

934th Airlift Wing

Nuclear Certified Equipment / DULL SWORD Guide



OPR:

**934th Airlift Wing Weapons Safety
Minneapolis – St. Paul ARS, Minnesota**

NUCLEAR CERTIFIED EQUIPMENT/DULL SWORD GUIDE

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NUCLEAR CERTIFIED EQUIPMENT/DULL SWORD GUIDE

This Nuclear Certified Equipment/DULL SWORD Guide has been provided by the 934 AW Weapons Safety staff to assist you in implementing your section-level nuclear certified equipment management program. Although parts of this guide are extracts from various regulations, it is not a directive in itself. This guide contains lists of directives, as references, to introduce you to regulations and requirements to run a successful and effective program. If there are any questions, or if I can be of assistance, please contact the Weapons Safety/Nuclear Surety Manager, Mr. Ryan Ricci, at 713-1236.

I. INTRODUCTION

What is Nuclear Certified Equipment (NCE)?

Being Nuclear Certified authorizes equipment for use with nuclear weapons. Currently, the 934 AW has no nuclear commitment; however, we still maintain nuclear certified equipment (test and support). In the event of a deficiency, a DULL SWORD report may be required. The Master Nuclear Certification Listing (MNCL) is the only official source listing all Nuclear Certified Equipment in the Air Force inventory. Equipment listed in the MNCL is the only equipment authorized for handling, transporting and testing nuclear weapons.

How do you report a DULL SWORD?

AFMAN 91-221, "Weapons Safety Investigations and Reports", contains both the definition of a DULL SWORD and the reporting procedures. When a deficiency is identified with a piece of nuclear certified equipment, contact the Wing Weapons Safety Office at 713-1236 immediately. Following notification via phone call, document the information on the DULL SWORD worksheet, and send it to the Weapons Safety office via e-mail, Ryan.Ricci.2@us.af.mil or fax to 713-1267.

Photographs of the incident or related equipment should be taken as they aid the investigative process. Ensure the correct agencies (Weapons Safety and QA) are notified as soon as possible because gathering data, writing reports, and coordination takes time, and all reports have time constraints as shown in section IV, "Reporting Suspense Matrix".

HQ AFRC NCE Program Management:

AFRC NCE Program Managers are:

Primary: Karen R. Smith, AFRC/A4MW, DSN 497-1658.

Alternate: MSgt Jason Blurton, AFRC/A4MZ (AGE), DSN 497-1621.

Alternate: MSgt Leroy Jackson, AFRC/A4RM (Supply), DSN 497-1670.

AFRC Nuclear Certification Manager is:

Primary: James "JJ" Johnson, AFRC/SEW, DSN 497-1874.

II. DIRECTIVES (References)

Air Force References

AFI 91-204, *Safety Investigations and Reports*

AFMAN 91-221, *Weapons Safety Investigations and Reports*

AFI 91-103, *Air Force Nuclear Safety Design Certification Program*

AFI 63-125, *Nuclear Certification Program*

Technical Orders/General Guidance

00-35D-54 Material Deficiency Reporting

Master Nuclear Certification List (MNCL) (Equipment Authorized for Use with Nuclear Weapons) → <https://wwwmil.nwc.kirtland.af.mil/mncl/index.cfm>

III. HOW DO YOU FIT IN?

The key to the Dull Sword reporting system is YOU; each and every member responsible for operating, maintaining and tracking Nuclear Certified Equipment. Each individual has a responsibility to recognize safety deficiencies and take appropriate action. This requires being thoroughly familiar with the use of this guide and its references. The 934th Airlift Wing Weapons Safety/Nuclear Surety Manager serves as the Dull Sword Program Manager and interacts with units through their Additional Duty Weapons Safety Representatives (ADWSR) and Nuclear Certified Equipment (NCE) monitors. The next section will outline the basics of what, when, and how to report a Dull Sword. You will also find a useful worksheet and phone numbers you may call for help during the reporting process.

