



DEFENSE LOGISTICS AGENCY  
HEADQUARTERS  
8725 JOHN J. KINGMAN ROAD  
FORT BELVOIR, VIRGINIA 22060-6221

August 29, 2012

Dear Prospective Metallurgical Grade Manganese Ore Customer:

On **Thursday, September 13, 2012, at 2:00 p.m., local time, Fort Belvoir, VA**, the Defense Logistics Agency, DLA Strategic Materials, will open and consider offers for the sale of approximately **25,000 short dry tons (SDT)** of metallurgical grade manganese ore under Solicitation of Offers DLA-METALLURGICAL GRADE MANGANESE ORE-001.

Offers may be submitted only by the electronic commerce method electronic mail (email). Email is the only transmission method authorized by the solicitation. Offers submitted by any other transmission method (mail, commercial delivery service, hand delivery, or facsimile) will **NOT** be accepted. The email address for submission of offers is: [SMContracting@dla.mil](mailto:SMContracting@dla.mil). Offerors should include the following information when transmitting their offer via email:

ATTN: Directorate of Contracting  
SOLICITATION OF OFFERS  
DLA-METALLURGICAL GRADE MANGANESE ORE-001  
DATE AND TIME OF OFFERING

The solicitation is in the negotiated format. Offerors must submit the documentation requested in Section **B.1** as part of their offers. Offerors are advised that, in accordance with Section **D.1** Payment (MAY 09), **all** payments made on any contracts awarded under Solicitation DLA-METALLURGICAL GRADE MANGANESE ORE-001 must be by wire transfer or international wire transfer only. Check payments will not be accepted.

Your interest in DLA Strategic Materials' sales program for metallurgical grade manganese ore is appreciated. If you have any questions, please contact the contract specialist, Ms. Najiyah Mahdi, by telephone at (703) 767-3184, or by email at: [najiyah.mahdi@dla.mil](mailto:najiyah.mahdi@dla.mil).

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Phillips".

JENNIFER PHILLIPS  
Contracting Officer  
DLA Strategic Materials

*Issue Date: August 29, 2012*

# **DLA–METALLURGICAL GRADE MANGANESE ORE-001**

## **SOLICITATION OF OFFERS**

### **FOR METALLURGICAL GRADE MANGANESE ORE**



## **DLA STRATEGIC MATERIALS**

**8725 John J. Kingman Road  
Suite 3229  
Fort Belvoir, Virginia 22060-6223**

**Telephone (703) 767-6500**  
<https://www.dnsc.dla.mil>

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## **SECTION A – SOLICITATION**

### **A.1 Introduction (AUG 12)**

- a.** The Defense Logistics Agency (DLA), DLA Strategic Materials, is soliciting offers in Fiscal Year 2012 for the sale of approximately **25,000 short dry tons (SDT) of metallurgical grade manganese ore**. The offering will be held at **2:00 p.m.**, local time, Fort Belvoir, VA, on **Thursday, September 13, 2012**. Offers must be received at the address in Section **B.2.a** by **2:00 p.m.**, local time, Fort Belvoir, VA. In the event that DLA Strategic Materials is closed at that time, offers for that day will be received at **2:00 p.m.**, local time, Fort Belvoir, VA, on the next DLA Strategic Materials business day.
- b.** Handling and outloading will be performed by and at the expense of the Contractor. (See Section **F.1**).
- c.** Offerors are advised that contractor operations at the storage site will be limited to those activities related to outloading of the material; i.e., transportation, sampling, weighing, and outloading. No processing of the material of any kind will be permitted on the storage site.

### **A.2 Description (AUG 12)**

- a.** The metallurgical grade manganese ore in the National Defense Stockpile is stored outside in bulk piles in Wenden, Arizona. The origin of the material is domestic and came from various mine operations in the United States. The ore was delivered to the Wenden site between 1952 and 1964. The material being offered for sale under this solicitation was sampled and analyzed in the fall of 2011. Sampling was performed by Gutiérrez GeoConsultants, LTD, and supervised by PARS Environmental, Inc. Analyses were performed by Mountain States Research and Development, Inc. (MSRDI) and METCON Research.
- b.** The material being offered for sale is listed in Section **I.2**. Analytical information for the material is provided in Section **J.2**.
- c.** Government records and analyses indicate that the material conforms to the data listed in Paragraphs **A.2.a.**; Section **I.2**; and Section **J.2**; however, no warranty or guarantee is made that the material so conforms or that it will be suitable for any particular purpose.

