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US Army Corps of Engineers®

U.S. ARMY CORPS OF ENGINEERS
PROTECTIVE DESIGN CENTER
TECHNICAL REPORT

WEAPONS SAFETY ASSESSMENT
Volume 1 of 5 – Template Instructions

Prepared for:
U.S. NUCLEAR REGULATORY COMMISSION –
OFFICE OF NUCLEAR SECURITY AND
INCIDENT RESPONSE

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When separated from Volumes 4 and 5 of the WSA, this volume is DECONTROLLED.

DISCLAIMER

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FORWARD

Submission of a weapons safety assessment (WSA) is one component of an application by a licensee or certificate holder (hereafter referred to as "applicant") to the U.S. Nuclear Regulatory Commission (NRC) for combined enhanced weapons authority and preemption authority. Refer to 10 CFR 73.18[1] and DG-5020[2] for complete details on the application process. Applicants for stand-alone preemption authority are not required to complete a WSA.

Enhance weapons, as defined in 10 CFR 73.2[3], means any short-barreled shotgun, short-barreled rifle, or machine gun as defined in 27 CFR 478.11[4]. Enhanced weapons do not include destructive devices as defined at 18 U.S.C. 921(a)(4)[5].

This report presents a WSA methodology acceptable to the NRC for an application for combined enhanced weapons authority and preemption authority; however, it is not exclusive. Other methodologies based on sound safety, scientific, and engineering principles are also acceptable.

This report is presented in five volumes. The content of each volume is described below.

- *Volume 1: Template Instructions* - This volume provides detailed instructions for completing the WSA template presented in Volume 2: Template. Section numbering of the explanations and instructions in this volume correspond to the section numbering of the template to facilitate ease of navigation between the two volumes.
- *Volume 2: Template* – This volume provides a template for information to be included in the WSA for submittal to NRC.

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[1] Title 10 of the *Code of Federal Regulations* (10 CFR) 73.18, "Authorization for Use of Enhanced Weapons and Preemption of Firearms Laws" (Unclassified)
[2] Draft Regulatory Guide (DG) -5020, "Applying for Enhanced Weapons Authority, Applying for Preemption Authority, and Accomplishing Firearms Background Checks Under 10 CFR Part 73" (Unclassified)
[3] 10 CFR 73.2, "Definitions" (Unclassified)
[4] 27 CFR Part 478, "Commerce in Firearms and Ammunition" (Unclassified)
[5] Title 18 United States Code, Chapter 44,"Gun Control Act of 1968" (Unclassified)

- *Volume 3: Review Criteria* – This volume describes the criteria that NRC will use in evaluation of a submitted WSA.
- *Volume 4: Reference Documents* – This volume is a collection of digital files that can be used by the applicant for additional information. The information pertains to weapons, weapons maintenance, training, and range design and range safety.
- *Volume 5: Sample Template* – This volume provides an example of a completed WSA template for a fictitious site. This is a clarification tool and visual aid to the applicant.

Completion of the template should be accomplished by a team composed of members from various elements of the applicant's organization. Examples of elements outside of security and what they can contribute are as follows:

- Facility safety office personnel can provide information on chemicals and other hazardous items on the site.
- Facility emergency preparedness office personnel can provide information on the surrounding community.
- Facility engineering office personnel can provide drawings and maps as well as construction details for structures containing risk items.

The applicant's team should include at least one subject matter expert familiar with automatic and large caliber firearm usage to assist with the selection, risk evaluation, documentation, planning, training, and possible training range modifications for use of the enhanced weapons.

The information in this report has been determined to be Official Use Only – Security-Related Information and is to be withheld from public disclosure under 10 CFR 2.390[1].

However, once site specific information has been placed in the template contained in Volume 2, the applicant should mark, label, control, store, and transmit the document as safeguards information or classified information, as appropriate. The applicant should determine, using applicable guidance, the appropriate sensitivity level of the information and protect it accordingly.

[1] 10 CFR 2.390, "Public Inspections, Exemptions, Requests For Withholding" (Unclassified)

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For additional instructions press ctrl and click.

SECTION 1 - INTRODUCTION

1-1 BACKGROUND

Recent changes to 10CFR73.18[1] allow U.S. Nuclear Regulatory Commission (NRC) licensee/ certificate holders to obtain enhanced weapons for use as part of their physical protection program with NRC approval. Part of the approval process is the submission for review and approval of a weapons safety assessment (WSA), prepared by the licensee/certificate holder, which must demonstrate that the use of enhanced weapons will not cause undue risk considering the on-site and off-site conditions associated with the use of a specific enhanced weapon system.

As defined in 10CFR73.2[2], enhanced weapons are weapons registered under the National Firearms Act, e.g., machineguns, short-barreled shotguns, and short-barreled rifles.

1-2 PURPOSE

This volume provides guidance for licensees and certificate holders (hereafter referred to as "applicant") to prepare a WSA based on the template in Volume 2 of this report.

1-3 LIMITATIONS

This report does not attempt to teach basic firearms safety or usage. The items in the WSA template (Volume 2) and these instructions have the applicant focus on the safety impacts of using an enhanced weapon. The potential for a stray round (i.e., misdirected or accidental firing and ricochets) leaving the applicant's facilities, damaging a facility asset or causing human injury can be great with these weapons. Large caliber ammunition may pass through normal building materials and when unhindered may travel for miles with the potential for critical damage.

This WSA guidance compilation has extensive references pertaining to range design, safety, training plans for specific weapons and maintenance of weapon systems. These references are provided to aid the applicant, but it is not within the scope of this document to create range designs, surface danger zones, training plans or weapon maintenance plans. The applicant is responsible for these other documents.

The development of 'surface danger zones' are not specifically performed as part of the WSA process. Instead, area danger rings (ADR) are used to define the ranges of the enhanced weapons and identify items at risk. For training ranges owned and/or controlled by the applicant that enhanced weapons will be used at, it may be necessary to designate special use airspace

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[1] Title 10 of the *Code of Federal Regulations* (10 CFR) 73.18, "Authorization for Use of Enhanced Weapons and Preemption of Firearms Laws" (Unclassified)
[2] 10 CFR 73.2, "Definitions" (Unclassified)

(SUA) in the vicinity of the site or training range. Existing warnings or advisories already in effect for airspace restrictions around nuclear power plants may not be restrictive enough with regards to the use of enhanced weapons. Contacting the local Federal Aviation Administration (FAA) is recommended by NRC as part of the WSA process.

1-4 REPORT STRUCTURE

- *Volume 1: Template Instructions* - This volume provides detailed instructions for completing WSA template presented in Volume 2: Template. Section numbering of the explanations and instructions in this volume correspond to the section numbering of the template to facilitate ease navigation between the two volumes.
- *Volume 2: Template* – This volume provides a template for information to be included in the WSA for submittal to NRC.
- *Volume 3: Review Criteria* – This volume describes the criteria that NRC will use in evaluation of a submitted WSA.
- *Volume 4: Reference Documents* – This volume is a collection of digital files that can be used by the applicant for additional information. The information pertains to weapons, weapons maintenance, training, and range design and range safety.
- *Volume 5: Sample Template* – This volume provides an example of a completed WSA template for a fictitious site. This is a clarification tool and visual aid to the applicant.

1-5 WSA PROCESS OVERVIEW

To complete the WSA template the applicant should understand the overall WSA process. The numbered list below outlines the steps of the assessment process:

1. The applicant provides general contact information.
2. The applicant specifies the weapon system and any associated ammunition types desired.
3. The applicant provides a discussion about anticipated uses of the weapon system.
4. The applicant obtains maps of the facility and the surrounding community.
5. The applicant creates an Initial Area Danger Ring (IADR) map.
6. Using the IADR map from step 5, working outward from the point of fire to the outward edges of the IADR, the applicant will analyze the surrounding area for buffers/encroachments and identify risk items.
7. The applicant discusses risk mitigations for all risk items.

