DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD, SUITE 3229
FT. BELVOIR, VIRGINIA 22060-6223

IN REPLY REFER TO **DNSC-C** **October 12, 2005**

AMENDMENT NO. 007 TO
INVITATION FOR BIDS FOR
ACID GRADE FLUORSPAR AND
METALLURGICAL GRADE FLUORSPAR
UNDER DLA-FLUORSPAR-002

The above referenced Invitation for Bids for the sale of Acid Grade Fluorspar and Metallurgical Grade Fluorspar is hereby amended as follows:

1. Amendments No. 003, 004, 005 and 006 are hereby deleted in their entirety.

2. In Section **A.1 Introduction (MAR 05),** Amendment No. 001**,** paragraph **a.** the following sentence is hereby deleted in its entirety:

"Approximately 10,000 SDT of each type will be made available for sale each month."

3. Section **D.1 Payment (MAY 04)** is deleted in its entirety and replaced with the following:

D.1 Payment (OCT 05)

a. Payment shall be made in U.S. dollars.

b. Payment ***for material*** shall be made ***only*** by wire transfer (Fedwire). Payment for ***adjustments for variations in quantity or weight of material shipped***, storage charges, interest, penalty charges, or administrative charges may be made by wire transfer, electronic funds transfer, or company or bank check. If payments for material (other than payments for adjustments for variations in quantity or weight) are made by electronic funds transfer or check, delays in shipment will result, and the payment may be returned to the sender.

c. Payment by wire transfer (Fedwire).

(1) Wire transfer payment shall be made in accordance with instructions in **Section J.3**. Fees for wire transfers are the responsibility of the Contractor. Payment shall be accompanied by **identifying information including the contract number, invoice number (if applicable), and a description of the material purchased**.

(2) If wire transfer payment is not made in accordance with the instructions in **Section J.3**, or if identifying information is not provided, shipment of material may be delayed by up to one week, the wire transfer may be returned to the sender or a Contractor may incur charges if payments are delinquent.

d. Payment by electronic funds transfer.

(1) Electronic funds transfer payment shall be made in accordance with instructions in **Section J.3**. Any fees for electronic funds transfers are the responsibility of the Contractor. Payment shall be accompanied by **identifying information including the contract number, invoice number, and a description of the material purchased**.

(2) If payment by electronic funds transfer is not made in accordance with the instructions in **Section J.3**, or if identifying information is not provided, payment may be returned to the sender and the Contractor may incur charges if payments are delinquent.

e. Payment by company or bank check.

(1) All checks must be drawn on a U.S. domestic bank or on the United States branch of an acceptable foreign bank and must be payable in United States currency. **A service charge of $100.00 will be applied to all returned checks.**

(2) Payment shall be made to the **Defense Finance and Accounting Service - Columbus (DFAS-Columbus)**. If a check is not made payable to DFAS-Columbus, the check may be returned and the $100.00 fee stated in **D.1.e.(1)** charged. Payment shall be accompanied by **identifying information including the contract number, invoice number, and a description of the material purchased**. Check payments which do not have the required identification may be returned and the Contractor may incur charges if payments are delinquent. Check payments shall be sent to:

ATTN: DNSC-R, Accounts Receivable
Defense National Stockpile Center
8725 John J. Kingman Road Suite 3229
Fort Belvoir, VA 22060-6223

f. Invoices issued for adjustments for variations in quantity or weight, storage charges, interest, penalty charges, or administrative charges shall be paid promptly.

g. If payment is not made in full within 30 calendar days of issuance of an invoice as specified in **D.1.f.**, the Contractor will be considered delinquent and any outstanding charges will be reduced by any subsequent payments. No material will be released until all delinquent charges are paid. (See Sections **F.1.a.** and **G.10**.)

3. Sections **I.2.a.** and **I.2.b. Item Bid Page (MAY 05)** are hereby replaced with the attached updated listing.

4. Section **J.2.a Analysis of Material (MAY 05)** and Section **J.2.b Analysis of Material (MAY 05)** is hereby replaced with the attached respective updated listing.

5. Section **J.4 MATERIAL SAFETY DATA SHEET (MAY 04) ACID GRADE FLUORSPAR and** Section **J.4 MATERIAL SAFETY DATA SHEET (JUN 04) METALLURGICAL GRADE FLUORSPAR** is hereby deleted in its entirety and replaced with the updated listing.

6. Section **J.5 FEDWIRE PROCEDURES (JAN 95)** is hereby deleted in its entirety and replaced with the attached Section **J.5 FEDWIRE AND ELECTRONIC FUNDS TRANSFER PROCEDURES (OCT 05).**

7. Bidders shall acknowledge receipt of this Amendment by signing in the space provided below and returning this form along with their bid to:

ATTN: DNSC-R (Bid Custodian)
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Fort Belvoir, VA 22060-6223
Facsimile No.: (703) 767-5541

Failure to acknowledge receipt of this Amendment may result in a Bidder being ineligible for award.

7. Except as provided herein, all other terms and conditions of Invitation for Bids DLA-FLUORSPAR-002, as amended by Amendments No. 001 and 002 thereto, remain unchanged and in full force and effect.