### **A.3 Financial Exposure Limit (MAR 11)**

- a.** DLA Strategic Materials will establish a financial exposure limit (maximum level of business the DLA Strategic Materials intends to allow) for each Offeror. The financial exposure limit shall be determined based upon the following:

- (1) Financial Position of the Offeror
  - (2) Past Performance
  - (3) References (Suppliers, Financial Institutions)
  - (4) Credit Reports
- b.** If the Contractor reaches its financial exposure limit, DLA Strategic Materials, solely at its discretion, may determine to make no subsequent awards to the firm until such time as the Contractor satisfactorily performs existing contracts or DLA Strategic Materials increases the exposure limit.
- c.** All contracts awarded to a Contractor by DLA Strategic Materials will be applied against the Contractor's financial exposure limit.
- d.** DLA Strategic Materials may decide to make an award to an Offeror without the prior establishment of a financial exposure limit *only if* the Contracting Officer determines that the award is in the best interest of the Government and that waiting for the establishment of the financial exposure limit would unduly delay the sale.

#### **A.4 Foreign Trade Regulations (MAR 11)**

- a.** The Contractor shall determine any export license requirements, obtain any export license or other official authorization required for export, and carry out any U.S. Customs formalities for the export of any material awarded under this Solicitation.
- b.** The Contractor shall comply with United States Bureau of the Census, Department of Commerce, Foreign Trade Regulations and Export Administration Regulations as set forth in 15 CFR Parts 30 and 732 (latest editions).
- c.** The Contractor shall comply with the requirements set forth in 15 CFR 30 regarding filing of electronic export information (EEI).
- d.** DLA Strategic Materials shall not be named as the United States Principal Party in Interest (USPPI). DLA Strategic Materials will not execute any Shipper's Export Declaration (SED) or file any EEI through the Automated Export System (AES) or AESDirect required by the Foreign Trade Regulations.

**END OF SECTION A**

## **SECTION B –PREPARATION AND SUBMISSION OF OFFERS**

### **B.1 Submittals (AUG 12)**

Offerors shall submit **all** of the following documents along with the offer:

- a. Section I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)** with the section entitled “Execution by Contractor” completed.
- b. Section I.2, Item Offer Page – DLA-METALLURGICAL GRADE MANGANESE ORE-001** with the (1) Unit Price (\$ per SDT) column; (2) Quantity (SDT); (3) Total Offer Price (\$) column; (4) company name; (5) name and title of person authorized to sign the offer; (6) telephone number; (7) facsimile; (8) email address; and (9) signature and date blocks completed.
- c. Section I.3, Proposed Removal Schedule (AUG 12).**
- d. Section I.4, Certificate of Independent Price Determination (JAN 02).**
- e. Section I.5, Certification Regarding Responsibility Matters (APR 10).**
- f. Representations, Certifications and Identifications at Section I.6 through I.10.**
- g.** Copies of the most recent income statement, balance sheet, and list of credit references for the company and any other documentation that will verify the financial level of business transactions. DLA Strategic Materials may require the Contractor to submit updated information at any time.
- h.** Any other terms the Offeror wishes to negotiate. (See Section **B.8.c.** and **B.10.c.**)

### **B.2 General Information (AUG 12)**

- a.** Offers, modifications, and revisions to offers may be submitted by the electronic commerce method electronic mail (email). The only transmission method authorized by this solicitation is electronic mail (hereinafter referred to as email; see Sections **B.6** and **B.7**). Offers, modifications, and revisions to offers submitted by any other transmission method (i.e., facsimile, commercial delivery service, mail, or hand delivery) will **NOT** be accepted.

- b. Offerors must submit their offers via email to [SMContracting@dla.mil](mailto:SMContracting@dla.mil) and include the following information:

ATTN: Directorate of Contracting  
SOLICITATION OF OFFERS  
DLA-METALLURGICAL GRADE MANGANESE ORE-001  
DATE AND TIME OF OFFERING

- c. The Offeror agrees, if its offer is accepted by the Government within **twenty (20)** working days from the date specified in the Solicitation for receipt of offers, to purchase any or all material on which offers are made at the price offered and to take delivery of the material within the time specified in the executed **Section I.1 Sale of Government Property Negotiated Sales Contract**.
- d. Unless a designation of agent is on file at DLA Strategic Materials, an Offeror submitting an offer as agent for another party shall submit written proof, either prior to or with the offer, that it is authorized to act as agent and shall tender the offer in the name of the principal.

### **B.3 Minimum/Maximum Quantity (AUG 12)**

The minimum offer shall be 500 SDT unless a smaller quantity is all that is available for an item. An offer for less than the minimum quantity may render an Offeror ineligible for award. The maximum offer may be for all material offered. The Government may award up to the entire quantity of the offering.

