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Disa Technologies, Inc; License Application

Comment On: NRC-2025-0084-0002
Disa Technologies, Inc.; Draft Generic Environmental Assessment and Finding of No Significant Impact

Document: NRC-2025-0084-DRAFT-0012
Comment on FR Doc # 2025-15087

Submitter Information

Email: stills@eclawoffice.org
Organization: Energy & Conservation Law

General Comment

See attached file(s)

Attachments

Comment Letter DISA EA_FONSI Docket ID NRC-2025-0084 wExhibits

Energy & Conservation Law

a public interest environmental law firm

227 E. 14th Street, # 201
Durango, Colorado 81301

Phone: (970) 375- 9231
Email: stills@eclawoffice.org

September 8, 2025

Priya Yadav, P.E. Project Manager
U.S. Nuclear Regulatory Commission
Low-level Waste and Projects Branch
Office of Nuclear Material Safety and Safeguards
Washington, DC 20555–0001
Office telephone: 301–415–6667
Work phone: 650-274-9376
email: Priya.Yadav@nrc.gov.

Also submitted via federal rulemaking website,
https://www.regulations.gov, Docket ID NRC-2025-0084.

RE: Public Comment - Disa Technologies, Inc.; Draft Generic Environmental Assessment and Finding of No Significant Impact; Docket ID NRC-2025-0084

Dear Ms. Yadav,

This comment letter is submitted on behalf of the below-signed organizations, all of whom have a longstanding interest in open, transparent, and informed decisionmaking to ensure prompt reclamation and remediation takes place whenever uranium mining and milling occurs. Each organization supports long-overdue efforts to require operators and owners to reclaim and remediate uranium mines, many of which have not been capable of economically viable production for decades, and especially those on federal public lands. However, the proposal to issue a generic license for a mobile uranium mill to operate at unspecified mine sites does not achieve that goal or provide the protections required by laws adopted to clean up the last round of unregulated uranium milling. The proposal threatens to make existing problems worse by licensing a technology that creates a waste stream of an undisclosed amount and type of radioactive and toxic slurries that will be disposed of at thousands of unlicensed uranium mill tailing disposal sites. A wide range of remediation and reclamation alternatives that do not include the mine site creation and disposal of additional mill tailings are available, but none were considered by NRC staff.

NRC staff has confirmed that the application has serious deficiencies that will not be corrected before this comment period closes. ML25217A323 (Disa Application Regulatory Audit July 11- 29, 2025 Audit Topics Summary). Although NRC staff sought public comments without providing site-specific information to comment upon, among other things, commenters use and enjoy rivers impacted by numerous unreclaimed uranium mines that also may affect numerous species of fish and wildlife that are protected by the Endangered Species Act. Nevertheless, NRC staff has deferred methodology for radioactive "fish pathway" analysis until some unspecified licensing stage. *Id*. at 2. The commenters' members use and enjoy public lands and live in communities that have an interest in ensuring gardening remains possible, a task that

the DGEA and NRC staff's audit leave for Disa "to determine" at a later date. *Id*. at 2. Using gardens and building materials as tailings disposal was used throughout Colorado in the 1950s and 1960s, and remains a problem today. https://cdphe.colorado.gov/hm/uranium-mill-tailings-faq .

Uranium mines implicate important historic and cultural resources, including towns and informal settlements populated by migrant laborers such as those near Uravan and Slick Rock, Colorado and other uranium mining districts. Similarly, NRC staff's audit confirmed that information needed for informed interdisciplinary analysis and public comment has not been provided for radiation doses, radiation exposure thresholds, radiation release criteria, water sampling, radiation mitigation measures, farmer and gardener exposure rates, radioactive dust emissions, dust and erosion control, air sampling, baseline and background conditions, plans for water discharge, quality assurance, Radiation Safety Officer training modifications, and reduced survey and monitoring requirements. ML25217A323 at 2-4.

Although federal law requires NRC staff to inform the public and consider informed public comments before issuing a license, the current licensing process prevents informed public comment. Expending NRC staff resources should be halted until such time as Disa and NRC staff publicly disclose the information required to meet NRC's Part 40 licensing duties. The limited information does confirm that the proposed license cannot be lawfully issued in the manner NRC staff sets forth in the materials offered for public comment.

INTRODUCTON AND LEGAL SUMMARY

The Draft Generic Environmental Assessment ("DGEA") and Finding of No Significant Impact ("FONSI") violate the action-forcing and remedial purposes of the National Environmental Policy Act ("NEPA") and the Uranium Mill Tailings Radiation Control Act ("UMTRCA"). Instead of implementing the strict licensing provisions that UMTRCA requires for the uranium processing and concentration activities and instead of providing the site-specific analysis required by NEPA and UMTRCA, the DGEA/FONSI seeks to clothe NRC staff with the authority to make ad hoc site-specific approvals for milling activities that create 11e2 byproduct materials that require licensed disposal and perpetual care. The FONSI fails to recognize significant impacts from milling activities that "could range from six months for small sites to almost 13 years for large sites." EA at 1.

The DGEA contradicts an uninterrupted line of state and federal determinations that have confirmed the activities proposed by Disa creates 11e2 byproduct material that requires UMTRCA Part 40 licensing. The 11e2 byproduct that Disa proposes to create requires a license with specific handling and perpetual care that must be addressed in a formal cost estimate. 10 C.F.R. Part 40, Appendix A, Criterion 9(c) ("The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts."). The Appendix A information requirements are not addressed in the DGEA. Importantly, NRC staff has confirmed that financial assurance information was not submitted, and may never be submitted, for public comment. ML25217A323 at 4 ("Disa will submit surety information if available by September; if not available, a license condition will specify financial assurance needed.").