NAME OF FIRM: _____

ADDRESS: _____

TELEPHONE: _____ **FACSIMILE:** _____

COMPLETED BY: _____

SIGNATURE: _____ **DATE:** _____

TITLE: _____

WEB PAGE: _____ **E-MAIL ADDRESS:** _____

Invitation for Bids DLA-FLUORSPAR-002, Amendments No. 001, 002 and this amendment are available on the DNSC Website: **https://www.dnsc.dla.mil**

I.2.a. Item Bid Page - DLA-Fluorspar-002 (OCT 05) Acid Grade Fluorspar

Item	Location	Pile	Type	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Bid Price
2	New Haven, IN	Bin 2	Dry Fines	Foreign	217.00	$		$
3	New Haven, IN	Bin 3	Dry Fines	Foreign	642.00	$		$
4	New Haven, IN	Bin 4	Dry Fines	Foreign	1,837.00	$		$
8	New Haven, IN	Bin 8	Dry Fines	Foreign	1,564.00	$		$
				Total	**4,260.00**			

NOTE: All above listed Acid Grade Fluorspar is bagged in 1.25 to 1.5 ton Super-Sacks and stored on 48" x 48" pallets.
Item # 2 contains approximately 136 super sacks
Item # 3 contains approximately 468 super sacks
Item # 4 contains approximately 1,340 super sacks
Item # 8 contains approximately 1,122 super sacks

Name of Company: _____

Bidder's Name and Title: _____

_____

Bidder's Signature: _____

Date: _____

I.2.b. Item Bid Page - DLA-Fluorspar-002 (OCT 05) Metallurgical Grade Fluorspar

Item	Location	Pile	Type	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Bid Price
104	New Haven, IN	97	Grade A	Domestic	16,685.99	$		$
105	New Haven, IN	98	Grade B	Domestic	7,691.99	$		$
107	New Haven, IN	103	Grade A	Domestic	9,998.99	$		$
				Total	**34,376.97**			

Name of company: _____

Bidder's name and title: _____

_____

Bidder's signature: _____

Date: _____

J.2.a. ANALYSIS OF MATERIAL (AUG 05) Acid Grade Fluorspar

Item	Location	Pile	Type	Origin	CaF2	SiO2	S	Pb	CaCO3	Moisture
2	New Haven, IN	Bin 2	Dry Fines	Foreign	97.37%	0.89%				0.0001%
3	New Haven, IN	Bin 3	Dry Fines	Foreign	98.22%	1.01%				0.0001%
4	New Haven, IN	Bin 4	Dry Fines	Foreign	97.74%	0.93%	0.04%	0.08%		0.2089%
8	New Haven, IN	Bin 8	Dry Fines	Foreign	98.22%	1.01%				0.0001%

*DNSC Analysis of record.

GRAB Sample testing completed 7/26/2005 by McCreath & Sons
Results are as follows:

Element	Bin #2 %	Bin #4 %
Moisture	0.08	0.05
Calcium Fluoride	96.98	96.65
Calcium Carbonate	0.78	1.07
Silica	1.08	1.03
Sulphur	0.014	0.077
Sodium Chloride	<0.01	<0.01
R2O3	0.84	0.15
Ferric Oxide	0.55	0.043
Arsenic	<1 PPM	<1 PPM
Lead	<0.002	0.095
Zinc	<0.002	0.003
Phosphorus	0.082	0.013
Boron	<0.001	0.039

J.2.b. ANALYSIS OF MATERIAL (OCT 05) Metallurgical Grade Fluorspar

Item	Location	Pile	Type	Origin	CaF2	SiO2	S	Pb	% Passing # 16 Sieve
104	New Haven, IN	97	Grade A	Domestic	83.20%	4.36%			
105	New Haven, IN	98	Grade B	Domestic	63.84%	4.84%			13.12%
107	New Haven, IN	103	Grade A	Domestic	83.48%	4.47%	0.01%		21.07%

*DNSC Analysis of record

J.4 MATERIAL SAFETY DATA SHEET (JUN 05) -ACID GRADE FLUORSPAR

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD
SUITE 3339
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 (NORTH AMERICA)
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: FLUORSPAR, ACID GRADE

TRADE NAMES/SYNONYMS:
DLA10002

CREATION DATE: Jul 01 1992
REVISION DATE: Jun 16 2005

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: CALCIUM FLUORIDE
CAS NUMBER: 7789-75-5
EC NUMBER (EINECS): 232-188-7
PERCENTAGE: >97.00

COMPONENT: SULFRAMIN 40
CAS NUMBER: 12627-25-7
EC NUMBER: Not assigned.
PERCENTAGE: <0.03

COMPONENT: SILICON DIOXIDE
CAS NUMBER: 7631-86-9
EC NUMBER (EINECS): 231-545-4
PERCENTAGE: <1.00

COMPONENT: CALCIUM CARBONATE
CAS NUMBER: 471-34-1
EC NUMBER (EINECS): 207-439-9
PERCENTAGE: <1.25

COMPONENT: SODIUM CHLORIDE
CAS NUMBER: 7647-14-5
EC NUMBER (EINECS): 231-598-3
PERCENTAGE: <0.02

COMPONENT: METAL OXIDE
CAS NUMBER: Not assigned.
EC NUMBER: Not assigned.
PERCENTAGE: <0.04

