

WARNING

THIS CONTRACT INVOLVES HAZARDOUS MATERIAL

SEE SEPARATE HAZARDOUS COMPONENT SAFETY
DATA STATEMENTS FOR TECHNICAL DATA
AND SAFETY REQUIREMENTS

(TITLE OF END ITEM AND IFB, RFQ, RFP'S, ETC. OR CONTRACT NUMBER)
Nuclear Lamps and Cell Assy, Optic
DAAE20-01-T-0043
E/U: M102 Towed Howitzer

**FIRMS MUST HAVE ADEQUATE FACILITIES
FOR HANDLING AMMUNITION, EXPLOSIVES,
or other unique military related dangerous material
involved that could adversely affect personnel and
property in the event of explosion, fire or exposure.
Prior to contract award, the Government will thoroughly
investigate the ability of prospective contractor to
comply with safety requirements.**

CONTRACT DATA REQUIREMENTS LIST
DD FORM 1423 (MECHANIZED)

CATEGORY: MISC SYSTEM/ITEM: LAMP, NUCLEAR
TO CONTRACT/PR: P40FKTX4 NSN: 6260-00-257-2773

1. SEQUENCE NUMBER		14. DISTRIBUTION	DRFT/REG/REPRO COPIES
2. TITLE OF DATA ITEM			
3. SUBTITLE			
4. DATA ITEM NUMBER			
5. CONTRACT REFERENCE			
6. TECHNICAL OFFICE	7. DD	8. APP	9. DIST STATEMENT
	250	CODE	REQUIRED
10. FREQUENCY	11. AS OF DATE		15. TOTAL:
12. DATE OF 1ST SUBMISSION	13. DATE OF SUBSEQUENT SUBMISSION		
16. REMARKS			

1. A001		14. AMSTA-AR-CCL-F	/ /
2. CONFIGURATION CHANGE CONTROL*		(ECALS)	/ /
3. ENGINEERING ACTIONS			
4. DI-CMAN-81554			
5. SECTION C			
6. AMSTA-AR-ES	7. NO	8. -	9. **
10. ASREQ	11. ---	15. TOTAL	0/ 0/ 0
12. ASREQ	13. ASREQ		

16. REMARKS
PREPARE ENGINEERING ACTIONS IAW DI-CMAN-81544 AND SUBMIT ELECTRONICALLY VIA ECALS WORLDWIDE WEB PAGE [HTTP://EDMD4.PICA.ARMY.MIL/](http://EDMD4.PICA.ARMY.MIL/). *DATA INFORMATION PACKET **DISTRIBUTION STATEMENT WILL BE ASSIGNED AND IMPLEMENTED BY THE DOD CONFIGURATION MANAGER. THE POC FOR ECALS IS LEE SADAUSKAS, AMSTA-AR-QAW, (973) 724-6626 LEES@PICA.ARMY.MIL.

APPROVED BY: STEPHEN J HANSEN, SDMO, AMSTA-AR-QAD DATE: 09/12/2000

CONTRACT DATA REQUIREMENTS LIST
DD FORM 1423 (MECHANIZED)

CATEGORY: MISC SYSTEM/ITEM: LAMP RADIOLUMINOUS
TO CONTRACT/PR: P21FLK01&2 NSN: 1240-00-257-2759; 1240-01-139-3467;
6260-01-135-3161; 6260-00-257-2770; 6260-01-096-4479

- | | | | |
|----------------------------|----------------|-----------------------------------|-----------------------|
| 1. SEQUENCE NUMBER | | 14. DISTRIBUTION | DRFT/REG/REPRO COPIES |
| 2. TITLE OF DATA ITEM | | | |
| 3. SUBTITLE | | | |
| 4. DATA ITEM NUMBER | | | |
| 5. CONTRACT REFERENCE | | | |
| 6. TECHNICAL OFFICE | 7. DD | 8. APP | 9. DIST STATEMENT |
| | 250 | CODE | REQUIRED |
| 10. FREQUENCY | 11. AS OF DATE | | 15. TOTAL: |
| 12. DATE OF 1ST SUBMISSION | | 13. DATE OF SUBSEQUENT SUBMISSION | |
| 16. REMARKS | | | |