8. When the applicant has completed this assessment out to the edges of the IADR, the applicant considers all risk items and their risk mitigation and creates a Mitigated Area Danger Ring (MADR) map that may encompass a much smaller area than the IADR map.

9. With the completed MADR map, the applicant then returns to the Volume 2: WSA Template, Section 2-8 Risk Identification, Evaluation and Mitigation and marks the risk items that fall outside the MADR boundaries.

10. The applicant documents the training, maintenance and range modifications needed for the new weapon system.

11. The applicant submits the WSA application to the NRC.

1-6 SENSITIVITY OF INFORMATION

The information in this report has been determined to be Official Use Only – Security-Related Information and is to be withheld from public disclosure under 10 CFR 2.390[1].

Each entity completing a WSA must determine the sensitivity of the information, and protect accordingly. Early in the WSA activity process it is recommended to utilize personnel who have been designated as authorized to identify and mark sensitive unclassified and/or classified information. When filled out, the template in Volume 2 may be Official Use Only – Security-Related Information, safeguards information, or classified information. The applicant should mark, label, control, store, and transmit Volume 2 as appropriate for the level of sensitivity/classification of the information.

[1] 10 CFR 2.390, "Public Inspections, Exemptions, Requests For Withholding" (Unclassified)

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SECTION 2 - WSA TEMPLATE INSTRUCTIONS

This section provides detailed instructions for completing the input form (Volume 2: Template). Heading numbers and titles in this section correspond to the same heading numbers and titles in the input form.

For ease of tracking internal to the applicant and for NRC review, the applicant should save the template as "WSA – Facility Name.doc". The filename for the template will appear in the footer. The footer will not change immediately, but will appear in the footer after the document is saved, closed, and reopened or after a print preview.

2-1 GENERAL INFORMATION

This section of the form is designed to collect basic information about the applicants' facility.

1. *Facility name*

   Enter the facility name.
   (This is a text input field.)

2. *Submittal Date*

   Enter the date (dd-mm-yyyy) this form was submitted for review.
   (This is a text input field.)

3. *Physical Address*

   Enter the facility's physical location (not a P. O. box or applicant's headquarters address).
   (This is a text input field.)

4. *Is this a re-submittal for this facility and weapon?*

   Yes or No. This response will alert the review team to review the previous package for comments.
   (This field is a drop-down selection.)

5. *City, State, Zip*

   Enter the name of the city the facility in located in, the two letter abbreviation for the state and the zip code.
   (This is a text input field.)

6. *Facility Phone Number*

   Enter the phone number (including area code) for the facility's physical address. (This is a text input field.)

7. *Mailing Address*

   Enter the facility's mailing address if different from the physical address.
   (This is a text input field.)

8. *City, State, Zip*

   Enter the city, two letter state abbreviation and the zip code for the mailing address.
   (This is a text input field.)

9. *Mailing Address Phone Number*

   Enter the phone number (including area code) for the facility's mailing address.
   (This is a text input field.)

10. *Applicant Point of Contact (POC)*

    Enter the POC's name.
    (This is a text input field.)

11. *Position Title of Applicant POC*

    Enter the position title for the applicant POC.
    (This is a text input field.)

12. *Work phone no.*

    Enter the POC's work phone number (including area code).
    (This is a text input field.)

13. *Alternate phone no.*

    Enter a secondary phone number, such as the POC's mobile phone number (including area code).
    (This is a text input field.)

14. *POC's e-mail Address*

    Enter the POC's office e-mail address.
    (This is a text input field.)

15. *Alternate Point of Contact (POC)*

    Enter the name of the secondary POC.
    (This is a text input field.)

16. *Position Title of Alternate POC*

    Enter the position title for the Applicant alternate POC.
    (This is a text input field.)

17. *Work phone no.*

    Enter the alternate POC's work phone number (including area code).
    (This is a text input field.)

18. *Alternate phone no.*

Enter a secondary phone number such as a mobile number for the alternate POC (including area code).
(This is a text input field.)

19. Alternate POC's Email Address

Enter the alternate POC's office e-mail address.
(This is a text input field.)

20. *Applicants Plant Manager*

Enter the applicant's plant manager name.
(This is a text input field.)

21. *Work Phone No.*

Enter the alternate POC's work phone number (including area code).
(This is a text input field.)

22. *Alternate Phone No.*

Enter a secondary phone number such as a mobile number for the plant manager (including area code).
(This is a text input field.)

23. *Plant Manager's e-mail Address*

Enter the alternate POC's office e-mail address.
(This is a text input field.)

2-2 DESIRED WEAPON FOR SUBMISSION

In this section of the form the applicant selects the type of enhanced weapon category (i.e., machineguns, short-barreled shotguns, and short-barreled rifles) and identifies the specific weapon desired. Appendix A in Volume 4 has lists of potential weapons for each category. These lists are not all inclusive, but provide several representatives from each category.

24. *Select an enhanced weapon category.*

Choose the type of enhanced weapon category.
(This field is a drop-down selection)

25. *Identify the specific manufacturer, model, and caliber/gauge of the weapon desired.*

Specify only one weapon that matches the selected weapon category. If submitting multiple forms for multiple weapons, choose the weapon/ammo with the longest range first. This will ease the WSA process for shorter ranged weapons/ammo. Create a separate WSA for each weapon desired.
(This is a text input field.)

26. *Enter the maximum range (meters):*

Enter the weapon maximum range in the cell. Appendix B in Volume 4 shows the maximum range for various ammunition types.
(This is a text input field.)

27. *How many of the desired weapons are being requested?*

Enter the total number of weapons that will be requested. This will be the total number of this weapon requested including spares.
(This is a text input field.)

28. How many will normally be deployed?

Of the total number from Item 27, enter the number of weapons that will be checked out and/or in use at any given time, excluding spares or any weapons that may be temporarily out of service (weapon maintenance/repair).
(This is a text input field.)

2-3 AMMUNITION SELECTION AND WEAPON USE

The weapons being requested may use many types of ammunition. The ammunition proposed to be used should match the intent of use for the weapon. If a weapon will be used in an environment of delicate equipment or explosive chemicals, a frangible round might be the proper choice; if a weapon will be used against material targets or to penetrate defenses, an armor piercing round may be appropriate. As the applicant selects the type(s) of ammunition to be used with a weapon, attention to the maximum range of the ammunition should be considered. This information will be used by the NRC while reviewing the WSA to assess risk.

Table A-1 in Appendix A lists each weapon with associated recommended ammunition.

29. Check all of the ammunition types below that are to be used with this weapon.

(This is a checkbox selection/text input field.)

	Type of Ammunition				
☐	Ball	☐	Tracer	☐	Plastic (less-lethal)
☐	Armor Piercing	☐	Hollow Point	☐	Frangible
☐	Slug	☐	Buckshot	☐	Birdshot
☐	Other (specify):				

Figure 2-3.1

NOTE: Frangible and other reduced range ammunitions should be considered against the overall design basis threat (DBT) to ensure that no degradation of the security capability results from their use.

A short descriptive paragraph about various ammunitions can be found in Appendix B in Volume 4 of the WSA guidance. This description is intended to give the applicant a general overview of the ammunition's capabilities. It is recommended that the applicant perform further research on

any ammunition they intend to use. The reference material listed in Appendix D, Volume 4, can assist the applicant in this effort. Ammunition manufacturer literature can also be utilized.

2-4 WEAPONS DEPLOYMENT

30. Check all types of deployment for the weapon.

Check all that apply

(This field is a checkbox selection.)