COMPONENT: BERYLLIUM
CAS NUMBER: 7440-41-7
EC NUMBER (EINECS): 231-150-7
PERCENTAGE: 0.00100

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=0

EMERGENCY OVERVIEW:
PHYSICAL DESCRIPTION: White, yellow, green or purple powder or crystal.
MAJOR HEALTH HAZARDS: mucous membrane burns, skin irritation, eye irritation, cancer hazard (in humans)

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: same as effects reported in long term ingestion, irritation, nosebleed, loss of voice, asthma, lung damage, cancer
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation
EYE CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation
INGESTION:
SHORT TERM EXPOSURE: burns, changes in blood pressure, nausea, vomiting, diarrhea, constipation, stomach pain, difficulty breathing, irregular heartbeat, headache, disorientation, difficulty speaking, pain in extremities, tremors, visual disturbances, dilated pupils, bluish skin color, internal bleeding, kidney damage, unconsciousness, coma
LONG TERM EXPOSURE: irritation, nausea, vomiting, diarrhea, constipation, stomach pain, loss of appetite, weight loss, blood disorders

CARCINOGEN STATUS:
OSHA: No
NTP: Yes
IARC: Yes

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-p

roducts. Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

WATER RELEASE:
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water inside container. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
FLUORSPAR, ACID GRADE:
INORGANIC FLUORIDES (as F):
2.5 mg/m3 OSHA TWA
2.5 mg/m3 ACGIH TWA
2.5 mg/m3 NIOSH recommended TWA 10 hour(s)
2.5 mg/m3 DFG MAK (peak limitation category - II, with excursion factor of 2) (inhalable fraction)
2.5 mg/m3 EC OEL TWA (IOELV)
2.5 mg(F)/m3 UK WEL TWA

MEASUREMENT METHOD: Treated pad with pre-filter (with special coating); Reagent; Ion-specific electrode; NIOSH III # 7902, Fluorides

CALCIUM CARBONATE:
5 mg/m3 OSHA TWA (respirable dust fraction)
15 mg/m3 OSHA TWA (total dust)
10 mg/m3 ACGIH TWA (total particulate)
5 mg/m3 NIOSH recommended TWA 10 hour(s) (respirable fraction)
10 mg/m3 NIOSH recommended TWA 10 hour(s) (total particulate)
10 mg/m3 UK WEL TWA (total inhalable dust)
4 mg/m3 UK WEL TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Acid; Flame atomic absorption spectrometry; NIOSH IV # 7020, Calcium

SILICON DIOXIDE, AMORPHOUS (SILICA, AMORPHOUS):
20 mppcf OSHA TWA (<1% crystalline silica)
OSHA TWA (<1% crystalline silica) (80 mg/m3 divided by %SiO2)
10 mg/m3 ACGIH TWA (inhalable fraction) (no asbestos and <1% crystalline silica)
3 mg/m3 ACGIH TWA (respirable fraction) (no asbestos and <1% crystalline silica)
6 mg/m3 NIOSH recommended TWA 10 hour(s)
4 mg/m3 DFG MAK (inhalable dust fraction)
6 mg/m3 UK WEL TWA (total inhalable dust)
2.4 mg/m3 UK WEL TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Low-temperature ashing; X-ray diffraction spectrometry; NIOSH IV # 7501

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
Any dust and mist respirator with a full facepiece.
Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter.
Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: White, yellow, green or purple powder or crystal.
BOILING POINT: Not applicable
MELTING POINT: 2462 F (1350 C)
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SPECIFIC GRAVITY (water=1): 3.2
WATER SOLUBILITY: insoluble
PH: Not applicable
VOLATILITY: Not applicable
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Soluble: ammonium salt solutions

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Keep out of water supplies and sewers.

INCOMPATIBILITIES: acids

CALCIUM FLUORIDE:
ACIDS (CONCENTRATED): Reacts vigorously evolving toxic fumes of hydrogen fluoride.

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: acid halides

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

CALCIUM FLUORIDE:
TOXICITY DATA:
4250 mg/kg oral-rat LD50; >1500 mg/kg intraperitoneal-rat LD50; 2638 mg/kg intraperitoneal-mouse LD50; >5 gm/kg oral-guinea pig LDLo; >10 gm/kg intraperitoneal-mammal LD; 4417 mg/kg oral-rat LD50; 44 gm/kg/31 day(s) intermittent oral-rat TDLo
CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen (Fluorides)
LOCAL EFFECTS:
Corrosive: ingestion
ACUTE TOXICITY LEVEL:
Moderately Toxic: ingestion
MUTAGENIC DATA:
cytogenetic analysis - rat Ascites tumor 1 gm/kg
REPRODUCTIVE EFFECTS DATA:
3200 mg/kg intraperitoneal-mouse TDLo 9 day(s) pregnant female continuous; 67200 mg/kg intraperitoneal-mouse TDLo 1-21 day(s) pregnant female continuous

