explored “adding different methods of execution in *case of supply chain issues*, such as . . . firing squad.”¹⁴ (Doc. 148 at 30 n.5) (emphasis added). While the State *could* articulate supply chain concerns as a

¹⁴ *See* U.S. DEP’T OF JUST. OFF. OF LEGAL POLICY, *Restoring and Strengthening the Federal Death Penalty* 19–38 (2026), <https://www.justice.gov/ag/media/1437806/dl?inline>.

legitimate penological reason for refusing to adopt a plaintiff’s proposed alternative, it has not done so here.

D. Lee’s Requested Permanent Injunctive Relief

In the operative complaint, Lee seeks a declaration that the Protocol is facially unconstitutional and an injunction prohibiting the ADOC from executing him by nitrogen hypoxia or “any method other than one of the alternatives provided by his attorneys.” (Doc. 40 at 23). He seeks similar relief in his pending motion, asking the Court to “permanently enjoin [the State] from executing him by nitrogen [hypoxia] *or any other method other than firing squad.*” (Doc. 185 at 1 (emphasis added)). But Alabama law authorizes two other methods of execution: lethal injection and electrocution. *See* ALA. CODE § 15-18-82.1. Here, Lee challenged only the ADOC’s nitrogen hypoxia protocol—not lethal injection or electrocution. After carefully considering traditional equitable principles, and given the Court’s legal conclusions, the Court concludes that a permanent injunction should issue prohibiting the State from executing Lee using the Protocol. *See eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (explaining that a plaintiff seeking a permanent injunction must show (1) irreparable injury; (2) that “remedies available at law, such as monetary damages, are inadequate to compensate for that injury”; (3) that an equitable remedy is warranted “considering the balance of hardships between the plaintiff and defendant[s]”; and (4) that “the public interest would not be disserved by a permanent injunction”); *Angel Flight of Ga., Inc. v. Angel Flight Am., Inc.*, 522 F.3d 1200, 1208 (11th Cir. 2008) (same). But because Lee has not established that Alabama’s other statutorily

authorized methods violate the Eighth Amendment, he is not entitled to an injunction barring the State from executing him using one of those methods.¹⁵

VI. FINDINGS OF FACT AND CONCLUSIONS OF LAW¹⁶

A. Findings of Fact¹⁷

An execution pursuant to Lee’s proposed firing squad alternative, involving four .30-caliber bullets fired at the heart, renders an inmate unconscious in three to five seconds. Due to the related phenomena of delayed brain processing and neural stunning, an inmate executed under Lee’s firing squad alternative is rendered unconscious before his brain can process any pain. Thus, Lee’s proposed alternative produces a quick and painless death.

The State can readily obtain rifles, ammunition, and other materials necessary to carry out a firing squad execution. Additionally, the State would be able to modify space at Holman to carry out executions by firing squad. The State is also able to source and train volunteers willing to carry out such an execution.

¹⁵ That the State will be prohibited only from executing Lee using nitrogen hypoxia bolsters the Court’s conclusion that entry of this permanent injunction is appropriate, as it is narrowly tailored to remedy the specific harm at issue here: that the Protocol violates the Eighth Amendment.

¹⁶ To the extent that any findings of fact may constitute conclusions of law, they are adopted as such, and to the extent that any conclusions of law may constitute findings of fact, they are adopted as such.

¹⁷ The Eleventh Circuit discerned no error in the Court’s prior findings of fact. *Lee*, 2026 WL 1651147, at *6. The Court accordingly incorporates its previous factual findings into this Memorandum Opinion and Order, *see Lee*, 2026 WL 1493098, at *24–25, with one clarification. The Court did not find that air hunger is “worse than pain” but instead recounted patients’ descriptions in a clinical setting that air hunger can be “‘worse than pain’ because it is associated with the fearing of dying.” *See id.* at *24.

B. Conclusions of Law

Consistent with the Eleventh Circuit’s opinion, Lee has shown by a preponderance of the evidence that the Protocol “presents a ‘substantial risk of serious harm’—severe pain over and above death itself.” *Lee*, 2026 WL 1651147, at *2 (quoting *Nance*, 597 U.S. at 164). Additionally, Lee has shown by a preponderance of the evidence that his proposed firing squad alternative is feasible, readily implemented, and significantly reduces the substantial risk of serious harm posed by the Protocol. The State has failed to articulate a legitimate penological reason for refusing to adopt Lee’s proposed alternative. Therefore, Lee has shown by a preponderance of the evidence that the Protocol constitutes cruel and unusual punishment in violation of the Eighth Amendment.

VII. CONCLUSION

On this record, and in this posture, Lee has shown that the ADOC’s nitrogen hypoxia execution protocol violates the Eighth Amendment. Consequently, the Court will enter judgment in Lee’s favor and enjoin the State from executing Lee pursuant to the Protocol.

To be clear, the Court’s decision does not disturb the State’s ability to administer capital punishment. Lee successfully challenged only the ADOC’s nitrogen hypoxia protocol, not its electrocution or (this time) its lethal injection protocol. *Cf. Lee v. Comm’r, Ala. Dep’t of Corr.*, 731 F. App’x 885 (11th Cir. 2018) (per curiam) (Lee’s challenge to the ADOC’s lethal injection protocol). An Eighth Amendment method of execution claim is a “*necessarily* comparative exercise,” *Bucklew*, 587 U.S. at 136 (emphasis in original), and Lee only asks this Court to compare nitrogen hypoxia and firing squad. On this record, and in light of the Eleventh Circuit’s opinion, Lee has shown that his proposed firing squad

alternative significantly reduces a substantial risk of severe pain *as compared to* nitrogen hypoxia. The result is that the State of Alabama cannot execute Lee by nitrogen hypoxia—no more, no less.

Federal courts are routinely placed in the difficult position of comparing methods of execution, both old and new alike. This Court is intimately familiar with the history of method of execution claims in this State. As methods evolve and change, so too do the challenges to each method. The only constant is litigation. Were Alabama to adopt firing squad as a method of execution, that method would likely be challenged as well. Indeed, there is likely no method—no matter how humane—that would be immune to constitutional challenge. *Cf. Bucklew*, 587 U.S. at 140 (acknowledging in passing that a condemned inmate may have just as much motivation to forestall his execution entirely as to “avoid[] unnecessary pain”). But the Constitution does not guarantee a painless death, *see id.* at 132, and human life cannot be purposefully extinguished without some risk of pain. The Court, the condemned, and the State must all confront that sobering reality.

Accordingly, the Court DECLARES and ORDERS as follows:

1. The ADOC’s nitrogen hypoxia execution protocol violates the Eighth Amendment;
2. The State is PERMANENTLY ENJOINED from executing Lee using the Protocol;
3. Judgment is entered in favor of Lee and against the State;

4. Lee's motion to enter judgment in his favor or, in the alternative, to stay his execution (doc. 185) is DENIED as moot;

5. Costs are taxed as paid.

A separate Final Judgment will be entered.

DONE this 9th day of June, 2026.

/s/ Emily C. Marks
EMILY C. MARKS
UNITED STATES DISTRICT JUDGE