☐	As a remotely operated weapon system (ROWS) from fixed position/s. (If checked, applicant must discuss in Item 33.)
☐	The weapon will be used from fixed position/s. (e.g., guard towers, roof tops, etc.)
☐	The weapon will be used from a designated firing point/s. (e.g., guard towers, roof tops, etc.)
☐	The weapon will be used while patrolling the property (e.g., foot patrols, vehicle patrols, etc.)
☐	The weapon will be used inside facility buildings. (e.g., interior fighting position, checkpoints, patrols, etc.)
☐	The weapon will only be used within a small defined area of the property.
☐	The weapon will be used in many situations and areas of the property.

Figure 2-4.1

Check all of the boxes that describe how the applicant plans on using the selected weapon system. Item 31 is for the narrative description for the weapon deployment.

Firing positions are defined as follows:

Fixed: A fixed firing position is where the weapon is only fired from a fixed mount to include multiple fixed positions where the weapon can be moved to another fixed mount.

Designated: A designated firing position is predetermined by the security operating procedures (SOPs). These positions can be re-deployable based on the security strategy.

31. Additional description of weapon deployment.

(Describe how and where this weapon will be used and in what type of situations. Include how the weapon will be carried, either by individuals or roving patrol, i.e., "locked in a rack" or "loaded with un-chambered round", etc. Also note if the weapon will be replacing a different caliber weapon.) Consider the questions below in the discussion.

(This is a text input field.)

The discussion should consider the following:

1. Will the weapon be mounted in several fixed positions, inside a building, or used by roaming security personnel?
2. Is there a chance of creating a dangerous crossfire situation in the event of an emergency?
3. If the weapon is used from an elevated or fixed position, has overshooting a target been considered?
4. Will the weapon itself or area that it will be used in be fitted with modifications to limit its field of fire?
5. Are administrative or procedural controls going to be implemented to limit the weapon's field of fire?

32. Create a Standard Range Card

For any weapon that is being used from a fixed position. A separate Standard Range Card should be created for each fixed position and each weapon. Submit the created Standard Range Cards with the WSA application. Standard Range Cards and instructions for their use can be found in Volume 4, References (Army Field Manual, Combat Skills of the Soldier, Appendix I; Army FM 21-75, and Standard Range Card, Department of the Army, DA 5517-R,).

33. ROWS discussion:

a. Describe how many ROWS will be in use at the facility.

b. Describe where these weapons will be placed.

c. Describe where the weapons will be controlled from (location).

d. Describe how many ROWs each operator will control.

e. Describe any restrictions on field of fire.

f. Describe any steps taken or conditions of the site that avoid crossfire.

(This is a text input field.)

34. Describe any pertinent training and describe the level of training. Attach supporting documentation to application.

(This field is a drop-down selection and text input field below)

Enhanced and Specialized Training: Training that is more in depth than 10CFR73 Appendix B training and is intended to support and complement the existing training and counter terrorism efforts by the facility. This training is normally (but not limited to) conducted by an outside agency approved and certified by the NRC or the U.S. Department of Homeland Security. A sample Plan of Instruction can be found in Volume 4 references (Enhanced Security Guard Training Program).

Enhanced Training: Training that is above and beyond the 10CFR73 Appendix B training conducted. The applicant should justify Enhanced Training with documentation and explain how it will mitigate the ADR. Areas of enhanced training include, but are not limited to:

- Advanced Shooting Positions
- Shooting from Cover
- Stance and Grip
- Shooting from a Vehicle
- Multiple Shots
- Low-Light and Night shooting
- Malfunction Drills
- Speed and Tactical Reloads
- Failure Drills
- Close Combat/Weapons Retention
- Multiple Targets
- Concealed Carry Techniques
- Speed and Accuracy Drills

Specialized Training: Training that is more in depth than 10CFR73 Appendix B training and enhanced training. The applicant should justify Specialized Training with documentation and explain how it will mitigate the ADR. Areas of specialized training include, but are not limited to:

- Terrorist Operations /Criminal Attacks Analysis & Practical Exercises
- Threat Route Analysis & Practical Exercises
- Surveillance Detection Techniques & Practical Exercises
- Limits of Fire Training & Practical Exercises

Applicants will receive risk reduction factors of 25% (.25) for Enhanced Training and 50% (.50) for Specialized Training at the bottom of each Risk Identification Table for items 38-42. If the training only meets the 10CFR73 Appendix B requirements, the

reduction factor should be entered into the tables as a zero. The risk reduction factors are not intended to eliminate or reduce the need for mitigative measures used to provide protection for Risk Items.

2-5 MAP INFORMATION

This section of the form is designed to collect information about the facility that is found, on or illustrated, on maps. These could be topographical, aerial, grid or street maps. Maps can be used for identifying natural barriers, buffer areas, encroachments, and explaining risk mitigation plans, etc.

The applicant illustrates buffers and encroachments, risk items, and risk mitigations (Section 2-7 and Section 2-8) on maps and/or facility diagrams. All maps should be adequately detailed; the applicant may use multiple maps of differing levels of detail and scale, if needed for clarification.

Do not insert digital maps into the form, but submit via a separate file as an attachment. All maps should be submitted in both electronic and hard copy form.

35. Provide any pertinent map comments or explanations:

In this field describe things that are marked or significant on the maps that are submitted with the application.
(This is a text input field.)

2-6 INITIAL AREA DANGER RING

The purpose of an initial area danger ring (IADR) is to create an encompassed area around the facility that represents the worst case scenario of a stray round's potential range. The IADR defines the area to identify risk items described in Section 2-8.

Note: A separate IADR should be created for an independent spent fuel storage installation (ISFSI) that is not within the reactor protected area (PA); if enhanced weapons are used there.

For example: For Item 29, if the applicant selects Ball, Tracer and Frangible for a 7.62mm, then from Table B-1 in Appendix B of Volume 4, matches the types of ammunition selected and the size and then determines the maximum range to be 2.55 miles or 4,100 meters. The maximum range of the type of ammunition selected is the controlling factor to determine the limits of the IADR.

NOTE: The Maximum Range of Ammunition data displayed in Table B-1 is derived from two sources. Both of the sources can be found in WSA Volume 4: Reference Documents.

1. DOE M470.4-3 Protective Force, Section B, II-7

2. DA PAM 385-63 Range Safety, Appendix B, Table B-1

Maximum range for ammunition occurs when the weapon is fired at an angle of 30-35 degrees above level. Maximum Range data for commercial ammunition is generally not available; for commercial ammunition, the applicant is referred to similar ammunition in Table B-1 that has maximum range data available. The applicant should read all available information in Appendices B and C pertaining to the ammunition for the weapon system selected before creating the IADR.

Using a hardcopy or electronic map, satellite photo, or facility diagram, draw a circle(s) with its center beginning from the anticipated point(s) of fire and equal to the maximum range of the ammunition. Refer to Appendix B, Table B-1 for the applicant's selected ammunition. A simplified example, for one firing position at the center of the site, and the maximum range from Table B-1 is 2500 yards; the radius of the IADR would be 2500 yards. The radius begins at the anticipated point of fire and goes outward from the firing position (see figure 2-6.1). The circle created will be called the IADR. It represents (worst case) how far a stray round could travel during training or a live scenario from given firing positions. If there are multiple firing positions it may be a series of circles, or an area enveloping the individual circles for multiple firing positions, or, if the enhanced weapons are used within an area rather than a fixed position. The IADR will assist the applicant to identify potential risk items.

Electronic mapping tools, computer aided design (CAD), or drafting tools may be used to draw the IADR on maps. Ensure the rings depicted are legible and include the entire IADR areas.

NOTE: The following IADR map is not to scale and is illustrated for an example.