QUARTZ:
TOXICITY DATA:
16 mppcf/8 hour(s)-17.9 year(s) intermittent inhalation-human TCLo; 300 ug/m3/10 year(s) intermittent inhalation-human LCLo; 90 mg/kg intravenous-rat LDLo; 200 mg/kg intratracheal-rat LDLo; 40 mg/kg intravenous-mouse LDLo; >20 mg/kg intratracheal-mouse LD; 20 mg/kg intravenous-dog LDLo; 200 mg/kg inhalation-rat TCLo; 250 mg/kg intratracheal-rat LDLo; 240 mg/kg/1 hour(s) intratracheal-rat TDLo; 1.5 mg/kg intratracheal-rat TDLo; 120 gm/kg oral-rat TDLo; 15.69 mg/kg intratracheal-rat TDLo; 16.7 mg/kg intratracheal-mouse TDLo; 40 mg/kg inhalation-mouse TCLo; 25 mg/kg intratracheal-rat TDLo; 20 mg/kg implant-rabbit TDLo; 80 mg/kg intratracheal-mouse TDLo; 150 mg/kg intratracheal-rat TDLo; 40 mg/kg inhalation-mouse TCLo; 80 mg/kg intratracheal-mouse TDLo; 100 mg/kg intratracheal-mouse TDLo; 80 mg/m3/26 week(s) intermittent inhalation-rat TCLo; 108 mg/m3/6 hour(s)-3 day(s) intermittent inhalation-rat TCLo; 58 mg/m3/13 week(s) intermittent inhalation-rat TCLo; 1475 ug/m3/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLo; 4932 ug/m3/24 hour(s)-39 week(s) continuous inhalation-mouse TCLo; 28 mg/m3/3 week(s) intermittent inhalation-guinea pig TCLo; 3 mg/m3/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLo; 1000 gm/m3/10 day(s) intermittent inhalation-domestic animal TCLo; 2.88 mg/kg/12 week(s) intermittent intratracheal-rat TDLo; 11.52 mg/kg/12 week(s) intermittent intratracheal-rat TDLo; 15 mg/m3/26 week(s) intermittent inhalation-rat TCLo; 0.74 mg/m3/2 year(s) intermittent inhalation-rat TCLo; 10 mg/m3/75 day(s) intermittent inhalation-rat TCLo; 10 mg/m3/818 day(s) intermittent inhalation-monkey TCLo; 240 ug/kg/12 week(s) intermittent intratracheal-rat TDLo; 960 ug/kg/12 week(s) intermittent intratracheal-rat TDLo
CARCINOGEN STATUS: NTP: Known Human Carcinogen; IARC: Human Sufficient Evidence, Animal Sufficient Evidence, Group 1; ACGIH: A2 -Suspected Human Carcinogen; EC: Category 2
Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica. Malignant lymphomas developed in rats after intrapleural and intraperitoneal injections of quartz suspensions and intrapleural injection of cristobalite and tridymite. Epidemiologic studies indicate lung cancer occurs more frequently among silicotics than in the general population.
ACUTE TOXICITY LEVEL: Insufficient Data.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders
TUMORIGENIC DATA:
50 mg/m3 inhalation-rat TCLo/6 hour(s)-71 week(s) intermittent; 45 mg/kg intraperitoneal-rat TDLo; 90 mg/kg intravenous-rat TDLo; 90 mg/kg intrapleural-rat TDLo; 111 mg/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo/19 week(s) intermittent; 900 mg/kg implant-rat TDLo; 4000 mg/kg implant-mouse TDLo; 83 mg/kg intrapleural-hamster TDLo; 90 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 450 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 4554 mg/kg implant-rat TD; 200 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD
MUTAGENIC DATA:
micronucleus test - human lung 40 ug/cm2; micronucleus test - hamster lung 160 ug/cm2; DNA damage - rat intratracheal 3 mg/kg
ADDITIONAL DATA: Smoking may enhance the toxic effects.

CALCIUM CARBONATE:
IRRITATION DATA:
500 mg/24 hour(s) skin-rabbit moderate; 750 ug/24 hour(s) eyes-rabbit severe
TOXICITY DATA:
6450 mg/kg oral-rat LD50; 60 gm/kg oral-rat TDLo
LOCAL EFFECTS:
Irritant: skin, eye
ACUTE TOXICITY LEVEL:
Slightly Toxic: ingestion
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: blood system disorders, gastrointestinal disorders, hormonal disorders, kidney disorders, metabolic disorders
ADDITIONAL DATA: Interactions with drugs may occur.

HEALTH EFFECTS:
INHALATION:
SILICON DIOXIDE: CARCINOGEN (CRYSTALLINE SILICA).

ACUTE EXPOSURE:
CALCIUM FLUORIDE: Dust may cause irritation of the respiratory system.

CALCIUM CARBONATE: May cause mechanical irritation with coughing and sneezing. No pathologic findings were noted in sacrificed rats exposed to 81.2 mg/m3 for 90 minutes. Excessive concentrations of nuisance dusts in the workroom may cause unpleasant deposits in the nasal passages.