Although the DGEA is obviously using an unlawful and truncated analog to NEPA's tiering procedures, the proposed licensing process unlawfully fails to require further NEPA public comment opportunities after the GEA and license issue. It is of no consequence that a need for supplemental NEPA analysis may be confirmed at a later date, if NRC staff decide the Final GEA does not address site specific conditions and alternatives involving endangered species, historic and cultural resources, and other environmental concerns. Instead of addressing known and foreseeable impacts now, the DGEA leaves NRC staff free to quietly allow a proliferation of mill tailing disposal sites throughout the Western United States without site-specific UMTRCA licensing and NEPA analysis. DGEA at 54 (describing an ad hoc, assumption-based process for site-specific approvals). The proposed use of "pre-mobilization notice" to compare assumptions in the GEA with the actual site has no basis in UMTRCA, Part 40 regulations, NEPA, or federal public lands law.

UMTRCA was enacted, in part, to close the regulatory gap of the Atomic Energy Act, which applied only to active processing, and ensure NRC had express authority to regulate mill tailings at active and inactive sites. *Waste Action Project v. Dawn Mining Corp*., 137 F.3d 1426, 1430 (9th Cir. 1998) (discussing legislative history). A similar, but unique, regulatory gap that Congress closed would be created by the DGEA/FONSI proposal to absolve the NRC and EPA of their UMTRCA and NEPA duties and responsibilities by allowing a closed door, notice-based approval that converts abandoned mines into a proliferation of radioactive uranium processing waste disposal sites throughout Colorado and the Western United States. Should the agencies charged with implementing UMTRCA through standard-based licensing, NRC and the Environmental Protection Agency ("EPA"), desire a different licensing program for onsite processing of ore and disposal of 11e2 byproduct material at mine sites, either rulemaking or legislative proposals to alter UMTRCA, subjected to NEPA analysis, is the proper route. 42 U.S.C. §7609 (requiring EPA review of NEPA analysis of agency actions, rulemaking, and legislative proposals).

The Deficient Application Confirms Public Comment and NEPA Analysis is Premature

"NRC is proposing to issue a license under 10 CFR part 40 for the possession and processing of source material ore." DGEA at 1. Despite the confirmed lack of information and the deferred analyses identified in the audit of the license application (ML25189A159), NRC staff is arbitrarily moving forward with National Environmental Policy Act ("NEPA") disclosures and analysis announced in the Federal Register on August 8, 2025, even though Disa submitted preliminary supplement to their March 2025 license application on July 31, 2025 and August 4, 2025 (ML25216A267). The audit confirms that Disa's initial supplements did not address the deficiencies identified by NRC staff. Moreover, the DGEA and audit appear to be based on information that Disa shared with NRC staff, but which NRC staff attempted to shield from public view by not downloading copies of Disa's documents. ML25217A322 at 4 (NRC "audit team members did not download copies of documents shared."). All documents from these and other meetings where NRC staff did not retain records used in the meetings must be included in the administrative record and be made promptly available on ADAMS.

Instead of addressing deficiencies identified by NRC staff, and purportedly addressed by documents provided in meetings with Disa that have not been made public, the Audit Report

defers information, such as radiation exposure that would impact commenter's members, ("e.g. resident farmer, resident gardener, recreational, rancher" ML25217A323 at 2) to some uncertain future application supplement. The GDEA does not identify any mechanism for making "application supplements" available to the public before NRC staff issues site-specific approvals, and there is no indication when or how Disa will provide the required information to NRC staff for inclusion in the NEPA process. Instead, radiation release criteria will be excluded from the NEPA process by "addressing release criteria for each site" in a "pre-mobilization notification." *Id*. This non-NEPA approach to licensing Disa to use untested technology to create and dispose of mill tailings (aka 11e2 byproduct material disposed on site) also has no basis in 10 C.F.R. Part 40 or NEPA itself.

Moreover, there is no basis to use 10 C.F.R. Part 20 as a substitute for the detailed application requirements required by the applicable Part 40 regulation.

> Every applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling, is required by the provisions of § 40.31(h) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or wastes resulting from such milling activities.

10 C.F.R. Part 40 Appendix A. Instead of basing the interdisciplinary NEPA analysis on an Appendix 40 compliant application, NRC staff has sought public comment on an application that NRC staff has confirmed is not informed by site-specific information, is woefully deficient, will not be revised to address the deficiencies, and will not be subjected to further NEPA analysis after deficiencies are remedied.

> Rather than revising the March 2025 license application, Disa committed to developing a new submittal with additional information to be placed on the docket called an "application supplement".

ML25217A322 at 4. There is no basis to issue an UMTRCA license based on a licensee's commitment to someday provide required information. UMTRCA's licensing requirements must be met by information contained in a license application and disclosed in a NEPA analysis subject to public comment. The Audit Report confirms that NRC staff has not, and will not, base its licensing decision and public comment duties on the information found in a Part 40 compliant application.

Alarmingly, one of the key features of Part 40 licensing of 11e2 byproduct material will not be submitted until after the NEPA comment period are closed, if ever.

> Disa will submit surety information if available by September; if not available, a license condition will specify financial assurance needed.

ML25217A323 at 4. The comment period closed September 8, but no surety information was available for public comment.