-
- | | | | |
|----------------------------------|---------|----------------------------|-------------------|
| 1. A001 | | 14. AMSTA-AR-CCL-F (ECALS) | / / |
| 2. CONFIGURATION CHANGE CONTROL* | | | / / |
| 3. ENGINEERING ACTIONS | | | |
| 4. DI-CMAN-81554 | | | |
| 5. SECTION C | | | |
| 6. AMSTA-AR-ES | 7. NO | 8. - | 9. ** |
| 10. ASREQ | 11. --- | | 15. TOTAL 0/ 0/ 0 |
| 12. ASREQ | | 13. ASREQ | |

16. REMARKS
PREPARE ENGINEERING ACTIONS IAW DI-CMAN-81544 AND SUBMIT ELECTRONICALLY VIA ECALS WORLDWIDE WEB PAGE [HTTP://EDMD4.PICA.ARMY.MIL/](http://EDMD4.PICA.ARMY.MIL/). *DATA INFORMATION PACKET **DISTRIBUTION STATEMENT WILL BE ASSIGNED AND IMPLEMENTED BY THE DOD CONFIGURATION MANAGER. THE POC FOR ECALS IS LEE SADAUSKAS, AMSTA-AR-QAW, (973) 724-6626 LEES@PICA.ARMY.MIL.

-
- | | | | |
|---|-------|--------------------|-------------------|
| 1. A002 | | 14. AMSTA-AR-QAW-C | / 1/ |
| 2. TEST/INSP REPORTS-PRODUCTION ACCEPT. | | QAR | / 1/ |
| 3. INSP & TEST REPORT | | CO (LT ONLY) | / / |
| 4. DI-NDTI-80809B | | | |
| 5. SECTION E | | | |
| 6. AMSTA-AR-QA | 7. LT | 8. | 9. |
| 10. * | 11. | | 15. TOTAL 0/ 2/ 0 |
| 12. * | | 13. WHEN REVISED | |

16. REMARKS
*REPORTS SHALL BE SUBMITTED UPON COMPLETION OF EACH LOT.
email:<amsta-ar-qa-cdr1@ria-emh2.army.mil

APPROVED BY: STEPHEN J HANSEN, SDMO, AMSTA-AR-QAD DATE: 12/21/2000

DOCUMENT SUMMARY LIST

Item: ARM ASSY, NUCLEAR LAMP, OPTICAL CELL ASSY
 NSN: 6260-00-257-2773; 1240-01-139-3467; 6260-01-135-3161
 Control Number/PRON: P11FKY01,02,03

Identifies all first tier documents (cited in SOW) (applicable DIDs). Also included are all referenced documents (2nd, (includes DID block 10 references), 3rd and lower tier) which have been tailored.

DOCUMENT CATEGORY:

CATEGORY 0 - Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

CATEGORY 1 - The requirements contained in the directly cited document are contractually applicable to the extent specified. All referenced documents are for guidance and information only.

CATEGORY 2 - The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. All subsequently referenced documents are for guidance and information only.

CATEGORY 3 - Unless otherwise specified in the solicitation, contract or contract modification, all requirements contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.