SILICON DIOXIDE: Dusts may cause irritation of the respiratory tract and coughing.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Workers repeatedly exposed to fluorspar, which contains silica, showed pulmonary changes including fibrosis and emphysema and increased incidences of lung cancer. Repeated or prolonged exposure to fluoride dust may cause nosebleeds, hoarseness, sore throat, sinus trouble and asthma. Fluorosis, as detailed in chronic ingestion may also occur.

CALCIUM CARBONATE: No data available.

SILICON DIOXIDE: Exposure to dusts of crystalline or amorphous silica for 6 months to 30 years may result in silicosis with symptoms of cough, chest pain, dyspnea, tachypnea, marked weakness and weight loss. This pulmonary insufficiency may be characterised by diffuse nodular fibrosis, distortion of bronchi, diminished chest expansion, decreased vital capacity and compensatory and bullous emphysema. Although pulmonary fibrosis has been reported from workers exposed to amorphous silica, the crystalline form is the established cause of fibrotic response in the lung. However, the amorphous form has been reported fibrogenic to a lesser extent. As the disease progresses, cor pulmonale, cardiorespiratory failure, and death may occur. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

SKIN CONTACT:
ACUTE EXPOSURE:
CALCIUM FLUORIDE: May cause irritation.

CALCIUM CARBONATE: Application of 500 mg/24 hours to rabbits resulted in moderate irritation.

SILICON DIOXIDE: Prolonged skin contact with dry particulate may cause drying of the skin.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Repeated or prolonged contact with dusts containing fluoride may result in dermatitis.

CALCIUM CARBONATE: Repeated and prolonged contact with irritants may cause dermatitis.

SILICON DIOXIDE: No data available.

EYE CONTACT:
ACUTE EXPOSURE:
CALCIUM FLUORIDE: Dust may cause irritation.

CALCIUM CARBONATE: May cause redness, pain, and tearing. Application of 750 ug to rabbit eyes for 24 hours resulted in severe irritation.

SILICON DIOXIDE: Dusts may cause irritation with redness and pain.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Repeated or prolonged contact with fluoride dust may cause conjunctivitis.

CALCIUM CARBONATE: Repeated and prolonged exposure to irritants may cause conjunctivitis.

SILICON DIOXIDE: No data available.

INGESTION:
CALCIUM FLUORIDE: See information on inorganic fluorides.

ACUTE EXPOSURE:
CALCIUM CARBONATE: Ingestion may cause gastric irritation with belching, occasional nausea, constipation or diarrhea, and an increase in gastric secretions.

SILICON DIOXIDE: The effects of ingestion are purely mechanical as the substance is inert chemically and biologically.

CHRONIC EXPOSURE:
CALCIUM CARBONATE: May cause intestinal obstruction and fecal concretions. Repeated or prolonged ingestion may result in hypercalcemia with symptoms of anorexia, nausea, vomiting, constipation, abdominal pain, dry mouth, thirst, and polyuria. Alkalosis, calcinosis, azotemia, hypophosphatemia, alkaluria, and renal calculi have also been reported.

SILICON DIOXIDE: No data available.

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR: No classification assigned.

LAND TRANSPORT RID: No classification assigned.

AIR TRANSPORT IATA: No classification assigned.

AIR TRANSPORT ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
BERYLLIUM: 10 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:
California Proposition 65:
Known to the state of California to cause the following:
Silica, crystalline (airborne particles of respirable size)
Cancer (Oct 01, 1988)
BERYLLIUM AND COMPOUNDS
Cancer (Oct 01, 1987)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:
EC CLASSIFICATION (CALCULATED): Not determined.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Not listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

16. OTHER INFORMATION

MSDS SUMMARY OF CHANGES
8. EXPOSURE CONTROLS, PERSONAL PROTECTION
11. TOXICOLOGICAL INFORMATION

J.4 MATERIAL SAFETY DATA SHEET (JUN 05) –METALLURGICAL GRADE FLUORSPAR

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD
SUITE 3339
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 (NORTH AMERICA)
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: FLUORSPAR, METALLURGICAL

TRADE NAMES/SYNONYMS:
DLA10003

CREATION DATE: Jul 01 1992
REVISION DATE: Jun 16 2005

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: CALCIUM FLUORIDE
CAS NUMBER: 7789-75-5
EC NUMBER (EINECS): 232-188-7
PERCENTAGE: >70.00