RESPONSIBILITIES

Wing Weapons Safety/Nuclear Surety Manager:

1. Train and document the training of appointed unit Additional Duty Weapons Safety Representatives and NCE monitors
(NOTE: At a minimum training will consist of: Specific types of nuclear certified equipment, Situations likely to be encountered, Procedures for immediate notification, Notification procedures during non-duty hours, and Procedures for forwarding deficiency worksheets to Wing Safety)
2. Maintain a list of trained NCE monitors
3. Inspect unit programs for compliance
4. Act as the Wing Dull Sword Program Manager
5. Determine Dull Sword Reportability
6. Report valid Dull Swords in the Air Force Safety Automated System (AFSAS)

Squadron Commanders (Unit equipped with NCE):

1. Appoint primary AND alternate NCE monitors to manage the unit NCE program.
(NOTE: Primary should be a fulltime member)
2. Ensure NCE monitors schedule and attend Wing Safety Dull Sword training.
3. Ensure NCE monitors comply with the Dull Sword program criteria directed by the references listed in Section II and this guide.

NCE Monitors:

1. Function as the unit commander's representative for all NCE issues.
2. Schedule and receive NCE deficiency reporting (Dull Sword) training provided by Wing Weapons Safety, IAW AFI 91-103 & AFMAN 91-221.
(NOTE: To receive training NCE Monitors **must** bring their appointment letter)
3. Ensure unit personnel are aware of reporting procedures for potential Dull Swords.
4. Use Kirtland's MNCL Website, to determine applicability of assigned equipment located at <https://wwwmil.nwc.kirtland.af.mil/MNCL/index.cfm>
5. Establish and provide the Wing Weapons Safety Manager with a current NCE inventory.
6. Validate the unit's NCE listing monthly by performing a 100% MNCL reconciliation. Documentation of the reconciliation will be kept in the NCE Program Management Continuity Book, Tab "D".
7. Annually, a 100% of unit assigned NCE will be surveyed to ensure positive identification is made by using all possible identification elements of the nameplate, label, appropriate markings, or by official documents. Documentation of the annual survey will be kept in the NCE Program Management Continuity Book, Tab "D".
8. Ensure all deficiencies on NCE are reported to the Wing Weapons Safety office
9. Maintain an electronic continuity binder on the Wing Safety CoP containing the following documents:
 - a. NCE Monitor Appointment and Training Letters
 - b. Wing Safety POCs
 - c. NCE Guidance and Checklists
 - d. Unit NCE Listing Documented Reviews
 - e. Dull Sword Worksheets (Blank)
 - f. Dull Sword Cross-tell (Link to AFRC/SEW Dull Sword Folder)
 - g. Submitted Dull Sword Worksheets
 - h. USAF Master Nuclear Certification Listing (**LINK ONLY**)
 - i. Miscellaneous NCE/Dull Sword Information
10. Establish procedures to up-channel any potential deficiencies

11. Follow-up on deficiency reports
12. Comply with all Dull Sword program criteria provided by the references in Section II and this guide.
13. Attend NCE meetings as scheduled by the Wing Weapons Safety Office

IV. REPORTING CRITERIA (WHAT, WHEN, HOW)

As with any piece of equipment, nuclear certified equipment is subject to deficiencies. When a problem is discovered, not only must it be corrected, but in some cases, it must also be reported. The report used is named a DULL SWORD Report. A DULL SWORD is defined as a nuclear safety deficiency (i.e., a situation, event, or condition which could or does degrade nuclear safety) and it is not intended to replace QA Material Deficiency Reporting (MDR), but in most cases, it will supplement a MDR.

Report DULL SWORDS on damage, malfunction, or failure of nuclear capable combat delivery vehicle suspension, release, launch, separation, arming, monitoring, and control systems, nuclear certified test equipment. Nuclear certified ground support equipment, common commercial vehicles (i.e. bobtails, forklifts, tractors/trailers), munitions handling equipment (i.e. MHU-141 trailers), specialized equipment, and cargo tie down and support equipment (i.e. CGU-1/B cargo tie down straps, MB-1 chain and binder assemblies) may require a DULL SWORD report depending on the deficiency. These examples are a good cross section of day to day equipment utilized throughout the base.