Document Number (Contract Reference) Applicable Tailoring	Document Title	Document Date/ Document Category
1a. MIL-STD-2549 Table DIP 4-1	Configuration Management Data Interface	30 Jun 97 Cat 2
1b. DI-CMAN-81554 (seq A001)	Configuration Change Control Data Information Packet	30 Jun 97 Cat 2
2. ANSI/ISO/ASQC Q9002 or equivalent	Model for Quality Assurance in Production, Installation & Servicing	18 Jul 94
3. MIL-PRF-13830 Rev B	Optical Components For Fire Control Instruments; Gen.Spec.	09 Jan 97 Cat 2
4a. SOW	SOW for Radioactive Wipe Test Procedure	May 94 Cat 1
4b. DI-NDTI-80809B (DD Form 1423)	Test/Inspection Reports	24 Jan 97 Cat 1

DOCUMENT SUMMARY LIST

Item: LAMP, NUCLEAR
 NSN: 6260-00-257-2773
 Control Number/PRON: P40FKTX4

Identifies all first tier documents (cited in SOW) (applicable DIDs). Also included are all referenced documents (2nd, (includes DID block 10 references), 3rd and lower tier) which have been tailored.

DOCUMENT CATEGORY:

CATEGORY 0 - Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

CATEGORY 1 - The requirements contained in the directly cited document are contractually applicable to the extent specified. All referenced documents are for guidance and information only.

CATEGORY 2 - The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. All subsequently referenced documents are for guidance and information only.

CATEGORY 3 - Unless otherwise specified in the solicitation, contract or contract modification, all requirements contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.

Document Number (Contract Reference) Applicable Tailoring	Document Title	Document Date/ Document Category
1a. MIL-STD-2549 Table DIP 4-1	Configuration Management Data Interface	30 Jun 97 Cat 2
1b. DI-CMAN-81554 (seq A001)	Configuration Change Control Data Information Packet	30 Jun 97 Cat 2
2. ANSI/ISO/ASQC Q9003 or equivalent	Quality Systems-Model for Quality Assurance in Final Inspection and Test	18 Jul 94

DOCUMENT SUMMARY LIST

Item: LAMP RADIOLUMINOUS
 NSN: 6260-00-257-2770 & 6260-01-096-4479
 Control Number/PRON: P21FLK01&2

Identifies all first tier documents (cited in SOW) (applicable DIDs). Also included are all referenced documents (2nd, (includes DID block 10 references), 3rd and lower tier) which have been tailored.

DOCUMENT CATEGORY:

CATEGORY 0 - Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

CATEGORY 1 - The requirements contained in the directly cited document are contractually applicable to the extent specified. All referenced documents are for guidance and information only.

CATEGORY 2 - The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. All subsequently referenced documents are for guidance and information only.

CATEGORY 3 - Unless otherwise specified in the solicitation, contract or contract modification, all requirements contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.

Document Number (Contract Reference) Applicable Tailoring	Document Title	Document Date/ Document Category
1a. MIL-STD-2549 Table DIP 4-1	Configuration Management Data Interface	30 Jun 97 Cat 2
1b. DI-CMAN-81554 (seq A001)	Configuration Change Control Data Information Packet	30 Jun 97 Cat 2
2. ANSI/ISO/ASQC Q9002 or equivalent	Model for Quality Assurance in Production, Installation & Servicing	18 Jul 94
3a. SOW	SOW for Radioactive Wipe Test Procedure	May 94 Cat 1
3b. DI-NDTI-80809B (DD Form 1423)	Test/Inspection Reports	24 Jan 97 Cat 1

APPENDIX I

GOVERNMENT-DESIGNED ACCEPTANCE INSPECTION EQUIPMENT

<u>AVAILABLE EQUIPMENT</u>					<u>Estimated Weight</u> 5 lb		
<u>QTY</u>	<u>DRAWING NUMBER</u>	<u>REV</u> <u>SYM</u>	<u>COST</u> <u>EACH</u>	<u>QTY</u>	<u>DRAWING NUMBER</u>	<u>REV</u> <u>SYM</u>	<u>COST</u> <u>EACH</u>
1	7641866	N	\$2000.00				

MB-MICROTEC -- LIGHT SOURCE,TRITIUM - LAMP NUCLEAR
MATERIAL SAFETY DATA SHEET
NSN: 6260010562883
Manufacturer's CAGE: S5244
Part No. Indicator: A
Part Number/Trade Name: LIGHT SOURCE,TRITIUM