### **B.4 Offer Price (DEC 07)**

Offers shall be expressed as a fixed U.S. dollar and cent value per short dry ton (SDT).

### **B.5 Submission of Offers (AUG 12)**

The metallurgical grade manganese ore offered under this Solicitation was sampled and analyzed by independent sampler/analysts in the fall of 2011 (see Section **A.2**). All manganese ore under this Solicitation shall be awarded on the basis of dry weight (short dry ton). The Offeror shall specify in its offer whether it elects to sample and analyze any awarded material for moisture or whether it elects to waive a moisture determination and accept the Government's analysis of record for moisture based on the 2011 sampling and analysis. See Section **F.3**.

### **B.6 Late Submissions, Modifications, and Withdrawals of Offers (MAR 11)**

- a. Offerors are responsible for submitting offers, and any revisions, and modifications, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. Offerors may use any transmission method authorized

by the solicitation (i.e., regular mail, commercial delivery service, hand delivery, electronic commerce, or facsimile).

- b.** (1) Any offer, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of offers is “late” and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the sale and—
  - (i) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or
  - (ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government’s control prior to the time set for receipt of offers; or
  - (iii) It was the only offer received.
- (2) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.
- c.** Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of the installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.
- d.** If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.
- e.** Offers may be withdrawn by written notice at any time before award. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before award. Offers may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the offer before award.
- f.** Offerors may submit modifications to their offer at any time before closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

- g.** Offerors may submit best and final offers (BAFOs) only if requested or allowed by the Contracting Officer.
- h.** The Contracting Officer must promptly notify any offeror if its offer, modification, or revision was received late, and must inform the offeror whether its offer will be considered, unless contract award is imminent.

#### **B.7 Email Submissions (AUG 12)**

Email offers, modifications, and revisions will be accepted any time prior to the exact time set for receipt of offers. Email withdrawals will be accepted any time before award. **Offerors must use the email address [SMContracting@dla.mil](mailto:SMContracting@dla.mil).**

- a.** Definition: “Email submission,” as used in this Solicitation, means an offer, modification, revision, or withdrawal of an offer that is transmitted to and received by the Government via the electronic commerce method electronic mail (email).
- b.** Offerors may submit email submissions as responses to this Solicitation. These responses must arrive at the place, and by the time, specified in the Solicitation.
- c.** Email submissions that fail to furnish required representations, certifications or information, that reject any of the terms, conditions, and provisions of the Solicitation, that contain garbled information, or are otherwise incomplete, may be excluded from consideration.
- d.** Email submissions must contain the required signatures and include the required Solicitation documentation.
- e.** The Government will make award solely on the email submission.

#### **B.8 Consideration of Offers (AUG 09)**

- a.** The Government reserves the right to --
  - (1) Reject any or all offers;
  - (2) Waive any informalities and minor irregularities in an offer;
  - (3) Award a quantity less than the quantity offered on at the unit price offered; and
  - (4) Accept any one item or group of items in an offer, as may be in the best interest of the Government.
- b.** Notwithstanding Section **B.8.a.(3)**, Offerors may submit multiple offers at various unit prices and may specify a minimum or maximum quantity.

- c. The Government may request specific documentation to support the offer submitted. Failure to provide the documentation, if requested, may result in the Offeror being determined to be ineligible for award.

#### **B.9 Evaluation of Offers – Metallurgical Grade Manganese Ore (AUG 12)**

- a. General - The evaluation factors are listed below in descending order of importance:
  - (1) Unit price.
  - (2) Removal Schedule.
- b. To be considered, offers must meet the following minimum requirements:
  - (1) Submission of the information requested in Section **B.1.**;
  - (2) Submission of pricing which complies with the provisions of Section **B.4.**;
  - (3) Submission of the offer in accordance with Section **B.5.**; and
  - (4) Submission of a removal schedule which meets or exceeds the provisions of **E.1.**

#### **B.10 Negotiation Procedures (MAY 09)**

The Government intends to evaluate offers and award a contract after conducting discussions with all Offerors whose offers have been determined to be within the competitive range. However, the Government reserves the right to award without discussions. Accordingly, Offerors are advised to include their best possible terms in their initial offer.

If the Government determines that holding discussions is in its best interest, the following procedure will be utilized:

- a. **Competitive Range** – The competitive range shall be determined on the basis of price and other factors that are stated in the solicitation and will include all offers which comply with Section **B.9.b.** that have a reasonable chance of being selected for award. Offers not included in the competitive range will not be given further consideration.
- b. **Negotiations/Discussions** – Only Offerors within the competitive range will be contacted to schedule the day and time for discussions to be conducted. Negotiations will be conducted only with the company official signing Section **I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)** or a specifically authorized individual identified in Section **I.6 Authorized Negotiators (MAR 11)**. The content and extent of the discussions is a matter of the Contracting Officer's judgment, based on the particular facts of the sale and each Offeror's initial offer.