How do you know if a DULL SWORD report is required?

The textbook definition of a DULL SWORD incident is extremely general. Listed below are numerous, specific, guidelines for what constitutes a DULL SWORD. If, after reading these guidelines, you are still not sure whether a deficiency is truly a DULL SWORD, contact Wing Weapons Safety at 713-1236.

a. DO Report Dull Swords on:

- (1) Deficiencies that occur while equipment is in use for nuclear or non-nuclear operations.
- (2) Deficiencies for which corrective action procedures are not provided in technical orders.
- (3) Weld cracks, regardless of the existence of corrective procedures or when discovered.
- (4) Damage, malfunction or failure of a nuclear capable combat delivery vehicle's suspension, release, launch, arming, monitoring and control system.
- (5) Tow vehicles. Deficiencies that occur during nuclear and non-nuclear operations involving a vehicle certified for towing including:
 - (a) Brake system deficiencies that affect the tow vehicle's capability to safely stop or to hold in park the tow vehicle/trailer combination.
 - (b) Deficiencies, including weld cracks, in the structural members through which the towing/braking force is transferred to the trailer.

- (c) Deficiencies that affect steering or stability.
 - (d) Weld cracks in pintle hook mounting plate and support brackets. Deficiencies in pintle hook or fifth wheel.
- (6) Transportation Vehicle. Deficiencies that occur during nuclear or non-nuclear operations involving a vehicle certified for transporting nuclear weapons on its cargo deck including:
- (a) Brake system deficiencies that affect the transport vehicles' capability to safely stop or to hold it in park.
 - (b) Deficiencies, including weld cracks that affect the structural integrity of the vehicle to transport or to restrain the nuclear cargo.
 - (c) Deficiencies that affect steering or stability.
 - (d) Deficiencies in tie down points and tie down patterns.
- (7) Forklifts. Deficiencies that occur during nuclear or non-nuclear operations involving forklift trucks certified for lifting/handling nuclear weapons including:
- (a) Deficiencies in the hydraulic, mechanical, and structural components of the lifting system that result in non-responsive operation or uncontrolled lowering of cargo.
 - (b) Brake system deficiencies.
 - (c) Deficiencies that affect steering or stability.
 - (d) Deficiencies that affect the restraint of nuclear cargo in the lift times.
- (8) Frequent occurrences of a normally non-reportable deficiency, which you believe has a potential to cause an accident involving nuclear weapons.
- b. DO NOT report Dull Swords on:
- (1) Deficiencies noted during receipt or acceptance inspections.
 - (2) Traffic accidents not involving nuclear weapons and not caused by a vehicle deficiency.
 - (3) Dents, rust, and corrosion that do not affect the vehicle's capability to steer, stop, tow, and hold in park a tow vehicle/trailer combination or to lift, transport, or restrain nuclear cargo on the vehicle's cargo deck.
 - (4) Deficiencies in electrical accessories including lights, washers and wipers.

The textbook description of a DULL SWORD is contained in AFMAN 91-221, Paragraphs 1.4.5 – 1.4.5.5.1. The above listing covers many of the deficiencies you will encounter during general daily operations, which require reporting as a DULL SWORD. NCE Monitors, Supervisors, and Shop Chiefs use the worksheet provided in Section V to notify Wing Safety of a deficiency on Nuclear Certified Equipment. **IMPORTANT:** Please remember, the DULL SWORD worksheet does not replace the Material Deficiency Reporting (MDR) program. Wing Safety and QA submit their respective reports separately when both are required. Quality Assurance is the OPR for the MDR. Wing Safety will work with QA to ensure that the DULL SWORD references the MDR.