=====
General Information
=====

Item Name: LAMP NUCLEAR
Company's Name: MB-MICROTEC
Company's Street: FREIBURGSTRASSE 624
Company's City: CH-3172 NIEDERWANGEN/BERN
Company's Country: SZ
Company's Emerg Ph #: 214-644-0722
Company's Info Ph #: 214-644-0722
Distributor/Vendor # 1: OPTEX SYSTEMS INC (214-644-0722)
Distributor/Vendor # 1 Cage: 0BK64
Distributor/Vendor # 2: DELTA LIGHTING CORP (203-356-9797)
Distributor/Vendor # 2 Cage: 9S515
Distributor/Vendor # 3: .
Distributor/Vendor # 4: .
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 002
Status: SE
Date MSDS Prepared: 22OCT90
Safety Data Review Date: 10JUL97
MSDS Preparer's Name: DOUGLAS H. KEEFER, PH.D.
Preparer's Company: RADIOLOGICAL CONSULTANTS, INC.
Preparer's St Or P. O. Box: 7306 FOXWORTH DRIVE (214-768-4704)
Preparer's City: DALLAS
Preparer's State: TX
Preparer's Zip Code: 75248-3036
MSDS Serial Number: CDYWV
Specification Number: NONE
Spec Type, Grade, Class: NONE
Hazard Characteristic Code: A3
Unit Of Issue: EA
Unit Of Issue Container Qty: UNKNOWN
Type Of Container: UNKNOWN
Net Unit Weight: ADD DATA
NRC/State License Number: NONE
Net Propellant Weight-Ammo: NONE

=====
Ingredients/Identity Information
=====

Proprietary: NO
Ingredient: TRITIUM,
Ingredient Sequence Number: 01
Percent: UNKNOWN
NIOSH (RTECS) Number: 1009915TR
CAS Number: 10028-17-8
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Other Recommended Limit: NONE RECOMMENDED

=====
Physical/Chemical Characteristics
=====

=====
 Appearance And Odor: SPHERICAL BOROSILICATE GLASS CAPSULE, LACQUER COATED,
 LINED W/PHOSPHOR.

Boiling Point: UNKNOWN

Melting Point: UNKNOWN

Vapor Pressure (MM Hg/70 F): UNKNOWN

Vapor Density (Air=1): UNKNOWN

Specific Gravity: UNKNOWN

Decomposition Temperature: UNKNOWN

Evaporation Rate And Ref: UNKNOWN

Solubility In Water: UNKNOWN

Viscosity: UNKNOWN

Radioactivity: 1.0 CI

Form (Radioactive Matl): NORMAL

Corrosion Rate (IPY): UNKNOWNNN

=====
 Fire and Explosion Hazard Data
 =====

Flash Point: NOT KNOWN

Lower Explosive Limit: NOT KNOWN

Upper Explosive Limit: NOT KNOWN

Extinguishing Media: MFR GAVE NO INFORMATION OF MSDS.

Special Fire Fighting Proc: MFR GAVE NO INFORMATION OF MSDS. USE NORMAL
 FIRE FIGHTING PROCEDURES.

Unusual Fire And Expl Hazrds: ALTHOUGH GTLS CONTAINS FLAMMABLE GAS IT MUST
 BE NOTED THAT TOTAL GAS VOL IS <0.5 CUBIC INCH, THUS, DANGER FROM FIRE AND/OR
 EXPLOSION IS MINIMAL.

=====
 Reactivity Data
 =====

Stability: YES

Cond To Avoid (Stability): MFR GAVE NO INFORMATION OF MSDS.

Materials To Avoid: MFR GAVE NO INFORMATION OF MSDS.

Hazardous Decomp Products: MFR GAVE NO INFORMATION OF MSDS.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): MFR GAVE NO INFORMATION OF MSDS.

