Item 5 Radioactive material:

Element and mass number: uranium (depleted)
Chemical and/or physical: any
Maximum amount that will be possession only at any time: 5700 kg as follows

Installation	Number of rounds	DU Mass (kg)[a]	Number of Sites[m]	Reference	Max DU mass (kg)[ag]
Fort Benning GA formerly Fort Moore	9700 [b]	1843.0	9	(USACE St Louis 2008a)	1850
Fort Bragg NC formerly Fort Liberty	4212 [d]	800.3	1	(USACE St Louis 2008b)	810
Fort Campbell KY	681 [b]	129.4	1	(USACE St Louis 2008c)	130
Fort Carson CO	1404 [d]	266.8	2	(USACE St Louis 2008d)	270
Fort Gordon GA formerly Fort Eisenhower	135 [e]	25.7	1	(USACE St Louis 2009b)	30
Donnely Training Area, Fort Wainwright, AK	93[i]	17.7	1	(USACE St Louis 2008e)[j]	20
Fort Hood TX formerly Fort Cavazos	4038 [b]	767.2	1	(USACE St Louis 2008f)	770
Fort Hunter Liggett CA	135 [f]	25.7	3	(USACE St Louis 2009c)	30
Fort Jackson SC	135 [e]	25.7	1	(USACE St Louis 2009d)	45
Fort Knox KY	3956 [b]	751.6	2[l]	(USACE St Louis 2008g)	760
Fort Polk LA	1923 [c]	365.4	1	(USACE St Louis 2008i)	370
Fort Riley KS	105 [b]	20.0	2	(USACE St Louis 2008j)	20
Fort Sill OK	585 [d]	111.2	1	(USACE St Louis 2009e)	120
Joint Base Lewis-McChord[k] / Yakima Training Center WA	1756 [b]	333.6	3 / 3	(USACE St Louis 2008h)	340
Joint Base McGuire-Dix-Lakehurst NJ	50 [h]	9.5	1	(USACE St Louis 2009a)	10

Schofield Barracks HI / Pohakuloa Training Area	714 [b]	135.7	1 / 4	(USACE St Louis 2007)	140
Total	**29622**	**5,628.2**	**38 Sites**		**5,700[g]**

[a] Each M101 round contains (3180 ± 25) grains = (0.2061 ± .0015) kg of molybdenum-DU alloy (USACE St Louis 2011). The molybdenum-DU alloy is 92 percent DU, so each M101 round contains about 0.190 kg of DU.
[b] Value based on actual number of rounds shipped to installation according to shipping records.
[c] Shipping records were not available. Number of rounds is based on estimated size of training classes, number of years used, and training protocols.
[d] Shipping records were not available. Number of rounds is based on number of M28 squads present on the installation, number of years used, and training protocols.
[e] The archive search report for this installation did not provide a value for the number of M101 rounds fired. However, it said that M101 rounds might have been fired during firepower demonstrations. Therefore, the estimated value is based on the estimated number of rounds used in firepower demonstrations at Fort Polk (USACE St Louis 2008i).
[f] The Fort Hunter-Liggett archive search report says, "The Davy Crockett Weapon System fired at identified ranges were [sic] either brought there by Fort Ord units conducting firepower demonstrations for recruits or by other units training at Fort Hunter Liggett." [The main document for the archive search reports (USACE St Louis 2011) says, "…no evidence was found indicating that the 20mm M101 … were fired at (Fort Ord) …."] While the number of M101 rounds fired at Fort Hunter Liggett is unknown, an estimated value of 135 could be based on the estimated number of rounds used in firepower demonstrations at Fort Polk (USACE St Louis 2008i). However, since "other units" apparently may have brought these rounds from other installations, use of the number 135 for Fort Hunter Liggett likely is counting these rounds twice. Nevertheless, as a conservative measure, we use 135 as the estimated number of rounds fired at Fort Hunter Liggett.
[g] Discrepancy is due to round off.
[h] The Fort Dix archive search report (USACE St Louis 2009a) says, "Less than 50 Cartridges, 20mm Spotting M101 were fired at Fort Dix."
[i] A 1962 Lake City Army Ammunition Plant document said that 39.0 pounds of DU "in the form of finished XM101 cartridges" were at Fort Greely. This is equivalent to 17.7 kg DU or about 93 M101 spotting rounds. (historical email in license
[j] Memorandum, Administrative adjustment to Installation Specific Archive Search Report on the Use of Cartridge, 20mm Spotting M101 Davy Crockett light weapon M28 at Fort Greely, Alaska (ML18064A140).
[k] Memorandum for Record, Radiation Control Area (RCA) Addition at Joint Base Lewis-McChord, 26 May 2023.
[l] Email clarifying RCAs at Fort Knox, KY, 29 January 2016 (ML16041A107).
[m]Emails Clarifying M101 RCAs, 12 February 2016 (ML16048A347), 24 May 2016 (ML16341C807), and 7 December 2016 (ML16351A092) showing 38 RCAs.