- c. Discussion Session** – Only one discussion session per Offeror is intended. In order to facilitate meaningful discussions, Offerors should:
- (1) Be prepared to discuss:
    - (i) All prices and terms included in the initial offer;
    - (ii) Supporting documentation and justification for the derivation of prices offered and other terms the Offeror wishes to negotiate; and
    - (iii) Removal schedule.
  - (2) Arrange to have appropriate support personnel present during discussions, i.e., Purchasing, Marketing, etc.
- d. Best and Final Offer Requests** - At the conclusion of discussions, all Offerors with which discussions were conducted will be requested to submit a best and final offer (BAFO). Oral requests for the best and final offer will be confirmed in writing. Each individual BAFO request will include the following:
- (1) Notice that discussions are concluded;
  - (2) Time and date by which the BAFO must be submitted;
  - (3) Notice that BAFOs are subject to Section **B.6 Late Submissions, Modifications, and Withdrawals of Offers (MAR 11)**;
  - (4) A record of negotiated issues and understandings between the Government and the Offeror (as applicable);
  - (5) A list of remaining questions/deficiencies (if any);
  - (6) A caution to Offerors to provide supporting documentation for any changes to their prior offers as revised during discussions; and
  - (7) Notice that the Government intends to evaluate best and final offers and award a contract without further discussions.
- e. Best and Final Offer Responses** – The BAFO should strictly conform to the best and final offer request. If the Offeror does not submit a BAFO, the initial offer will be considered as the best and final offer. Changes that are not fully supported by documentation may not be evaluated or considered.
- f. Subsequent Discussions/BAFO Requests** – Generally, only one best and final offer will be requested. After receipt of best and final offers, discussions will not be reopened unless the Government determines that it is in its best interest to do so. If discussions are reopened, an additional request for best and final offers will be issued to all Offerors still within the competitive range.

#### **B.11 Disclosure of Information (AUG 04)**

Proprietary or confidential information disclosed in offers/discussions/BAFOs will not be disclosed to the public or used by the Government except for evaluation purposes, unless required by law.

**B.12 Responsibility Determination (MAR 11)**

- a. No award shall be made unless the Contracting Officer makes an affirmative determination of responsibility.
- b. To be determined responsible and eligible for an award, the Offeror shall have adequate financial resources, a satisfactory performance record with DLA Strategic Materials, and a satisfactory record of integrity and ethics. For example, an Offeror may be determined to be non-responsible and therefore ineligible for award if there is a record of poor payment (e.g., payments made with insufficient funds) or poor performance (e.g., failure to pay for or remove material on time). In addition to looking at past performance, DLA Strategic Materials will also review the financial statements and references submitted by the Offeror, as well as the current Dun & Bradstreet report and any other credit reports.

**B.13 Contract Award (MAY 09)**

A written award signed by the Contracting Officer and furnished to a successful Offeror within the time specified for acceptance shall result in a binding contract incorporating all the terms and conditions of this Solicitation unless otherwise stated in the executed Section **I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)**.

**B.14 Unsuccessful Offerors (FEB 98)**

The Contracting Officer will notify unsuccessful Offeror(s) at the earliest practicable time of the basis for non-award.

**END OF SECTION B**

**SECTION C – INSPECTION (AUG 12)**

1. Offerors or their designees, at their expense, are encouraged to inspect material prior to placing an offer and to take a grab sample. Grab samples shall not exceed 50 pounds from each pile(s) being offered. Offerors shall provide a container for each required sample. The sample will be obtained in the presence of and under the direction of a DLA Strategic Materials representative. The Government does not warrant any samples to be representative of the entire pile.
2. Requests for an appointment to inspect and/or to sample the material must be made in writing or by facsimile submission on company letterhead to the following:

Mr. Gary Porter  
Chief, Operations and Logistics Division  
DLA Strategic Materials  
8725 John J. Kingman Road, Suite 3229  
Fort Belvoir, VA 22060-6223  
Facsimile: (703) 767-7608

Requests shall include the name and title of each individual wishing to inspect the material and/or to obtain samples. Offerors will be notified by telephone of the date the material will be available for inspection. The Government reserves the right to limit the number of individuals granted access to the depot.