In short, the Audit Report confirms that NRC staff is moving forward with the NEPA analysis despite a recognized lack of information required to address the proposed Part 40 licensing of a uranium milling technology that creates 11e2 byproduct materials (referred to euphemistically and deceptively as "course materials"). Requiring public comments on a license application containing serious deficiencies involving radiation emissions and pathways, radiation monitoring, and financial assurance fails to meet the agency duties to comply with NEPA's mandates to the fullest extent possible. Federal laws require that NRC withdraw the DGEA, and recommence the NEPA comment period when the required information has been obtained via the Part 40 compliant application and included in an interdisciplinary NEPA analysis. Due to significant impacts of deploying an untested uranium processing and concentrating technology throughout the Western United States, that NEPA document must be an Environmental Impact Statement ("EIS").

In short, 10 C.F.R. Part 40 does not allow an assumption-based process to supplant NEPA disclosure, comment, and analysis of actual conditions at each proposed milling and disposal site, as required by Part 40 Appendix A.

De Facto Rulemaking

NRC staff, along with various promoters and previous owners of the ablation technology, have spent years pushing various schemes to avoid Part 40 licensing and regulation of a technology that undisputedly creates 11e2 byproduct material. *See e.g.* ML22318A006

> NRC staff has determined that the HPSA technology is uranium milling, as it produces Atomic Energy Act of 1954, as amended (AEA), 11e.(2) byproduct material, and is thus subject to 10 CFR Part 40, including Appendix A.

Id. Although UMTRCA must be construed as intended - to close regulatory gaps - the DGEA proposes to create a new regulatory gap that would avoid Part 40 licensing of Disa's proposed processing and concentration of uranium from ores at these mine sites, for the express purpose of shipping the milled product for further processing into yellowcake. This is both contrary to law, and a waste of resources that should be focused on other persistent problems, such as poorly designed and leaking uranium tailings cells, ineffective groundwater remediation, and other unresolved regulatory/disposal issues at existing facilities.

Instead of working to undermine legislative intent through a DGEA that creates an ad hoc, in house approval process not found in UMTRCA or Part 40 or Appendix A, NRC staff should either propose new legislation or a comprehensive rulemaking that addresses persistent and controversial licensing deficiencies across NRC's Part 40 licensing program. Whichever route NRC staff chooses, Administrative Procedure Act rulemaking or legislation, NRC staff must inform the public and provide comment opportunities via the NEPA process.

The EA Confirms Significant Impacts and Fails to Identify Reasonable Alternatives

The NEPA-mandated means for disclosing and conducting interdisciplinary analysis of specific impacts – data-based, site-specific NEPA analysis – is dispensed with entirely in favor of

generic, untethered assumptions. This is contrary to NEPA's commands that agencies "(D) ensure the professional integrity, including scientific integrity, of the discussion and analysis in an environmental document" and "(E) make use of reliable data and resources in carrying out [NEPA]." 42 U.S.C.§ 4332 (2) (E-F). Despite NEPA's action-forcing mandates, the DGEA simply fails to inform the public and decisionmakers of likely impacts.

The GDEA assumes, for each resource category with absolutely no evidence regarding impacts, that radioactive emissions and other impacts would not be signficant based on numerous assumed mitigation measures and permitting requirements. *See e.g* GDEA at 25-26 (water use, surface water, and groundwater impacts). The no significant impact determination is based on what is known as a "mitigated FONSI." The assumed mitigation and other permitting conditions are assumed to move the impacts below the significance threshold of a license that purports to allow milling at thousands of sites, with creation of 11e2 byproduct materials sometimes lasting 13 years. Despite NRC staff's actual knowledge of significant impacts, the DGEA relies on assumptions regarding impacts and mitigation that are hypothetical, generic, and nonbinding. The DGEA does not identify any mitigation measures that would be made mandatory across all potential sites. The mitigated FONSI cannot avoid the significant impacts involved with the Disa's license request, or NRC staff's proposed licensing action. Consideration of the Disa proposal requires an EIS.

The GDEA fails to assess a range of reasonable alternative to the proposal to issue an assumption-based license, valid throughout the Western United States. DGEA at 2. This omission is fatal to any NEPA analysis, including the assumption-based DGEA. 42 U.S.C.§ 4332 (2)(F) (requiring agency to "study, develop, and describe technically and economically feasible alternatives."). There are numerous reclamation and remediation alternatives that do not involve on-site milling of uranium ore.

The only alternative in the DGEA – issue a generic license for unspecified sites - would require owners and operators to update mine plans and approvals to allow shipment of unprocessed ores to a licensed uranium mill. Many of the mines are on federal public lands, with an identifiable owner (the United States), whose land management agencies have made little or no effort to identify persons, and successors, with continuing reclamation liability. Most, if not all, of the mines are subject to state mining laws and permitting requirements. A reasonable alternative to a generic license is for NRC staff to cooperate with the approvals and regulatory programs of the federal land management and state permitting agencies, based on sites-specific conditions.

Many of the targeted, but unspecified, mines implicate the failure of federal defense contractors to carry out reclamation before transferring mines to uncapitalized successors. Many mines are linked to federal buying programs, federal public lands, and uranium tracts leased by the Department of Energy. Designating the contemplated uranium mines as Superfund sites provides an alterative that must undergo NEPA analysis. However, that alternative was not considered by NRC staff or included in the GDEA. Although Superfund has its problems, the Superfund listing and process provides a data and science-based approach to uranium mine clean-up. For mines where uranium ore processing may serve a useful purpose, a broad Superfund designation combined with a Part 40 complaint license at specific sites provides a reasonable, site-specific alternative to the generic approval of Disa's deficient application contemplated in the DGEA.