Item 6 Purposes(s) for which licensed material will be used:

Activities necessary for the possession and management of depleted uranium (DU) spotting rounds and fragments as a result of previous use of DU at sites located at U.S. Army installations. These activities include:

- Activities necessary to maintain the sites in a safe condition and to prevent the unauthorized removal of licensed material from the authorized places of use;
- Activities necessary to determine the presence of licensed material at the sites;
- Activities necessary to monitor the radiological environmental conditions in and around the authorized places of use to determine if licensed material is being transported in the environment; and

- Activities necessary for the packaging, transport and disposal of incidentally identified licensed material to a licensed/permitted disposal facility.

Item 7 Individual(s) responsible for radiation safety program and their training experience:

The License Radiation Safety Officer will have the following education, training, and experience:

- A Bachelors degree in the physical sciences, industrial hygiene, or engineering from an accredited college or university or an equivalent combination of training and relevant experience in radiological protection. Two years of relevant experience are generally considered equivalent to one year of academic study.
- At least one year of work experience in applied health physics, industrial hygiene, or similar work relevant to radiological hazards associated with site remediation. This experience should involve actually working with radiation detection and measurement equipment, not strictly administrative or "desk" work.
- A thorough knowledge of the proper application and use of all health physics equipment used for depleted uranium and its progeny, the chemical and analytical procedures used for radiological sampling and monitoring, methodologies used to calculate personnel exposure to depleted uranium and its daughters, and a thorough understanding of how the depleted uranium was used at the location and how the hazards are generated and controlled.

Item 8 Training for individuals working in or frequenting restricted areas

See Section 2.4 and 20 of the Radiation Safety Plan, which is attachment 1.

Item 9 Facilities and equipment

See attachment 2 for the location of each M101 spotting round impact area on the installations listed in item 3; radioactive material listed for each in item 5. The impact areas are in Army training ranges. Army training ranges are open areas with no habitable structures but may contain training materials, such as targets and associated supporting materials.

Item 10 Radiation Safety Program

Attachment 1 contains the Radiation Safety Plan that will apply for all sites.

Item 11 Waste management

See Section 18 in the Radiation Safety Plan, which is attachment 1.

Other supporting information

Attachment 3 Physical Security Plan

This plan applies to all licensed sites.

Attachment 4 Revised Final Programmatic Environmental Radiation Monitoring Plan (ERMP)

Programmatic Approach for Preparation of Installation-specific Environmental Radiation Monitoring Plans, and Site-Specific ERMPs.

Attachment 5 Bounding Calculations Using RESRAD 7.0 and RESRAD-OFFSITE 3.1

This document contains results of calculations that support assertions in attachment 4.

Attachment 6 Decommissioning Funding Plan for Davy Crockett M101 Depleted Uranium Impact Areas at M101 DU-affected Ranges with "Statement of Intent"

This includes cost estimates for all M101 DU-affected installations individually and collectively. It also includes the signed "Statement of Intent" to request funding.

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Attachments

1. Radiation Safety Plan
2. M101 Impact Areas (Radiation Control Areas)
3. Physical Security Plan
4. Revised Final Programmatic Environmental Radiation Monitoring Plan
5. Bounding Calculations Using RESRAD 7.0 and RESRAD-OFFSITE 3.1
6. Decommissioning Funding Plan with Statement of Intent