COMPONENT: SULFRAMIN 40
CAS NUMBER: 12627-25-7
EC NUMBER: Not assigned.
PERCENTAGE: <0.10

COMPONENT: LEAD
CAS NUMBER: 7439-92-1
EC NUMBER (EINECS): 231-100-4
PERCENTAGE: <0.25

COMPONENT: ARSENIC
CAS NUMBER: 7440-38-2
EC NUMBER (EINECS): 231-148-6
PERCENTAGE: <0.01

COMPONENT: BARIUM
CAS NUMBER: 7440-39-3
EC NUMBER (EINECS): 231-149-1
PERCENTAGE: <0.01

COMPONENT: ZINC
CAS NUMBER: 7440-66-6
EC NUMBER (EINECS): 231-175-3
PERCENTAGE: <0.01

COMPONENT: PICRIC ACID
CAS NUMBER: 88-89-1
EC NUMBER (EINECS): 201-865-9
PERCENTAGE: <0.25

COMPONENT: COPPER

CAS NUMBER: 7440-50-8
EC NUMBER (EINECS): 231-159-6
PERCENTAGE: <0.10

COMPONENT: ANTIMONY
CAS NUMBER: 7440-36-0
EC NUMBER (EINECS): 231-146-5
PERCENTAGE: <0.02

COMPONENT: TIN
CAS NUMBER: 7440-31-5
EC NUMBER (EINECS): 231-141-8
PERCENTAGE: <0.02

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=0

EMERGENCY OVERVIEW:
PHYSICAL DESCRIPTION: White, yellow, green, or purple crystals or powder.
MAJOR HEALTH HAZARDS: mucous membrane burns, suspect cancer hazard (in animals)

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: same as effects reported in long term ingestion, irritation, nosebleed, loss of voice, asthma, lung damage
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation
EYE CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation
INGESTION:
SHORT TERM EXPOSURE: burns, changes in blood pressure, nausea, vomiting, diarrhea, stomach pain, difficulty breathing, irregular heartbeat, headache, disorientation, difficulty speaking, pain in extremities, tremors, visual disturbances, dilated pupils, bluish skin color, internal bleeding, kidney damage, unconsciousness, coma
LONG TERM EXPOSURE: irritation, nausea, vomiting, diarrhea, constipation, loss of appetite, weight loss, blood disorders

CARCINOGEN STATUS:
OSHA: No
NTP: No
IARC: Yes

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

WATER RELEASE:
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Large spills: Collect spilled material in appropriate container for disposal. Avoid generating dust. Clean up residue with a high-efficiency particulate filter vacuum. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
CALCIUM FLUORIDE:
INORGANIC FLUORIDES (as F):
2.5 mg/m3 OSHA TWA
2.5 mg/m3 ACGIH TWA
2.5 mg/m3 NIOSH recommended TWA 10 hour(s)
2.5 mg/m3 DFG MAK (peak limitation category - II, with excursion factor of 2) (inhalable fraction)
2.5 mg/m3 EC OEL TWA (IOELV)
2.5 mg(F)/m3 UK WEL TWA

MEASUREMENT METHOD: Treated pad with pre-filter (with special coating); Reagent; Ion-specific electrode; NIOSH III # 7902, Fluorides

LEAD:
If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that day, shall be reduced according to the following formula: Maximum permissible limit (in ug/m3) = 400 divided by hours worked in the day.

LEAD, INORGANIC FUMES AND DUST (as Pb):
50 ug/m3 OSHA TWA 8 hour(s)
30 ug/m3 OSHA action level 8 hour(s)
0.05 mg/m3 ACGIH TWA
0.100 mg/m3 NIOSH recommended TWA 10 hour(s)
0.15 mg/m3 EC OEL TWA (BOELV)

MEASUREMENT METHOD: Particulate filter; Nitric acid/Hydrogen peroxide; Atomic absorption spectrometry; NIOSH III # 7082, ALSO # 7105

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
Measurement Element:
F
12.5 mg/m3
Any dust and mist respirator.
25 mg/m3
Any dust and mist respirator except single-use and quarter-mask respirators.
Any supplied-air respirator.
62.5 mg/m3
Any supplied-air respirator operated in a continuous-flow mode.
Any powered, air-purifying respirator with a dust and mist filter.
May need acid gas sorbent.
125 mg/m3
Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter.
May need acid gas sorbent.
Any self-contained breathing apparatus with a full facepiece.
Any supplied-air respirator with a full facepiece.
250 mg/m3
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.
Escape -
Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter.
May need acid gas sorbent.
Any appropriate escape-type, self-contained breathing apparatus.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: White, yellow, green, or purple crystals or powder.
BOILING POINT: Not applicable
MELTING POINT: 2462 F (1350 C)
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SPECIFIC GRAVITY (water=1): 3.2
WATER SOLUBILITY: insoluble
PH: Not applicable
VOLATILITY: Not applicable
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Soluble: ammonium salt solutions

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid generating dust.

INCOMPATIBILITIES: acids

CALCIUM FLUORIDE:
ACIDS (CONCENTRATED): Reacts vigorously evolving toxic fumes of hydrogen fluoride.