Although numerous federal and state agencies with jurisdiction and specialized expertise would play a critical role in the deployment of the generic license, none were included in the NRC staff's NEPA analysis. The actual purpose and need - reclamation and remediation of thousands of uranium mines - is far reaching and will impact the Western United States for decades, but the narrow scope of the DGEA excludes the outreach and consultation required by NEPA. 42 U.S.C.§ 4332 (2)(C).

The Licensing Proposal Triggers ESA and NHPA Consultation

Part 40 licensing is an "agency action" potentially triggering ESA consultation, and an "undertaking" triggering National Historic Preservation Act duties. However, the GDEA fails to address either of these statutory duties, despite available information regarding the locations where the controversial, experimental technology is likely to be deployed. DGEA at 10 (Figure 1. Locations of Western AUM Sites (EPA 2006)).

> In all cases, the NRC staff would conduct site-specific reviews to identify the potential environmental impacts of leaving coarse material onsite and would complete site-specific consultations under Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act.

GDEA at 57. The information regarding the locations for likely deployment of the portable uranium mill is known now, and compliance with NHPA and ESA cannot be deferred until later decisionmaking tiers.

Although the DGEA erroneously assumes that later processes create current compliance, the DGEA confirms no site-specific information was considered or sought in preparing the NEPA analysis GDEA at 40. NEPA imposes a duty on the agency, in the first instance, to provide interdisciplinary analysis and information disclosing the impacts of the proposed action in coordination with other federal laws at the earliest possible time. The DGEA fails to meet that duty.

RCRA Liability

The DGEA confirms that the Resource Conservation and Recovery Act ("RCRA") would create compliance requirements and liability for past and present owners and operators of mines where Disa deploys its technology, but simply assumes RCRA compliance without any analysis or information to support RCRA compliance. GDEA at 25. Although the assumption is faulty, RCRA does provide welcome legal mechanisms to directly enforce potential violations, thereby providing incentives for numerous entities to pursue RCRA compliance to avoid pollution liabilities not typically applicable to uranium mines.

Critically, NRC staff's proposal to accept Disa's application as an UMTRCA-licensed activity converts the regulatory status of uranium mines, which have been considered exempt from RCRA, into sites requiring compliance with RCRA, as implemented by EPA. The DGEA does not disclose or analyze the radical changes in regulatory status triggered by DISA's proposal for a generic Part 40 license to conduct on-site processing and concentration of uranium and subsequent disposal of 11e2 byproduct materials. A range of other federal laws, including the

Clean Water Act and Clean Air Act would also apply differently to uranium mines where portable uranium processing, concentration, and milling constitutes beneficiation that eliminates the RCRA exemption.

The proliferation of 11e2 byproduct material that NRC staff proposes to create and leave on site, without the benefit of perpetual licensing required by UMTRCA, would warrant RCRA enforcement in numerous cases. The DGEA fails to alert land management agencies, government officials, Tribes, and commenters to the radical regulatory shifts and liabilities that would be triggered by NRC staff's novel and illegal approach to Disa's deficient application.

Conclusion

The DGEA and FONSI fail to meet NRC's duty to comply with NEPA's mandates, to the fullest extent possible, when issuing a Part 40 license to create, possess, and dispose of 11e2 byproduct materials. The application is currently deficient, and NRC staff cannot go forward based on the DGEA. Instead, the significant impacts of a West-wide UMTRCA license for Disa to conduct mobile uranium milling requires an Environmental Impact Statement and site-specific analysis.

Sincerely,

s/Travis E. Stills

Travis E. Stills

Allison N. Henderson
Senior Attorney
Southern Rockies Director
Center for Biological Diversity
PO Box 3024
Crested Butte, CO 81224
970-309-2008 (c)
ahenderson@biologicaldiversity.org

Soren Jespersen, Director
Colorado Wildlands Project
(970) 819-7377

Luke Schafer
West Slope Director
Conservation Colorado
(C) 970.756.5854

Matthew Sandler
Legal Director/Leadership Team
Rocky Mountain Wild
1536 Wynkoop St., Suite 900
Denver, CO 80202

Phone: 303-579-5162
matt@rockymountainwild.org

Mike Eisenfeld
Energy and Climate Program Manager
San Juan Citizens Alliance
Farmington, NM
mobile: 505.360.8994

Ruthie Boyd
Program Director
Sheep Mountain Alliance
970.703.4267

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 29, 2022

Greyson Buckingham
President and Chief Executive Officer
Disa Technologies, Inc.
1653 English Avenue
Casper, WY 82601

SUBJECT: UNITED STATES NUCLEAR REGULATORY COMMISSION STAFF REGULATORY AND ACCEPTANCE REVIEW OF DISA TECHNOLOGIES' LICENSE APPLICATION FOR THE USE OF HIGH-PRESSURE SLURRY ABLATION TECHNOLOGY (DOCKET NO. 04038417)

Dear Greyson Buckingham:

In August 2022, Disa Technologies, Inc. (Disa) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) seeking a multi-site license to use a high-pressure slurry ablation (HPSA) system to remediate contaminated sites. The license application is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML22213A144.

As noted in the NRC staff's email acknowledging receipt of the application on August 23, 2022, the NRC has not previously issued a license to use HPSA technology (ADAMS Accession No. ML22236A012. As such, the NRC staff first performed a regulatory review to identify the applicable regulations for licensing this technology. The regulatory review included consideration of Disa's proposed activities, the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40, "Domestic Licensing of Source Material," and previous instances in which the NRC staff considered the applicable regulations for HPSA technology.