The initial ADR map for a single firing point at the center of a site may look similar to Figure 2-6.1.

NOTE: The applicant does not create a mitigated area danger ring (MADR) map until Section 2-9.

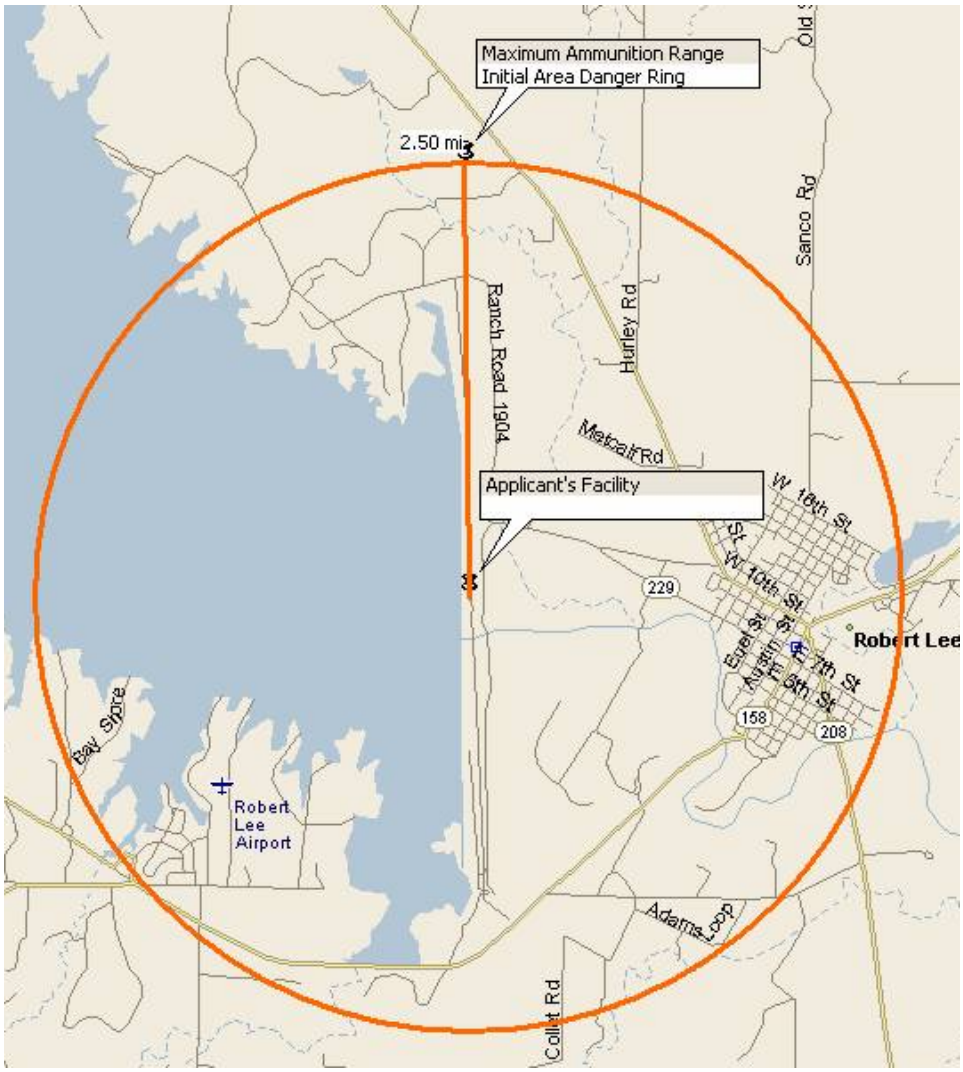

Figure 2-6.1 Simplified IADR for a single firing point – Map Drawing.

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2-7 PROPERTY BOUNDARY ASSESSMENT AND ENCROACHMENT ISSUES

In this section of the form, the applicant analyzes the property boundary. The assessment looks for buffers and encroachments. Buffers are typically large undeveloped areas with sparse populations or development. Encroachments are developments of commercial and residential activities or more dense populations that are directly adjacent to a property boundary. These areas are important in the assessment of Risk Items later in the input form. It is the

responsibility of the applicant to ensure that the percentages entered into the table equal a total of 100%.

The applicant should illustrate buffers and encroachments on maps, satellite photos, and/or facility diagrams. All maps should be adequately detailed; the applicant may use multiple maps of differing levels of detail and scale, if needed for clarification.

36. *Enter the percentage of each type of boundary buffer or encroachment type that surrounds the facility. These percentages should equal 100%. Double click on the table (in the Vol 2: Template) to open the Excel object for inputting data.*

(Table values are text input fields.)

Buffers	%	Buffers	%
River		Lake	
Ocean		Federal Property	
State Property		Farmland or Undeveloped Property	
Other Buffer			
Encroachments		**Encroachments**	
Residential Area		Light Industry	
Heavy Industry		Retail Property	
Recreational Areas		Other Encroachment	
		Total	0

Risk Level	1	Very Low
Percent Encroachment		0

Table 2-7.1

Table 2-7.1 automatically generates a Risk Level indicator and a Percent Encroachment value. The Risk Level indicator should indicate to the applicant how much comprehensive and detailed discussion is needed in Item 37 to allow accurate assessment by the NRC. The higher the Risk Level indicator the more detailed the discussion should be. The Percent Encroachment is a value that will be used by the NRC in the application review process.

Definitions and discussion are provided below to assist the applicant to identify the various boundary types.

2-7.1 Buffer Zone

A buffer zone is any area that serves the purpose of keeping two or more other areas separated from one another, for whatever reason. Common types of buffer zones are certain restrictive easement zones and greenbelts. Buffer zones can be set up to deter violence, protect the environment, and mitigate the risks of industrial accidents or natural disasters from residential or commercial zones.

2-7.2 Buffer Descriptions

River

A river is defined as a large natural waterway. Rivers come in all sizes but for this usage we will assume that it is of such a size as to provide a natural obstacle to approach by foot and wide enough to provide the property with a natural buffer from other properties. Do not consider creeks and small tributaries as part of this percentage.

Lake

A lake is defined as a body of water of considerable size surrounded by land. Lakes come in all sizes but for this usage we will assume that it is of such a size as to provide a natural obstacle to approach by foot and wide enough to provide the property with a natural buffer from other properties.

Ocean

This global, interconnected body of saltwater, called the world ocean, is generally divided by the continents and archipelagos into the following bodies, from the largest to the smallest: the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean and the Arctic Ocean. Smaller regions of the oceans are called seas, gulfs, straits and other names.

Federal Property

Property is owned by the United States government for a number of uses such as military installations, training areas, national parks, grasslands or forests, or historically significant sites, etc. In many cases this property is scarcely populated and remote enough to provide a buffer to any property along its borders. Some portions of federal property may experience high numbers of civilian use, such as attractions at national parks or the occupied area of a military installation. These high usage portions of federal land would represent an encroachment or a risk, not a buffer. If federal property is adjacent to the applicant's property boundaries, complete and submit a thorough assessment before determining federally owned property is a buffer.

State Property

Property is owned by a state government for a number of uses such as National Guard installations, training areas, state parks, piers, grasslands or forests, or historically significant sites, etc. In many cases this property is scarcely populated and remote enough to provide a buffer to any property along its borders. Some portions of state property may experience high numbers of civilian use, such as attractions at state parks. These high usage portions of state owned land would represent an encroachment or a risk, not a buffer. If state property is adjacent to the applicant's property boundaries, complete and submit a thorough assessment before determining state owned property is a buffer.

Farmland or Undeveloped Property

This is defined as land used for agriculture or property that has not been developed or constructed on. This type of property normally has an extremely low population density and therefore provides an excellent buffer for the applicant's facility.