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: acid halides

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

CALCIUM FLUORIDE:
TOXICITY DATA:
4250 mg/kg oral-rat LD50; >1500 mg/kg intraperitoneal-rat LD50; 2638 mg/kg intraperitoneal-mouse LD50; >5 gm/kg oral-guinea pig LDLo; >10 gm/kg intraperitoneal-mammal LD; 4417 mg/kg oral-rat LD50; 44 gm/kg/31 day(s) intermittent oral-rat TDLo
CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen (Fluorides)
LOCAL EFFECTS:
Corrosive: ingestion
ACUTE TOXICITY LEVEL:
Moderately Toxic: ingestion
MUTAGENIC DATA:
cytogenetic analysis - rat Ascites tumor 1 gm/kg
REPRODUCTIVE EFFECTS DATA:
3200 mg/kg intraperitoneal-mouse TDLo 9 day(s) pregnant female continuous; 67200 mg/kg intraperitoneal-mouse TDLo 1-21 day(s) pregnant female continuous

LEAD:
TOXICITY DATA:
450 mg/kg/6 year(s) oral-woman TDLo; 10 ug/m3 inhalation-human TCLo; 1 gm/kg intraperitoneal-rat LDLo; 160 mg/kg oral-pigeon LDLo; 271 mg/m3 inhalation-human LCLo; 155 mg/kg oral-human LDLo; 1050 ug/kg/30 week(s) intermittent oral-rat TDLo; 6879 mg/kg/5 week(s) continuous oral-mouse TDLo; 20 mg/m3/6 hour(s)-30 day(s) intermittent inhalation-guinea pig TCLo; 200 ug/m3/6 hour(s)-26 week(s) intermittent inhalation-guinea pig TCLo; 582 mg/kg/30 day(s) continuous oral-non-mammalian specie TDLo; 4099.2 mg/kg/8 week(s) intermittent oral-mouse TDLo; 10248 mg/kg/20 week(s) intermittent oral-mouse TDLo; 9.9 mg/m3/122 day(s) intermittent inhalation-human TCLo; 0.011 mg/m3/26 week(s) intermittent inhalation-human TCLo; 0.012 mg/kg/10 day(s) intermittent unreported-rat TDLo; 0.012 mg/kg/10 day(s) intermittent unreported-rat TDLo; 120 mg/kg/60 day(s) intermittent unreported-horse, donkey TDLo; 93.6 mg/kg/30 day(s) continuous oral-rat TDLo; 0.03 mg/m3/1 year(s) intermittent inhalation-man TCLo; 0.03 mg/m3/5 year(s) intermittent inhalation-man TCLo; 0.109 mg/m3/5 year(s) intermittent inhalation-man TCLo
CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Sufficient Evidence, Group 2B (Lead and inorganic lead compounds); ACGIH: A3 -Animal Carcinogen (Lead and inorganic lead compounds)
Renal tumors were produced in animals by lead acetate, subacetate and phosphate given orally, subcutaneously or intraperitoneally. No evaluation could be made of the carcinogenicity of powdered lead.
ACUTE TOXICITY LEVEL: Insufficient Data.
TARGET ORGANS: nervous system, kidneys, teratogen
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: blood system disorders, gastrointestinal disorders, nervous system disorders, respiratory disorders
MUTAGENIC DATA:
cytogenetic analysis - human unreported 50 ug/m3; cytogenetic analysis - rat inhalation 23 ug/m3 16 week(s); cytogenetic analysis - monkey oral 42 mg/kg 30 week(s); DNA damage - human inhalation 4.2 ng/L 6 year(s)-intermittent
REPRODUCTIVE EFFECTS DATA:
790 mg/kg oral-rat TDLo multigenerations; 1140 mg/kg oral-rat TDLo 14 day(s) pre pregnancy/21 day(s) post

pregnancy continuous; 520 mg/kg oral-rat TDLo 7-22 day(s) pregnant female/10 day(s) post pregnancy continuous; 1100 mg/kg oral-rat TDLo 1-22 day(s) pregnant female continuous; 10 mg/m3 inhalation-rat TCLo/24 hour(s) 1-21 day(s) pregnant female continuous; 3 mg/m3 inhalation-rat TCLo/24 hour(s) 1-21 day(s) pregnant female continuous; 1120 mg/kg oral-mouse TDLo multigenerations; 6300 mg/kg oral-mouse TDLo 1-21 day(s) pregnant female continuous; 300 mg/kg oral-mouse TDLo 1-2 day(s) pregnant female continuous; 4800 mg/kg oral-mouse TDLo 1-16 day(s) pregnant female continuous; 662 mg/kg oral-domestic animal TDLo 1-21 week(s) pregnant female continuous; 814 mg/kg oral-domestic animal TDLo 5 week(s) pre pregnancy/1-21 week(s) pregnant female continuous; 2118 mg/kg oral-mammal TDLo 15 day(s) post pregnancy continuous; 4099.2 mg/kg oral-mouse TDLo 56 day(s) male
ADDITIONAL DATA: May cross the placenta. Smoking may result in higher blood lead levels. May be excreted in breast milk.

HEALTH EFFECTS:
INHALATION:
ACUTE EXPOSURE:
CALCIUM FLUORIDE: Dust may cause irritation of the respiratory system.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Workers repeatedly exposed to fluorspar, which contains silica, showed pulmonary changes including fibrosis and emphysema and increased incidences of lung cancer. Repeated or prolonged exposure to fluoride dust may cause nosebleeds, hoarseness, sore throat, sinus trouble and asthma. Fluorosis, as detailed in chronic ingestion may also occur.

SKIN CONTACT:
ACUTE EXPOSURE:
CALCIUM FLUORIDE: May cause irritation.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Repeated or prolonged contact with dusts containing fluoride may result in dermatitis.

EYE CONTACT:
ACUTE EXPOSURE:
CALCIUM FLUORIDE: Dust may cause irritation.