V. Attachments

Attachment I

REPORT SUSPENSE MATRIX

Type of On Base Reports

DULL SWORD Worksheets	24 Hours
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Type of Report Sent Off Base Within:

DULL SWORD - Preliminary or one time	15 workdays
DULL SWORD - involving weapon in non-operational status	3 workdays from discovery of problem
DULL SWORD - final	90 days from discovery of problem

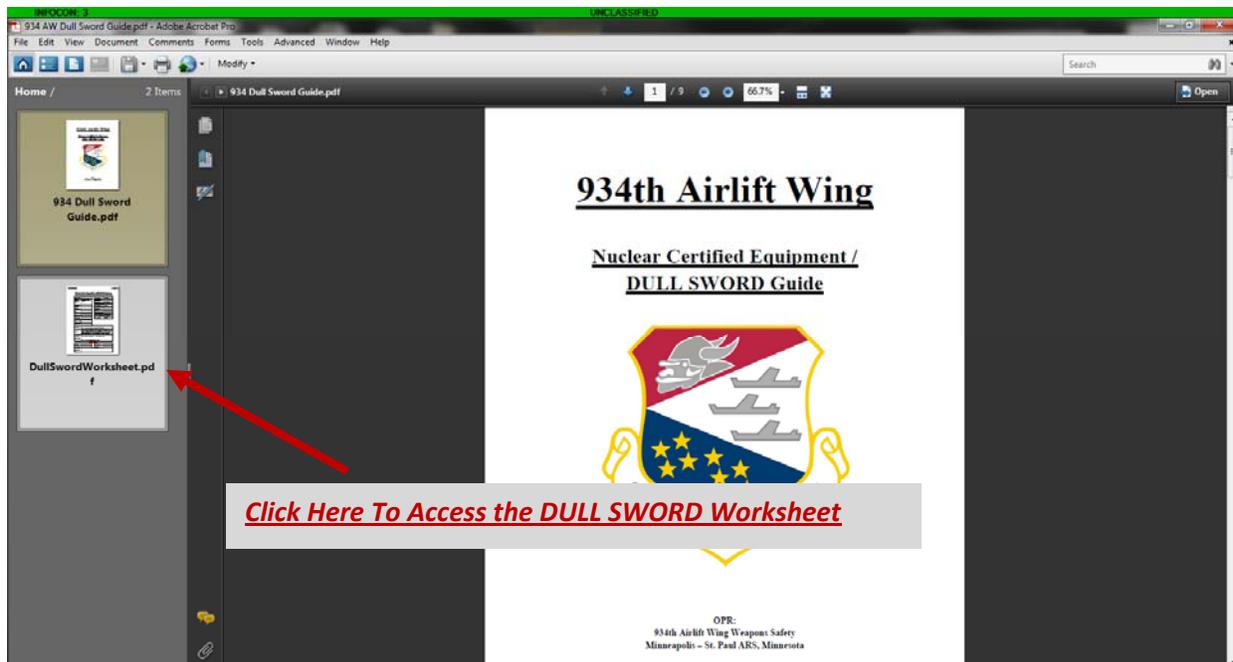
Attachment II

DULL SWORD WORKSHEET

Units must submit a DULL SWORD worksheet on any piece of Nuclear Certified Equipment to the safety office as soon as a deficiency is found. The Wing Safety Office will determine if an Official DULL SWORD Report is required and will report the deficiency in the Air Force Safety Automated System (AFSAS) if required.

This worksheet has been provided to assist you in gathering the data required by AFMAN 91-221 for a DULL SWORD report. The items on the worksheet have been taken directly from the DULL SWORD Message Format required by AFSAS. If the attachment still leaves you unsure as to what data you need, call the 934 AW Weapons Safety Manager, Mr. Ryan Ricci, at 713-1236. Please remember that there are time constraints involved with mishap reporting, so we need the info ASAP in order to write the report.

DULL SWORD Worksheet



How to use the worksheet:

1. Open the DULL SWORD Worksheet
2. Complete all applicable blocks
(NOTE: Some blocks are mandatory, if they are left empty, it will ask you to fill them in.)
3. When you have completed the form, scroll to the top and click "E-mail to Wing Safety"
4. The form will automatically be sent to Wing Safety for review