=====
 Health Hazard Data
 =====

LD50-LC50 Mixture: PRODUCT'S LD50 (ORAL RAT) WAS NOT STATED

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: NO

Route Of Entry - Ingestion: NO

Health Haz Acute And Chronic: CHROMOSOMAL TRITIUM MAKES SIGNIFICANT
 CONTRIBUTION TO TOTAL RADIATION DOSE AFTER ACUTE EXPOSURE IN LONG LIFE SPAN
 CELLS WHICH PROLIFERATED AT THE TIME OF EXPOSURE. THE CONTRIBUTION OF
 CHROMOSOMAL DAMAGE TO WHOLE BODY RADIATION DOSE, OCCURING FROM ACCIDENTAL
 RELEASE OF 10 CURIES OF TRITIUM, HAS YET TO BE OBSERVED.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: NO EVIDENCE IS YET AVAILABLE ON
 CARCINOGENESIS FROM TRITIATED WATER.

Signs/Symptoms Of Overexp: IT APPEARS UNLIKELY THAT TRITIUM IN THE FORM OF
 WATER AND/OR VAPOR WOULD EVER PRODUCE DELETERIOUS, DETECTABLE EFFECTS AT
 CONCENTRATIONS NORMALLY ENCOUNTERED.

Med Cond Aggravated By Exp: MFR GAVE NO INFORMATION OF MSDS.

Emergency/First Aid Proc: VENTILATE THE AREA IMMEDIATELY, MOVE ALL PERSONNEL UPWIND. WASH EXPOSED SKIN SURFACES AS SOON AS POSSIBLE. DRINK COPIOUS QUANTITIES OF FLUIDS ESPECIALLY WATER NOT CONTAMINATED W/TRITIUM. COLLECT 20 ML URINE SAMPLES HOURLY, FOR LIQUID SCINTILLATION ANALYSIS BY A LICENSED RADIOLOGICAL LAB. CONTINUE UNTIL SEVERITY OF EXPOSURE HAS BEEN DETERMINED BY HEALTH PHYSICS ORIENTED MEDICAL STAFF.

=====

Precautions for Safe Handling and Use

=====

Steps If Matl Released/Spill: ISOLATE IMMEDIATELY & SEAL IN MULTIPLE CONTAINMENT, PREFERRABLY UNDER WATER. KEEP PERSONNEL FROM TOUCHING OUTER SURFACES WHICH MAY BE HIGHLY CONTAMINATED W/TRITIATED OILS THAT ARE SKIN SOLUBLE.

Neutralizing Agent: MFR GAVE NO INFORMATION OF MSDS.

Waste Disposal Method: RETURN GTLS UNIT TO MANUFACTURER OR TRANSFER TO LICENSED RADIOACTIVE WASTE DISPOSAL FIRM FOR BURIAL IN APPROVED DISPOSAL SITE I/A/W FEDERAL, STATE & LOCAL REGULATIONS.

Precautions-Handling/Storing: EMPLOYEES HANDLING UNPROTECTED GTLS SHOULD DO SO ONLY IN A VENTED HOOD. ONCE THE SOURCES ARE PROTECTED BY HOUSING, THEY MAY BE HANDLED IN OTHER AREAS.

Other Precautions: MAKE PERIODIC CHECKS TO ASSURE THAT THE LUMINESCENSE OF EACH SOURCE HAS NOT DIMINISHED, SIGNALING A TRITIUM LEAK & POTENTIAL PERSONAL EXPOSURE. DO NOT CRACK OR DAMAGE THE INTEGRITY OF A GTLS IN ANY WAY. USE ONLY W/ADEQUATE VENTILATION.

=====

Control Measures

=====

Respiratory Protection: MFR GAVE NO INFORMATION OF MSDS.

Ventilation: SUFFICIENT AIRFLOW SHOULD BE PROVIDED TO VACATE ANY TRITIUM ACCIDENTALLY RELEASED WHILE THE SOURCES ARE BEING ASSEMBLED.

Protective Gloves: MFR GAVE NO INFORMATION OF MSDS.

Eye Protection: MFR GAVE NO INFORMATION OF MSDS.