CHRONIC EXPOSURE:
CALCIUM FLUORIDE: Repeated or prolonged contact with fluoride dust may cause conjunctivitis.

INGESTION:
CALCIUM FLUORIDE: See information on inorganic fluorides.

ACUTE EXPOSURE:
INORGANIC FLUORIDES: In the presence of moisture, corrosive hydrogen fluoride may be formed, especially in the stomach. Symptoms may include a burning sensation in the mouth and abdomen, sore tongue, a salty or soapy taste, nausea, salivation, difficulty speaking, thirst, vomiting, diarrhea, anorexia, and weight loss. Intense epigastric pain, deep ulceration of the esophagus and mucous membranes, hematemesis, and hematuria may also be present. Shock, manifested by symptoms of hypotension, weak pulse, pallor, dilated pupils, cyanosis, and anuria may occur. Muscle weakness, twitching, epileptiform convulsions, paresthesias, paralysis of the muscles of deglutition, carpopedal spasms, and painful spasms of the extremities and facial muscles may result. Other symptoms may include shortness of breath, headache, occasional urticaria, albuminuria, petechial hemorrhages, nystagmus, visual disturbances, optic neuritis, mental deterioration, unconsciousness, and coma. Cardiac arrhythmias, including ventricular fibrillation, leading to cardiac arrest have been reported. Death may also be due to cardiovascular collapse or respiratory failure. In addition to the corrosive effects, symptoms of acute fluoride toxicity may be caused by a variety of metabolic disorders, including hypocalcemia, hypomagnesemia, acidosis, and hyperkalemia. Pathologic findings may include congestion and hemorrhagic infiltration of all organs and degeneration of the kidneys and liver. In non-fatal cases, malaise and epigastric pain may persist for several days.

CHRONIC EXPOSURE:
INORGANIC FLUORIDES: Repeated or prolonged ingestion may cause fluorosis characterized by nausea, vomiting, anorexia, diarrhea or constipation, weight loss, anemia, weakness and general ill health. Excessive calcification of the bones with brittleness, and calcification of the ligaments of the ribs, pelvis and spinal column may occur. Stiffness and limitation of motion may result. Polyuria and polydipsia may occur. A mottled appearance and altered form of the teeth

may occur particularly during tooth formation. Exfoliative dermatitis, atopic dermatitis, stomatitis, gastrointestinal and respiratory allergy, and rarely, central nervous system involvement have been reported.

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number(s): D008. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 5.0 mg/L. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR: No classification assigned.

LAND TRANSPORT RID: No classification assigned.

AIR TRANSPORT IATA: No classification assigned.

AIR TRANSPORT ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
LEAD: 10 LBS RQ (solid metal particles < 100 micrometer diameter (0.004 inches))
ARSENIC: 1 LBS RQ
ZINC: 1000 LBS RQ
COPPER: 5000 LBS RQ
ANTIMONY: 5000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: Yes
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
LEAD
LEAD COMPOUNDS

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65:
Known to the state of California to cause the following:
LEAD
Cancer (Oct 01, 1992)
Developmental toxicity (Feb 27, 1987)
Male reproductive toxicity (Feb 27, 1987)
Female reproductive toxicity (Feb 27, 1987)
LEAD COMPOUNDS
Cancer (Oct 01, 1992)
Developmental toxicity (Feb 27, 1987)
Male reproductive toxicity (Feb 27, 1987)
Female reproductive toxicity (Feb 27, 1987)
ARSENIC
Cancer (Feb 27, 1987)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:
EC CLASSIFICATION (CALCULATED): Not determined.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Not listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

---

16. OTHER INFORMATION

MSDS SUMMARY OF CHANGES
8. EXPOSURE CONTROLS, PERSONAL PROTECTION

J.5 FEDWIRE AND ELECTRONIC FUNDS TRANSFER PROCEDURES (OCT 05, Rev.)

Fedwire (wire transfer)

The Sender must use a bank that offers Fedwire funds transfer capability. Information regarding Fedwire, including listings of Fedwire funds transfer participants, may be found at http://www.frbservices.org.

To ensure the funds are credited to the Defense National Stockpile Center the following information is required for any wire transfer of funds.

1. Bank Name, Location, and Routing Number.

Bank Name:	TREAS NYC
Location:	New York, NY
Routing Number:	021030004

2. Amount of funds to be transferred.

3. Beneficiary Name: 6355
   DFAS/DNSC

4. Third Party Information – Contractor's Name, Commodity, and Contract Number.

NOTE:
Under Item 3, the number 6355 is the ALC = Agency Location Code (this is the same as account number)

Electronic Funds Transfer

The following information is required for payments made through electronic funds transfer.

1. Bank Name, Location, Bank Number, SWIFT Code, and Account Number.

Bank Name:	Mellon Bank
Location:	Pittsburgh, PA
Bank Number:	043000261
Bank SWIFT Code:	MELNUS3P
Account Number:	910-1027

2. Amount of funds to be transferred.

3. Beneficiary Name: Department of Defense DFAS

4. Addendum Information: Payment for DNSC Contract No._____
   Invoice No._____