According to Disa's application, the HPSA technology requires re-sizing of material (crushing), mixing with water to create a slurry, and pumping the slurry through high-pressure nozzles to create a high energy impact zone. After the impact zone, the slurry is separated into two streams. Disa refers to these two streams as an 'isolated mineral fraction,' which contains vanadium, source material, and other constituents of concern, and a 'clean coarse fraction,' which Disa states contains inert product of the remediated material. The application states that, depending on the client, the isolated mineral fraction would either be sent to a uranium mill for further processing or to a low-level waste disposal site and that the 'clean coarse fraction' would remain on-site.

Consistent with previous instances where the NRC has considered the applicable statutory and regulatory requirements for such technology,[1] the NRC staff has determined that the HPSA

[1] The NRC staff has considered such technology and the applicable regulations in 2016, 2018, and 2020 (ADAMS Accession Nos. ML16272A302, ML17311A280, and ML20071G215). Although the term "kinetic separation" was used in some of those evaluations, this term is synonymous with HPSA.

technology is uranium milling, as it produces Atomic Energy Act of 1954, as amended (AEA), 11e.(2) byproduct material, and is thus subject to 10 CFR Part 40, including Appendix A. NRC regulations in 10 CFR 40.4 define uranium milling as “any activity that results in the production of byproduct material as defined in [10 CFR Part 40].” Section 40.4 defines byproduct material as “the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content,” originating from the definition of byproduct material in Section 11e(2) of the AEA.

Based on Disa’s application, the proposed HPSA technology is an activity that produces byproduct material as it: (i) involves the concentration of uranium and/or thorium for the primary purpose of recovering the source material, (ii) from ore, and (iii) produces tailings or waste. The material is crushed, slurried, and pumped through the high-pressure nozzles. According to the application, it has an initial maximum concentration of 1,500 mg/kg of source material. After using the HPSA technology, the isolated mineral fraction will have a concentration of 7,000 mg/kg of source material. Thus, the uranium and/or thorium will be concentrated. Additionally, Disa’s application states that it will be treating waste rock, a term that falls within the definition of ore as defined in Attachment 2 of RIS-2000-23, “Recent Changes to Uranium Recovery Policy” (ADAMS Accession No. ML003773008). Finally, the HPSA technology produces tailings or waste, which is the clean coarse fraction resulting from the concentration of uranium and/or thorium from waste rock. For these reasons, as stated above, the NRC staff has determined that Disa’s application to utilize the HPSA technology is a form of uranium milling and is thus subject to 10 CFR Part 40, including Appendix A.

The NRC staff also completed an acceptance review of Disa’s license application. The purpose of the acceptance review is to determine whether there is sufficient information in the application to allow for a detailed technical review.

Disa’s license application requests authorization to handle and package unlimited quantities of source material in the form of a slurry paste. Disa further seeks a license that would allow the HPSA technology to be used at multiple sites simultaneously. As discussed above, the NRC staff’s regulatory review determined that the HPSA technology is a form of uranium milling. However, the license application does not address the requirements for uranium milling activities in 10 CFR Part 40, including Appendix A. In addition, the application does not propose alternate standards or request exemptions from these requirements. As such, the NRC staff has determined that Disa’s license application is not acceptable for review at this time as it does not provide sufficient information for the NRC staff to perform a detailed technical review.

As stated in Appendix A, the NRC can approve alternatives to the Appendix A criteria, provided that the proposed alternatives “achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of this Appendix and the standards promulgated by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E.”

Should Disa wish to resubmit its application, the NRC staff has developed draft guidance for submission of an application seeking authorization for a conventional milling process. The guidance is available in NUREG-2126, “Standard Review Plan for Conventional Uranium Mill and Heap Leach Facilities” (ADAMS Accession No. ML14325A634). While this document remains in draft form, it is the most recent guidance staff has available for this type of

application. For an environmental report, Disa should consider the staff's guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" (ADAMS Accession No. ML032450279). The NRC staff is available to support pre-application activities, including a pre-submission audit.

A copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System component of the NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions regarding this letter, please contact Doug Mandeville of my staff at (301) 415-0724, or by email at douglas.mandeville@nrc.gov.

Sincerely,

Signed by Marshall, Jane
on 11/29/22

Jane E. Marshall, Director
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No.: 04038417

Letter to G. Buckingham Disa Technologies re completion of regulatory review and acceptance review of license application request DATE November 29, 2022

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ADAMS Accession No.: Ltr ML22318A006 *** via email**

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 8, 2025

Greyson Buckingham, CEO
Disa Technologies, Inc.
1010 Falcon Avenue
Mills, WY 82644

SUBJECT: REGULATORY AUDIT PLAN TO SUPPORT RESOLUTION OF REQUEST FOR ADDITIONAL INFORMATION ON DISA TECHNOLOGIES, INC. LICENSE APPLICATION FOR A PERFORMANCE-BASED, MULTI-SITE RADIOACTIVE MATERIALS LICENSE TO OPERATE A HIGH-PRESSURE SLURRY ABLATION REMEDIATION SYSTEM, REVISION 3, DOCKET 40-38417

Dear Mr. Buckingham:

The U.S. Nuclear Regulatory Commission (NRC) issued several requests for additional information (RAIs) in letter dated June 2, 2025 (Agencywide Documents Management and Access System [ADAMS] Accession No. ML25141A028) to support its review of Disa Technologies, Inc (Disa) license application dated March 21, 2025 (ML25087A094) for a multi-site radioactive materials license for its high-pressure slurry ablation technology to remediate abandoned uranium mine waste. Disa responded to these RAIs in letter dated June 16, 2025 (ML25167A328).