2-7.3 Encroachment Issues

Encroachment issues are the expansion of non-applicant activity (residential and commercial development) into formerly low use adjacent areas that are part of the IADR or MADR.

For the purpose of this assessment, "encroachment" refers to the expansion or existence of civilian activity (residential and commercial development) along or near the border or perimeter of the facility boundaries. This increases the risk to the public in the event a projectile passes beyond property/range boundaries.

Urban Sprawl

Urban Sprawl is a term typically identified as the rapid and expansive growth of a greater metropolitan area; traditionally regarded as suburbs covering a large area.

Residential Area

This is defined as land where the predominant use is housing. In areas that are zoned residential, buildings may include single family housing, multiple family housing such as apartments, duplexes, condominiums, and townhouses (or similar configurations), or mobile homes.

Light Industry

This is defined usually less capital intensive than heavy industry and is more consumer-oriented than business-oriented (i.e., most light industry products are produced for end-users rather than as semi-products for use by other industries). This is also defined as manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit weight.

Heavy Industry

This is defined as manufacturing activities engaged in the conversion of large volumes of raw materials and partially processed materials into products of higher value; hallmarks of this form of industry are considerable capital investment in large machinery, heavy energy consumption, and final products of relatively low value per unit weight

Retail Property

Property used primarily for the sale of goods/merchandise for personal or household consumption from a fixed location such as a department store, mall or kiosk.

Recreational Area

Property open to general public use in recreational activities such as, but not limited to hiking, biking, horseback riding, picnics, sports, fishing, and boating.

Other Encroachment

Enter the percentage of the applicant's border that fronts an encroachment that does not fit any of the other encroachment types. (e.g., aerial or maritime encroachment)

37. *Describe any pertinent information pertaining to property buffer or encroachment areas (i.e., describe what any federal or state owned property is used for; parks, recreation, military purposes). Describe natural barriers such as mountains, sloping terrain, man-made earthen berms, etc.):*

(This is a text input field.)

In this field describe all aspects of the property that would be significant in considering enhanced weapons to be used on the property. This would be the appropriate place to discuss terrain such as sloping ground, cliffs, hills, man-made earthen berms, embankments or mountains that exist on or near the property that could act as barriers to stop a stray round. Bodies of water can help keep the public at a distance from the facility, but water can cause a high probability of ricochet and should be considered later in the form when identifying risks.

2-8 RISK IDENTIFICATION, EVALUATION AND MITIGATION

For Section 2-8, the applicant should identify all applicable Risk Items and assign a likelihood and consequence to each. There are empty spaces in the tables to enable the addition of other Risk Items that are not already identified. Perform the risk assessment starting inside the PA and work outward to the edge of the IADR. Do not assign any value to the "Inside ADR-Mitigated" column until Section 2-10. **NOTE**: Items can be mitigated as a group if they are in close proximity to each other and have similar "likelihood and consequences".

NOTE: Only a portion of the input tables from Volume 2 are shown in this volume. The applicant should use the "Other" fields to identify Risk Items not specifically identified in the input tables. Primary consideration should be on a bullet hitting a Risk Item. The applicant should address the following questions: (Will puncturing, igniting or spilling occur? What would be the consequence? Is there a high likelihood that people would be injured by the bullet or adversely affected by the subsequent consequences?). Refer to Appendix C – Ammunition Effects when considering consequences to risk items inside buildings or behind barriers.

Impact to individuals will only be calculated under the people line item. The applicant should identify the specific number of people both inside and outside of the buildings when calculating the impact risk to individuals.

The applicant is required to illustrate risk items, and risk mitigations (Section 2-8 and Section 2-9) on maps and/or facility diagrams. All maps should be adequately detailed. The applicant may use multiple maps of differing levels of detail and scale, if needed for clarification.

NOTE: When identifying risk items and their associated likelihoods/consequences, start all analyses in the PA and work outward to the boundary of the IADR. Use the IADR created in accordance with Section 2-6 of this report to evaluate and identify risk items.

Risk Level	Green ---------- Red

	Very Low	Low	Moderate	High	Very High
	1	2	3	4	5
	No Harm or Damage	Minor Harm or Damage	Moderate Harm or Damage	Major Harm or Damage	Tragic or Catastrophic Harm or Damage

Table 2-8.1 Risk Level

Likelihood of Strike Identification		
Level	**Descriptor**	**Description**
5	Certain	At Risk Item will almost certainly be hit each time a weapon is discharged in that direction
4	Likely	At Risk Item is likely to be hit, but not every time a weapon is discharged in that direction
3	Possible	It is possible to hit the Risk Item, but it would only happen occasionally in many firings
2	Unlikely	At Risk Item is unlikely to be hit due to other objects in the line of sight of, or placement of, the at Risk Item
1	Rare	Unlikely that at Risk Item will ever be hit or the at Risk Item has been reinforced or protected against bullet penetration

Table 2-8.2 Likelihood of Strike Identification (at Risk Item)

NOTE: The applicant should consider four impacts for each Risk Item prior to assigning a consequence level:

1. Impact to Individuals (Table 2-8.3)
2. Impact to the Applicant's Facility (Table 2-8.3)
3. Impact to the Community (Table 2-8.4)
4. Impact of Chemical or Petroleum Hit (Table 2-8.4)

These impacts can be very different for a single at Risk Item.

For Example: The risk is a stray round, the Risk Item is the administrative building located on the facility property.

1. Impact to Individuals – could be death (Tragic, consequence level 5)
2. Impact to the applicant facility – could be just a single small hole in the exterior wall (Minor, consequence level 2)
3. Impact to the community – There would be no impact on the community (Insignificant, consequence level 1)

4. There was no chemical or petroleum/fuel hit involved in this Risk item (Insignificant, consequence level 1)

The highest consequence level identified is entered in the Consequence of Strike column of the template. (Tragic consequence level 5, for the example above).

Anticipated Consequence and Collateral Damage if the at Risk Item is Hit			
Level	**Descriptor**	**Impact to Individuals**	**Impact to Applicant's Facility**
5	Tragic	Death	All or portions of the facilities are destroyed and can no longer be used. Rebuild and repairs will be long term.
4	Major	Permanent Injury	All or portions of the facilities will be off-line for some amount of time
3	Moderate	Semi-Permanent Injury	One or more of the facilities sustained damage but no major systems are off-line. Safety inspections may be necessary.
2	Minor	Short Term Injury	Damage can be repaired in a short time frame.
1	Insignificant	No Injury or Adverse Outcome	Repair time is insignificant

Table 2-8.3 Impact to Individuals and Applicant's Facility

Anticipated Consequence and Collateral Damage if the at Risk Item is Hit			
Level	**Descriptor**	**Impact to Community**	**Chemical or Petroleum Hit**
5	Tragic	Significant impact on community with long lasting consequences	Possible death on-site and/or off-site, fire or explosion hazards, serious injuries to humans off-site and on-site, resident evacuations likely
4	Major	Major impact on the community with adverse media coverage and publicity.	Fire or explosion hazard on-site, human contact hazard off-site, possible resident evacuations
3	Moderate	Local adverse publicity	Semi-Permanent Injury

2	Minor	Minimal impact on the community. Short timeframes required for any repairs	Human contact hazard on-site, non-hazardous off-site release
1	Insignificant	No impact on the community	Non-hazardous on-site release

Table 2-8.4 Impact to the Community or of Chemical or Petroleum Hit

INPUT AND ASSOCIATED RISK LEVELS

Likelihood/ Consequence	Tragic	Major	Moderate	Minor	Insignificant
Certain	Very High	Very High	Moderate	Low	Very Low
Likely	Very High	High	Moderate	Low	Very Low
Possible	High	Moderate	Low	Low	Very Low
Unlikely	Moderate	Moderate	Low	Very Low	Very Low
Rare	Moderate	Moderate	Low	Very Low	Very Low

Table 2-8.5 Input and Associated Risk Levels

38. *Chemical and Petroleum/Fuel risks in the initial ADR. Double click on the table (in the Vol 2: Template) to open the Excel object for inputting data.*

(This is a drop-down selection field.)