Other Protective Equipment: MFR GAVE NO INFORMATION OF MSDS.

Work Hygienic Practices: LICENSEES ARE REQUIRED TO PERFORM QUARTERLY RADIOBIOASSAYS ON EMPLOYEES POTENTIALLY EXPOSED TO TRITIUM.

Suppl. Safety & Health Data: ADD THAT THIS INFO IS FOR THE RADIOACTIVE INGREDIENT TRITIUM. NO MSDS IS REQUIRED FOR THE DIAL CONTROL NOR THE TRITIUM SINCE THE QUANTITY OF TRITIUM IS W/I THE "EXCEPTED QUANTITY" FOR INSTRUMENTS & ARTICLES & IS NOT CONSIDERED HAZARDOUS BYOSHA. PROPER SHIPPING NAME IS "RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, UN2910".

=====

Transportation Data

=====

Trans Data Review Date: 97191

DOT PSN Code: MNS

DOT Proper Shipping Name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-
INSTRUMENTS OR ARTICLES

DOT Class: 7

DOT ID Number: UN2910

DOT Label: NONE

IMO PSN Code: MXJ

IMO Proper Shipping Name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE -
ARTICLES

IMO Regulations Page Number: 7102

IMO UN Number: 2910

IMO UN Class: 7

IMO Subsidiary Risk Label: *

IATA PSN Code: VNS
 IATA UN ID Number: 2910
 IATA Proper Shipping Name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE,
 ARTICLES
 IATA UN Class: 7
 IATA Label: NONE
 AFI PSN Code: VNR
 AFI Prop. Shipping Name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE,
 INSTRUMENTS OR ARTICLES
 AFI Class: 7
 AFI ID Number: UN2910
 AFI Basic Pac Ref: A11.12,A11.14
 MMAC Code: NK
 N.O.S. Shipping Name: TRITIUM
 Additional Trans Data: THE SUPERVISOR HAS ORDERED THAT *ALL* MSDS'S
 INCLUDE A NET WEIGHT. THIS IS NOT DONE AS A NET WEIGHT IS MEANINGLESS IN
 THE CASE OF RADIOACTIVES.

=====

Disposal Data

=====

=====

Label Data

=====

Label Required: YES
 Technical Review Date: 10JUL97
 MFR Label Number: NONE
 Label Status: F
 Common Name: LIGHT SOURCE,TRITIUM
 Chronic Hazard: NO
 Signal Word: CAUTION!
 Acute Health Hazard-Slight: X
 Contact Hazard-Slight: X
 Fire Hazard-None: X
 Reactivity Hazard-None: X
 Special Hazard Precautions: LABEL IS SPECIFIED BY NUCLEAR REGULATORY
 COMMISSION. CHROMOSOMAL TRITIUM MAKES SIGNIFICANT CONTRIBUTION TO TOTAL
 RADIATION DOSE AFTER ACUTE EXPOSURE IN LONG LIFE SPAN CELLS WHICH
 PROLIFERATED AT THE TIME OF EXPOSURE.THE CONTRIBUTION OF CHROMOSOMAL DAMAGE
 TO WHOLE BODY RADIATION DOSE, OCCURING FROM ACCIDENTAL RELEASE OF 10 CURIES
 OF TRITIUM,HAS YET TO BE OBSERVED. EMPLOYEES HANDLING UNPROTECTED GTLS
 SHOULD DO SO ONLY IN A VENTED HOOD. ONCE THE SOURCES ARE PROTECTED BY
 HOUSING, THEY MAY BE HANDLED IN OTHER AREAS.
 Protect Eye: Y
 Protect Skin: Y
 Protect Respiratory: Y
 Label Name: MB-MICROTEC
 Label Street: FREIBURGSTRASSE 624
 Label P.O. Box: ???????
 Label City: CH-3172 NIEDERWANGEN/BERN
 Label Zip Code: ???????????
 Label Country: SZ
 Label Emergency Number: 214-644-0722