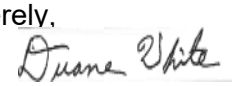
The NRC staff has reviewed the information Disa provided and believes it does not include sufficient details for staff to make the safety decisions required to complete the application review. Staff believes a regulatory audit is the most efficient way to resolve the information needs. A regulatory audit plan is enclosed in this letter.

Once the audit is concluded, the NRC staff will develop a regulatory audit summary documenting decisions and commitments. Following the audit, rather than revising the March 2025 license application, Disa should submit additional information to be added to the docket.

In accordance with Title 10 of *Code of Federal Regulation* (10 CFR) Part 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions, please contact Priya Yadav of my staff at 301-415-6667 or by e-mail at Priya.Yadav@nrc.gov.

Sincerely,



Signed by White, Duane
on 07/08/25

Duane E. White, Chief
Low-Level Waste and Projects Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket Number: 40-38417

Enclosure:
Regulatory Audit Plan

cc: Stephen Cohen, Disa USA Inc.
s.cohen@disausa.com
LISTSERV

REGULATORY AUDIT PLAN TO SUPPORT

RESOLUTION OF REQUEST FOR ADDITIONAL INFORMATION ON

DISA TECHNOLOGIES LICENSE APPLICATION

DOCKET NO. 40-38417

I. BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) issued several requests for additional information (RAIs) in letter dated June 2, 2025 (Agencywide Documents Management and Access System [ADAMS] Accession No. ML25141A028) to support its review of Disa Technologies, Inc (Disa) license application dated March 21, 2025 (ML25087A094) for a multi-site radioactive materials license for its high-pressure slurry ablation (HPSA) technology to remediate abandoned uranium mine waste. Disa responded to these RAIs in letter dated June 16, 2025 (ML25167A328).

II. REGULATORY AUDIT BASES

The audit is being conducted in accordance with the applicable regulatory requirements of:

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40, “Domestic Licensing of Source Material”
- 10 CFR Part 20, “Standards for Protection Against Radiation”
- 10 CFR Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions”
- Applicable guidance provided in
    - NUREG-1556, Volume 18, “Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses, Final Report”
    - NUREG-1569, “Standard Review Plan for In Situ Leach Uranium Extraction License Applications, Final Report”
    - NUREG-1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs”

III. REGULATORY SCOPE

The purpose of this regulatory audit is to obtain enough detail missing from Disa’s response to the NRC staff’s RAIs for staff to make the safety decisions required to complete the application review.

The NRC staff will review basis documents to gain a better understanding of Disa’s radiation safety plans and public dose assessments. The regulatory audit may also identify additional information that will be required to be docketed to support the basis of the licensing decision.

IV. NECESSARY INFORMATION AND MATERIALS FOR THE REGULATORY AUDIT

The NRC audit team will require access to the applicant’s technical and radiation safety personnel with detailed knowledge of the license application, supporting risk assessment methodology, standard operating procedures, and work plans for deployment of the HPSA technology at the temporary jobsites.

The following information needs have been identified below:

- Public Dose Assessment
    - Following HPSA treatment, dose modeled from concentrations expected in the coarse fraction and process water left onsite
    - MILDOS input and output files and associated assumed parameter values
    - Scenario assumptions (including land use assumptions and exposure pathways)
    - Site grading details and stabilization after treatment
- Radiation Safety Program
    - Air Monitoring for workers
    - Emergency response procedures and training
    - RSO training/qualifications
- Financial Assurance Mechanism

Additional information needs may arise during the NRC staff's audit.

V. AUDIT TEAM

The NRC staff performing this audit will include, but may not be limited to, the following staff:

Audit Team Members

- Priya Yadav (Audit Leader and Project Manager)
- Douglas Mandeville (Technical Reviewer)
- Martha Poston-Brown (Technical Reviewer)
- Karen Pinkston (Technical Reviewer)
- Isaac Johnston (Environmental Reviewer)
- Christine Pineda (Environmental Reviewer)

VI. LOGISTICS

The audit will begin on July 11, 2025, with a Microsoft Teams Virtual meeting from 10 am – 1 pm Eastern Standard Time (EST). Virtual meetings will continue as needed biweekly, Tuesdays from 1 pm – 4 pm EST and Fridays from 10 am to 1 pm EST from July 11 through July 25, 2025. Sessions will be shortened as needed. Disa should submit all materials to the NRC to be placed on the docket by July 29, 2025.

Completion of the audit is planned for July 29, 2025, with an exit meeting at 1 pm EST. If new technical items are identified, additional audit sessions may be needed to facilitate the continued review of the requested amendment.

The NRC staff will use an online reference document portal provided by Disa staff. Access to the online portal will be limited to specific NRC staff and the documents in the online portal are read-only (i.e., NRC staff will be prevented from saving, copying, downloading, or printing any documents). The conditions associated with the online reference document portal must be maintained throughout the review. The NRC staff who should be granted access to the portal are those listed in the "Audit Team" section above.

VII. DELIVERABLES

At the completion of the regulatory audit, the NRC staff will conduct an exit briefing and provide a summary of the audit results. The NRC staff plans to prepare a regulatory audit summary that will include the documents reviewed, the audit activities, and any decisions or commitments made.