Sample portion of input table:

38. Chemical and Petroleum/Fuel risks in the initial ADR. *(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)*							
Item ID	**Risk Item**	**Inside ADR[1]**		**Likelihood of Strike**	**Consequence of Strike[2]**	**Risk Level**	
		Initial	**Mitigated**				
38a		No	No	N/A	N/A	**0**	**N/A**
38b		No	No	N/A	N/A	**0**	**N/A**
38c		No	No	N/A	N/A	**0**	**N/A**
38d		No	No	N/A	N/A	**0**	**N/A**
38e		No	No	N/A	N/A	**0**	**N/A**
38f		No	No	N/A	N/A	**0**	**N/A**
38g		No	No	N/A	N/A	**0**	**N/A**
38h		No	No	N/A	N/A	**0**	**N/A**
38i		No	No	N/A	N/A	**0**	**N/A**
38j		No	No	N/A	N/A	**0**	**N/A**
38k		No	No	N/A	N/A	**0**	**N/A**
38l		No	No	N/A	N/A	**0**	**N/A**
38m		No	No	N/A	N/A	**0**	**N/A**

For evaluating risk items associated with chemicals and the potential release of chemical gases, fire or explosions; consider chemicals and fuels stored at the facility first, but also consider that

storage tanks 500 – 1500 meters away can easily be punctured by some of the ammunitions listed in Appendix B, Volume 4. The facility chemist/engineer should be consulted on the selection of said chemicals. The applicant is responsible for determining the content of the table input and analyzing their risks.

Sample portion of discussion items for Item 38.

38. The applicant justifies the likelihood and consequence levels for each at Risk Item in the areas provided below. Select only one Type of Mitigation for each at Risk Item and describe in detail the mitigation steps taken to alleviate or lower the risk factor. The "Other Discussion" field can be used for any additional information supporting risk mitigation.			
38a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			
38b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			

39. *Key Facilities/areas inside the PA. Double click on the table (in the Vol 2: Template) to open the Excel object for inputting data. (This is a drop-down selection field.)*

Sample portion of input table:

39. Key Facilities/Areas Inside the PA
(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)

Item ID	Risk Item	Inside ADR[1]		Likelihood of Strike	Consequence of Strike[2]	Rated	Risk Level	
		Initial	Mitigated					
39a	Spent Fuel Rods, Dry	No	No	N/A	N/A		**0**	**N/A**
Enter Critical Assets below								
39b		No	No	N/A	N/A		**0**	**N/A**
39c		No	No	N/A	N/A		**0**	**N/A**
39d		No	No	N/A	N/A		**0**	**N/A**
39e		No	No	N/A	N/A		**0**	**N/A**
39f		No	No	N/A	N/A		**0**	**N/A**
39g		No	No	N/A	N/A		**0**	**N/A**
39h		No	No	N/A	N/A		**0**	**N/A**
39i		No	No	N/A	N/A		**0**	**N/A**
39j		No	No	N/A	N/A		**0**	**N/A**
39k		No	No	N/A	N/A		**0**	**N/A**

For evaluating risk items associated with key facilities inside the protected area (PA), consider risk items that are not always obvious; for example, a diesel generator that if destroyed would not be hazardous, but it is a vital backup power source.

NOTES:

1. Applicants should include those systems, structures, components and operator actions that if unable to perform their required function, would lead to significant core damage or radiological sabotage of spent fuel. These should be designated as rated items to determine an average risk level.

2. Applicants may also consider financial impacts of other risk items (non-rated items) if so desired, and mitigate as they determine appropriate. However, the NRC will not consider potential financial implications to the applicant in the evaluation of the application. Any items and costs that will affect conduct of operations to produce power are only included in this form to assist licensees in assessing these potential impacts. Some types of facilities, when analyzing costs, may consider impacts to operations a national security issue, and if so, should be identified (rated items) and the NRC will use this information in the evaluation of the application.

NOTE: (Do not select Spent Fuel Rods, Dry Storage) if it is an independent spent fuel storage installation (ISFSI) outside of the reactor PA.

Sample portion of discussion items for Item 39.

39. The applicant justifies the likelihood and consequence levels for each at Risk Item in the areas provided below. Select only one Type of Mitigation for each at Risk Item and describe in detail the mitigation steps taken to alleviate or lower the risk factor. The "Other Discussion" field can be used for any additional information supporting risk mitigation.			
39a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			
39b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			

40. *Key Facilities/areas outside the PA but on the facility's property. Double click on the table (in the Vol 2: Template) to open the Excel object for inputting data. (This is a drop-down selection field.)*

Sample portion of input table:

40. Key Facilities/Areas Outside the PA but on the Facility's Property *(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)*							
Item ID	**Risk Item**	**Inside ADR[1]**		**Likelihood of Strike**	**Consequence of Strike[2]**	**Risk Level**	
		Initial	**Mitigated**				
40a		No	No	N/A	N/A	**0**	**N/A**
40b		No	No	N/A	N/A	**0**	**N/A**
40c		No	No	N/A	N/A	**0**	**N/A**
40d		No	No	N/A	N/A	**0**	**N/A**
40e		No	No	N/A	N/A	**0**	**N/A**

For evaluating risk items associated with key facilities outside the protected area (PA), consider risk items that are not always obvious; for example, a diesel generator that if destroyed would not be hazardous, but it is a vital backup power source.

NOTES:

1. Applicants should include those systems, structures, components and operator actions that if unable to perform their required function, would lead to significant core damage or radiological sabotage of spent fuel.

2. Applicants may also consider financial impacts of other risk items if so desired, and mitigate as they determine appropriate. However, the NRC will not consider potential financial implications to the applicant in the evaluation of the application. Any items and costs that will affect conduct of operations to produce power are only included in this form to assist licensees in assessing these potential impacts. Some types of facilities, when analyzing costs, may consider impacts to operations a national security issue, and if so, should be identified and the NRC will use this information in the evaluation of the application.

Sample portion of discussion items for Item 40.

40. The applicant justifies the likelihood and consequence levels for each at Risk Item in the areas provided below. Select only one Type of Mitigation for each at Risk Item and describe in detail the mitigation steps taken to alleviate or lower the risk factor. The "Other Discussion" field can be used for any additional information supporting risk mitigation.			
40a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			
40b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			

Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			

41. *Key Facilities/areas outside the property boundaries. (Refer to initial ADR map.) Double click on the table (in the Vol 2: Template) to open the Excel object for inputting data.*

(This is a drop-down selection field.)

Sample portion of input table:

41. Key Facilities/Areas Outside the Property Boundaries (Refer to ADR Analysis) *(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)*							
Item ID	**Risk Item**	**Inside ADR[1]**		**Likelihood of Strike**	**Consequence of Strike[2]**	**Risk Level**	
		Initial	**Mitigated**				
41a		No	No	N/A	N/A	**0**	**N/A**
41b		No	No	N/A	N/A	**0**	**N/A**
41c		No	No	N/A	N/A	**0**	**N/A**
41d		No	No	N/A	N/A	**0**	**N/A**
41e		No	No	N/A	N/A	**0**	**N/A**
41f		No	No	N/A	N/A	**0**	**N/A**
41g		No	No	N/A	N/A	**0**	**N/A**
41h		No	No	N/A	N/A	**0**	**N/A**

When evaluating risks associated with key facilities outside the property boundaries, refer to the IADR created in Section 2-6. The applicant should create lists of businesses, shopping areas and facilities within the ring, then discuss how a stray round might affect that item and if there are other barriers between it and the facility that would lessen the likelihood of a stray round reaching it. This section identifies key facilities or areas within the sectors of fire. All facilities should be identified and risks associated with each as pertaining to “Public Health and Safety” or under “Business Category” with consideration to how it affects future plant operations.

Sample portion of discussion items for Item 41.

41. The applicant justifies the likelihood and consequence levels for each at Risk Item in the areas provided below. Select only one Type of Mitigation for each at Risk Item and describe in detail the mitigation steps taken to alleviate or lower the risk factor. The “Other Discussion” field can be used for any additional information supporting risk mitigation.			
41a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			
41b. Justification of Likelihood & Consequence Levels:			

Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			

42. Critical asset items outside the property boundaries (Refer to ADR Assessment).

(This is a text input field.)

Sample portion of input table:

42. Critical Asset Items Outside the Property Boundaries (Refer to ADR Analysis) *(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)*							
Item	**Enter Risk Item below**	**Inside ADR[1]**		**Likelihood of Strike**	**Consequence of Strike[2]**	**Risk Level**	
		Initial	**Mitigated**				
42a		No	No	N/A	N/A	0	N/A
42b		No	No	N/A	N/A	0	N/A
42c		No	No	N/A	N/A	0	N/A
42d		No	No	N/A	N/A	0	N/A
42e		No	No	N/A	N/A	0	N/A

When evaluating risks associated with any other critical asset items outside the property boundaries, refer to the IADR created in Section 2-6. The applicant should create lists of any other risk items that have not been covered in the analysis from previous sections. List these items within the ring, then discuss how a stray round might affect that item and describe if there are other barriers between it and the facility that would lessen the likelihood of a stray round reaching it. This section identifies critical assets within the sectors of fire. All critical assets should be identified and risks associated with each as pertaining to “Public Health and Safety” or under “Business Category” with consideration to how it affects future plant operations.

Sample portion of discussion items for Item 42.

42. The applicant justifies the likelihood and consequence levels for each at Risk Item in the areas provided below. Select only one Type of Mitigation for each at Risk Item and describe in detail the mitigation steps taken to alleviate or lower the risk factor. The “Other Discussion” field can be used for any additional information supporting risk mitigation.			
42a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination
Other Discussion:			
42b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	☐ Procedural	☐ Physical	☐ Combination

Other Discussion:

2-9 MITIGATED AREA DANGER RING MAP

A MADR is a smaller area danger ring than the IADR. The size of the ring is reduced based on limitations on range and/or direction of rounds. These limitations should be documented in Sections 2-7 and 2-8. All movement of the IADR boundaries to create the MADR map should be based on thorough assessment of the risk items and effective mitigation planning and implementation.

Natural and man-made items should be considered when creating a MADR. Anything that will restrict or stop the flight of the round or limit the field of fire should be considered, such as concrete walls, terrain features, physical or mechanical restrictions, etc.

Based on the assessment in Sections 2-7 and 2-8, the applicant should use either a hardcopy or electronic map, and draw a MADR map (see Figures 2-9.1 and 2-9.2). Any mitigation that causes the initial ADR boundaries to change should be well documented in Section 2-8 Risk Identification, Evaluation and Mitigation. If the applicant will not be using mitigating measures to reduce the IADR, they should answer questions related to the MADR based on the IADR.

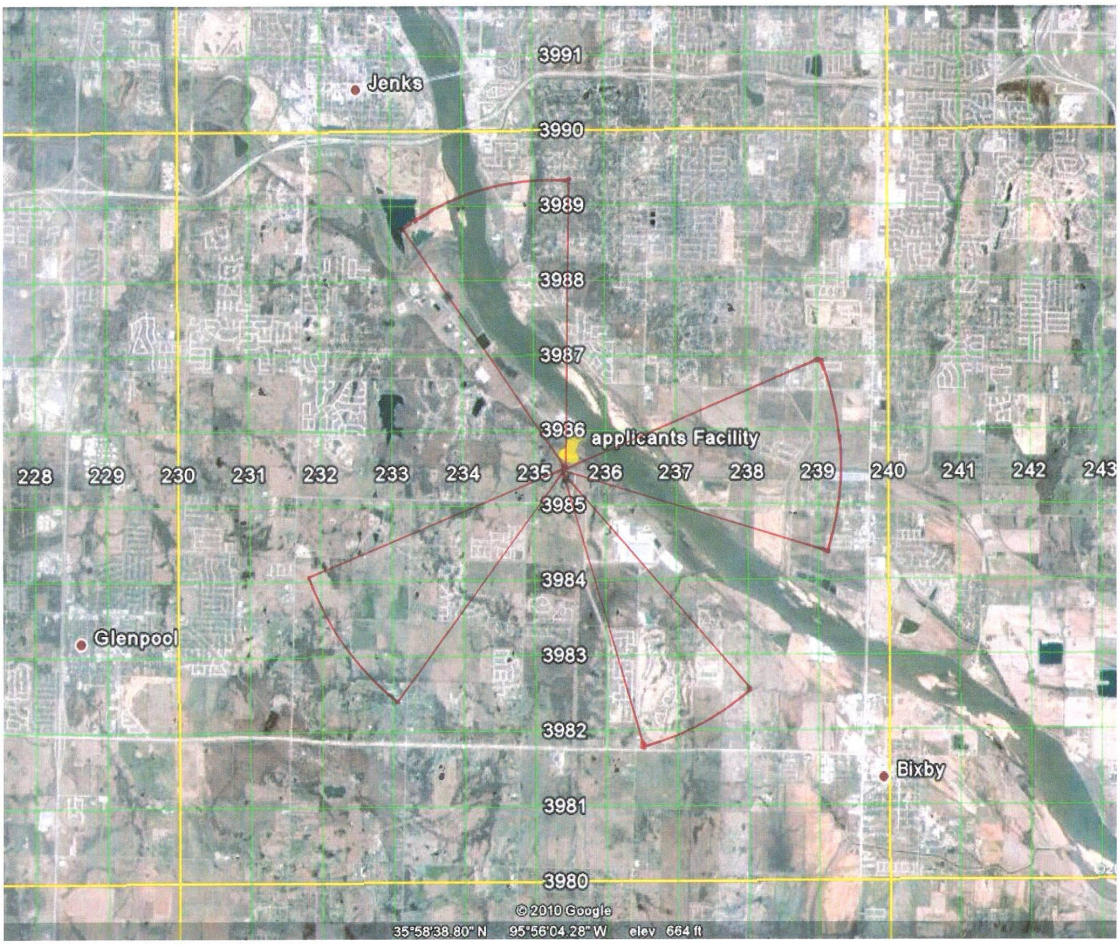

Figure 2-9.1 MADR w/series of cones. - Satellite photo.