DISTRIBUTION:

ADAMS Accession No.: ML25189A159; Ltr ML25189A159

OFFICE	NMSS/DUWP/LLWPB	NMSS/DUWP/LLWPB		
NAME	PYadav *PY*	DWhite *DW*		
DATE	Jul 8, 2025	Jul 8, 2025		

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 6, 2025

Greyson Buckingham, CEO
Disa Technologies, Inc.
1010 Falcon Avenue
Mills, WY 82644
greyson@disausa.com

SUBJECT: REGULATORY AUDIT SUMMARY REPORT– RESOLUTION OF REQUEST FOR ADDITIONAL INFORMATION ON DISA TECHNOLOGIES, INC. LICENSE APPLICATION FOR A PERFORMANCE-BASED, MULTI-SITE RADIOACTIVE MATERIALS LICENSE TO OPERATE A HIGH-PRESSURE SLURRY ABLATION REMEDIATION SYSTEM, REVISION 3, DOCKET 40-38417

Dear Mr. Buckingham:

The U.S. Nuclear Regulatory Commission (NRC) has completed the regulatory audit of Disa Technologies, Inc (Disa) responses to NRC's requests for additional information (RAIs) on Disa's license application dated March 21, 2025 (ML25087A094) for a multi-site radioactive materials license for its high-pressure slurry ablation technology to remediate abandoned uranium mine waste. The audit was completed in accordance with the regulatory audit plan issued in letter dated July 8, 2025 (Agencywide Documents Management and Access System [ADAMS] Accession No. ML25189A159).

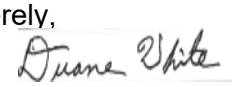
Enclosed is a summary report of the regulatory audit conducted by the NRC staff from July 11, 2025, to July 29, 2025. To finalize audit information, Disa submitted a supplement to their March 2025 license application on July 31, 2025 and August 4, 2025 (ML25216A267). Staff believe the supplement provides sufficient information to complete the licensing review on schedule. The supplemental information Disa submitted to the NRC is publicly available.

This audit report does not make any regulatory conclusions or findings. However, it is part of the administrative record of the NRC staff's review of the application and may provide information supporting the NRC staff's safety evaluation of the application.

In accordance with Title 10 of *Code of Federal Regulation* (10 CFR) Part 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions, please contact Priya Yadav of my staff at 301-415-6667 or by e-mail at Priya.Yadav@nrc.gov.

Sincerely,



Signed by White, Duane
on 08/06/25

Duane E. White, Chief
Low-Level Waste and Projects Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket Number: 040-38417

Enclosures:
Disa Application Regulatory Audit:
Audit Topics Summary

cc: Stephen Cohen, Disa USA Inc.
s.cohen@disausa.com

LISTSERV

REGULATORY AUDIT SUMMARY

RESOLUTION OF REQUEST FOR ADDITIONAL INFORMATION ON

DISA TECHNOLOGIES LICENSE APPLICATION

DOCKET NO. 40-38417

I. BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) issued several requests for additional information (RAIs) in letter dated June 2, 2025 (Agencywide Documents Management and Access System [ADAMS] Accession No. ML25141A028) to support its review of Disa Technologies, Inc (Disa) license application dated March 21, 2025 (ML25087A094) for a multi-site radioactive materials license for its high-pressure slurry ablation (HPSA) technology to remediate abandoned uranium mine waste. Disa responded to these RAIs in letter dated June 16, 2025 (ML25167A328).

The NRC determined Disa's RAI response did not include enough detail for staff to make the safety decisions required to complete the application review. Therefore, staff conducted a regulatory audit of the RAI responses in accordance with the audit plan issued in letter dated July 8, 2025 (ML25189A159).

This report summarizes the regulatory audit conducted by the NRC staff from July 11, 2025, to July 29, 2025. This audit report does not make any regulatory conclusions or findings. However, it is part of the administrative record of the NRC staff's review of the application and may provide information supporting the NRC staff's safety evaluation of the application.

II. AUDIT BASES

The audit was conducted in accordance with the applicable regulatory requirements of:

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40, "Domestic Licensing of Source Material"
- 10 CFR Part 20, "Standards for Protection Against Radiation"
- 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions**"**
- Applicable guidance provided in
    - NUREG-1556, Volume 18, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses, Final Report"
    - NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications, Final Report"
    - NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs"

III. AUDIT SCOPE AND ACTIVITIES

The purpose of the regulatory audit was for the NRC staff to obtain sufficient information missing from Disa's response to the NRC staff's RAIs for staff to make the safety decisions required to complete the application review.

The audit included six sessions, between July 11th and 29th, during which NRC staff and Disa (and its contractors) resolved many of the technical areas in their RAI response. NRC shared a list of topics for discussion with Disa prior to each session. All topics were addressed by the completion of the audit timeframe.

The NRC staff and Disa used a SharePoint online portal provided by Disa staff to share information. Access to the online portal was limited to the audit team members and the documents in the online portal were read-only (audit team members did not download copies of documents shared). Disa shared interim versions of its application supplement as well as dose modelling input and output files with NRC staff on the SharePoint portal.

An exit meeting was held on July 29, 2025 to conclude the audit.

IV. AUDIT PARTICIPANTS

The NRC and Disa staff involved in the regulatory audit included:

NRC Audit Team Members
Priya Yadav (Audit Leader and Project Manager)
Douglas Mandeville (Technical Reviewer)
Martha Poston-Brown (Technical Reviewer)
Karen Pinkston (Technical Reviewer)
Isaac Johnston (Environmental Reviewer)

Disa (and Disa contractors) Audit Team Members
Stephen Cohen (Chief Regulatory Affairs Officer)
Bryan Erdmann (Environmental Restoration Group)
Tom Patten (Pace Laboratories)

V. AUDIT RESULTS

Rather than revising the March 2025 license application, Disa committed to developing a new submittal with additional information to be placed on the docket called an “application supplement”. The table provided in the attachment to this audit report outlines each technical area in their RAI response that was discussed along with Disa’s proposed path to resolution.

Disa submitted its application supplement to the NRC on July 31, 2025, with additional supporting files submitted on August 4, 2025 (package ML25216A267).