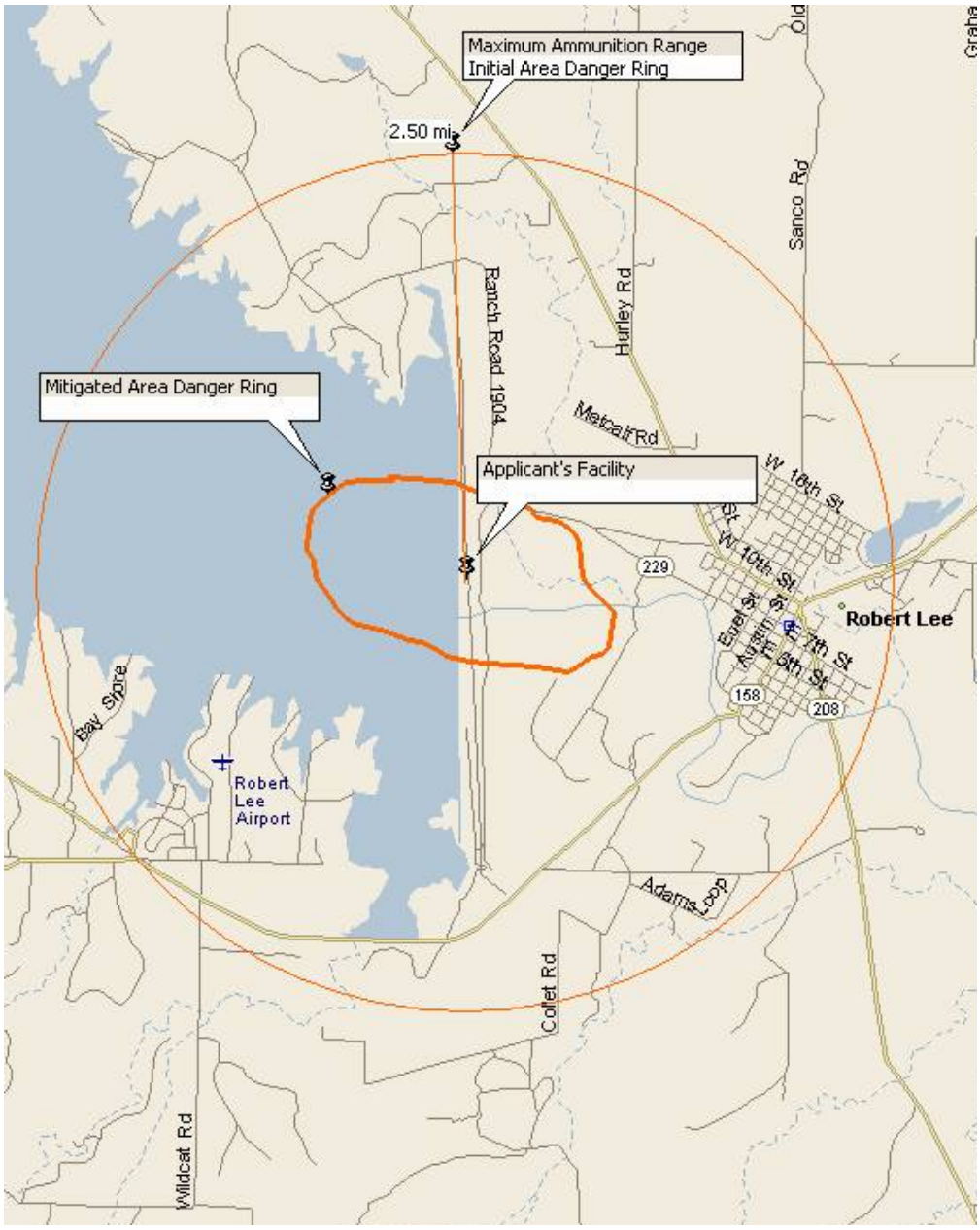

Figure 2-9.2 MADR map.

The MADR map should have a reduced footprint as illustrated in Figure 2-9.2

For Figure 2-9.1, the cones illustrated represent a MADR, or portions of an area danger ring that are mitigated by mechanical or physical limits on a field of fire from one firing position. Figure 2-9.2 represents a MADR with all the mitigation measures taken into account.

After the MADR has been created, the applicant should review item numbers 38-42 for all risk items and determine if the at Risk Item is inside ("Yes") or outside ("No") the perimeter of the MADR.

The applicant, upon submitting the application, commits to any identified mitigation measures. These measures will be inspected by the NRC prior to the application being approved.

Items 43-45 are included to assist the applicant to assess how many people may be affected by a stray round. Items 43-45 should be answered for the MADR footprint or for the IADR footprint should there be no mitigating factors.

43. What is the estimated population density within the MADR?

(This is a drop-down selection field.)

Select the number closest to the estimated population density within the MADR from the drop-down list. This is the population density inside the MADR not including the site personnel.

44. Is the population evenly distributed within the MADR?

(This is a drop-down selection field.)

This information is essential for an accurate assessment of potential risk. Since most applicant facilities are located adjacent to a body of water, the population within the MADR will tend to be massed in only part of the ring. If the population is located on only a portion of the area within the MADR, then the average number of people per square mile will be higher.

45. If no, describe population distribution. (For example; since the facility has a lake on the eastern side, most of the population is on the North, South and Western sides of the facility)

(This is a text input field.)

2-10 TRAINING AND WEAPON MAINTENANCE

This section of the form is designed to collect information about the applicant's plans for training. Instructions for developing a training curriculum and formal training plans are not in the scope of this document. The items in this section seek to affirm that the applicant has modified their existing training plan and found suitable facilities for training with the selected weapon.

NOTE: Refer to DOE M470.4-3 Protective Force, Section B, II-7 and DA PAM 385-63 Range Safety. Both of these sources can be found in WSA Volume 4: Reference Documents. For range design standards, the applicant can refer to Range Design Guides, U.S. Army Corps of Engineers, Huntsville, AL. Additional information is available at http://www.hnd.usace.army.mil/rdg/InterTemplate.aspx. It is recommended that the applicant use established standards and designs when modifying their weapon maintenance plans, training plans, and when applying range modifications.

46. Does the applicant have a firearms training range on their property where the enhanced weapons will be used.

(This is a drop-down selection field.)

47. If yes, will training for this enhanced weapon be on the facility's range?

(This is a drop-down selection field.)

If the answer to Item 47 is yes, the following two questions must be answered. If the answer to Item 47 is no, they are not applicable.

47a. Has the local Federal Aviation Administration (FAA) office been contacted to determine if special use airspace (SUA) needs to be established in the vicinity of the training range when enhanced weapons are in use?

(This is a drop-down selection field.)

47b. Summarize the results of discussions with FAA and include information for point of contact (i.e., title, office, name and telephone number)

(This is a text input field.)

48. Who uses the onsite firing range?

(This is a text input field.)

Describe all entities that use the onsite firing range.

49. If the existing range will not support training for this weapon, or if there is no range, have arrangements been made to train with this weapon at another location?

(This is a drop-down selection field.)

50. What reference materials were used for modifying the existing training and weapon maintenance plans? (e.g. military standards, NRA documents, etc.)

(This is a text input field.)

51. *If routine weapon maintenance and/or minor repair will not be done on site, discuss needed inventory levels to continue normal operations and support repair/maintenance shipping considerations.*

(This is a text input field.)

2-11 RISK ACCEPTABILITY

52. *The applicant has reviewed the risks associated with using this weapon and these selected ammunition(s). The applicant finds the risks to be _____ for this facility*

(This is a drop-down selection field.)

If the applicant finds the risks associated with using this weapon system at the facility unacceptable, the NRC may not authorize the requested weapon system.

If the applicant determines through the WSA process that the selected weapon system poses an unacceptable risk, options include changing the weapon and/or ammunition selection or providing additional mitigation measures to improve the risk numbers. Additional training for users of the enhanced weapons may also be an option to reduce an applicant's risk.

The table below summarizes the average risk levels calculated for items 38 through 42. The risk values need to be manually input into this table by the applicant from the spreadsheets within the Volume 2 template of the WSA.

Summary of risk identification, evaluation, and mitigation	Risk
38. Chemical and Petroleum/Fuel risks in the IADR.	
39. Key Facilities/Areas Inside the PA	
40. Key Facilities/Areas Outside the PA but on the Facility's Property	
41. Key Facilities/Areas Outside the Property Boundaries (Refer to IADR Assessment)	
42. Critical Asset Items Outside the Property Boundaries (Refer to IADR Assessment)	