DISTRIBUTION:

ADAMS Accession No.: ML25217A286; Ltr ML25217A322

OFFICE	NMSS/DUWP/LLWPB	NMSS/DUWP/LLWPB		
NAME	PYadav *PY*	DWhite *DW*		
DATE	Aug 5, 2025	Aug 6, 2025		

OFFICIAL RECORD COPY

Disa Application Regulatory Audit
July 11- 29, 2025
Audit Topics Summary

The U.S. Nuclear Regulatory Commission (NRC) has completed the regulatory audit of Disa Technologies, Inc (Disa) responses to NRC's requests for additional information (RAIs) on Disa's license application dated March 21, 2025 (ML25087A094) for a multi-site radioactive materials license for its high-pressure slurry ablation technology to remediate abandoned uranium mine waste. The audit was completed in accordance with the regulatory audit plan issued in letter dated July 8, 2025 (Agencywide Documents Management and Access System [ADAMS] Accession No. ML25189A159). This table represents a summary of the topics discussed during the audit.

Discussion Topic	**Closure Action**
Public dose assessment during operations assumptions (e.g., receptor located at 100 m distance)	Application supplement: Disa will modify the public dose assessment during operations and include revised assumptions on receptor distance.
Public dose assessment after high-pressure slurry ablation (HPSA) operations	Application supplement: Disa will include public dose assessment methodology to include several exposure scenarios and assumptions (e.g., resident farmer, resident gardener, recreational, rancher).
Modeling input and output files	Application supplement: Disa will include PDFs of RESRAD Summary files (inputs and calculated results).
Release criteria after HPSA treatment	Application supplement: NRC and Disa have agreed to use exposure-scenario-specific concentration thresholds as screening levels for each site. The site-specific threshold will be the first tier of release criteria; the second tier will be a dose assessment using 25 mrem/yr dose unrestricted release criteria per 10 CFR 20.1402.
Scenario selection and release criteria	Application supplement: Disa will include its proposed scenario selection (e.g., resident farmer, resident gardener, recreational, rancher) for each site in its pre-mobilization notification (PMN). This will indicate the release criteria for each site.

Discussion Topic	Closure Action
Coarse material and process water sampling	Application supplement: Disa will include minimum amount of grab samples (e.g., 5 samples for less than 40,000 tons of coarse material) PMN: Disa will include number of samples per amount of coarse material and process water per site.
Outlier scenarios in dose modeling	Application supplement: Disa will include methodology for handling outlier scenarios in application supplement (e.g., fish pathway edge case).
Coarse material thickness in dose modeling	Application supplement: Disa will add sensitivity analysis for thickness of coarse material to dose calculations.
Decision process	Application supplement: Disa will include decision process of what to do if screening level criteria is not met, include discussion of mitigative actions if dose assessment results demonstrate unrestricted release criteria is not met (e.g., soil mixing).
Breathing rate in dose modeling	Application supplement: Disa will review and provide more details on the weighted average breathing rate used in the dose calculations.
Exposure scenarios	Application supplement: Disa will clarify the difference between the resident farmer and the resident gardener exposure scenarios.
Resident gardener scenario	Application supplement: Disa will clarify the decision process they will use to determine whether growing a garden is possible (rural resident versus resident gardener).
Dust loading in dose modeling	Application supplement: Disa will evaluate dust loading for recreationalist (All Terrain Vehicle scenario) or do a sensitivity analysis.

Discussion Topic	Closure Action
Release criteria and source material threshold	Application supplement: Disa will revise Table 2-1 to clarify total uranium and thorium will be less than 500 mg/kg.
Leachate testing	Application supplement: Disa will include Synthetic Precipitation Leaching Procedure (SPLP) testing for coarse material to be compared to 10 CFR Part 20, Appendix B, Table 2 effluent limits (thorium, radium-226, and uranium).
Site Stabilization and controls	Application supplement: Disa will include details on site stabilization for dust control and erosion control.
Air particulate sampling	Application supplement: Disa to indicate air particulate sampling will be conducted across multiple sites over 12 months before it proposes to its Safety and Environmental Review Panel (SERP) to discontinue air sampling. For sites with HPSA work over multiple years, Disa will do 12 months at that site.
Background versus baseline term usage	Application supplement: Disa will indicate the term “background” and not “baseline” represents taking the survey and samples to determine the background radiation that can be subtracted for the post HPSA treatment dose assessment calculations.
Proposed license condition for performance-based reviews	Application supplement: Disa to suggest new language for performance-based license condition.
Process water treatment and discharge	Application supplement: Disa will include details on Headwater technologies treatment and plans for discharge of process water.
Process water compliance	Application supplement: Disa will confirm compliance with 10 CFR Part 20, Appendix B, Table 2 effluent limits for process water (not Table 3 sanitary sewer limits).

Discussion Topic	Closure Action
Sampling and Analysis and Quality Assurance Plan	Submittal: Disa will submit this plan on the docket separate from the application supplement.
Radiation Safety Officer (RSO) designee program	Standard Operating Procedures (SOPs): Disa will modify SOPs to include discussion of RSO equivalent and designee program.
Locations and frequencies of surveys	SOPs: Disa will modify SOPs to include locations and frequency of surveys.
Air monitoring	SOPs: Disa will modify SOPs to include locations and frequencies of air monitoring.
Radiation Safety Training	SOPs: Disa will modify SOPs to include discussion of RSO designee and RSO equivalent training and emergency procedures training.
Financial Assurance	Submittal: Disa will submit surety information if available by September; if not available, a license condition will specify financial assurance needed.