3. The Offeror, its agents and representatives shall comply at all times with the rules of the storage location.

**END OF SECTION C**

## **SECTION D – PAYMENT**

### **D.1 Payment (MAY 09)**

- a. Payment shall be made in U.S. dollars.
- b. *All payments* shall be made *only* by wire transfer (Fedwire for domestic, within U.S. wire payment; or International wire transfer for wire payments from outside the U.S.). This includes payments for material, adjustments for variations in quantity or weight of material shipped, storage charges, interest, penalty charges, administrative charges, or any other charges. If attempted payments are made by check, the payment will be returned to the sender. The Contractor will incur charges if payments are delinquent.
- c. Payment by wire transfer (Fedwire or International).
  - (1) Wire transfer payment shall be made in accordance with instructions in **Section J.5**. Fees for wire transfers are the responsibility of the Contractor. Payment shall be accompanied by **identifying information including the contract number; modification number (if applicable); invoice number (if applicable); and the name of the material purchased.**
  - (2) If wire transfer payment is not made in accordance with the instructions in **Section J.5** 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. Invoices issued for adjustments for variations in quantity or weight, storage charges, interest, penalty charges, or administrative charges shall be paid promptly.
- e. If payment is not made in full within 30 calendar days of issuance of an invoice as specified in **D.1.d.**, 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.12.**)

### **D.2 Payment Due Date (OCT 05)**

- a. Payment will be made before shipment of material and before the end of the contract period specified in the executed **Section I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)**. If payment is not received by 2:00 p.m., local time Fort Belvoir, VA, on the payment due date, payment will not be credited until the next Government business day. Interest and penalty charges will accrue accordingly.
- b. In the event the payment due date falls on a Saturday, Sunday, or Federal holiday, then the payment due date will be extended to the next Government business day.

**D.3 Interest (AUG 09)**

- a. All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid at the Prompt Payment interest rate. The Prompt Payment interest rate shall be the interest rate established by the Secretary of the Treasury as provided by 41 U.S.C. § 611 and Public Law 92-41. The rate can found in the Federal Register and is applicable to the period in which the amount becomes due, as provided in paragraph **b.**, below.
- b. Amounts shall be due at the earliest of the following dates:
  - (1) The final day of the contract period specified in Section **I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)** (with or without the issuance of an invoice by the Government); or
  - (2) The date of the first written demand for payment under the contract, including any demand resulting from a default termination, unless paid within 30 days of becoming due.

**D.4 Penalty and Administrative Charges (MAY 04)**

In addition to interest charges specified in Section **D.3**, above, a penalty charge of 6 percent per annum shall be assessed on any debt principal that is delinquent more than 90 calendar days. Penalty charges shall accrue from the date the principal amount due becomes delinquent until paid. Additional administrative charges may be assessed, if needed. Administrative charges relating only to delinquent debts will be assessed to cover expenses incurred by the Government in the recovery of such debts.

**END OF SECTION D**

**SECTION E – MATERIAL REMOVAL**

**E.1 Removal of Material (AUG 12)**

- a. The contract period is based on the quantity of material awarded and begins on the date of contract award. The contract period is as follows:

<b><u>Award Quantity (SDT)</u></b>	<b><u>Contract Period in Calendar Days</u></b>
Up to 5,000	30 days
5,001 to 10,000	60 days
10,001 to 15,000	90 days
15,001 to 20,000	120 days
Greater than 20,000	180 days

- b. If the Contractor fails to pay for and remove the material on or before the last day of the contract period, the Contractor will be considered delinquent and no material will be shipped until payment for all remaining material has been received.
- c. The contract period includes Saturdays, Sundays and Federal holidays. If the last day of the contract period is a Saturday, Sunday or Federal holiday, or the storage location is otherwise closed that day, the period of contract performance will be extended to the next Government workday.

**E.2 Storage Charges (AUG 12)**

- a. Storage charges shall be assessed on all material remaining after the last day of the contract period. The Government reserves the right to remove any remaining material to a commercial storage facility and be reimbursed by the Contractor for any expenses incurred. Storage charges continue to accrue until all the material has been removed or the contract is terminated for default, in which case the Contractor will be liable for damages, as set forth in Section **G.7 Default** of the Solicitation.
- b. The storage charge is the greater of the following: (1) **\$0.03 per short ton bulk (net wet) weight** (if a fraction of a ton remains, the charge will be for a full ton) per 30 day period regardless of whether the material remains in storage a period of 30 days or less than 30 days; or (2) commercial storage charges, if applicable.

- c. Storage charges will be invoiced upon shipment. Payment shall be made promptly.
- d. Payment of storage charges shall not relieve the Contractor of its obligation to remove the material in a timely manner. Acceptance of storage payments by the Government is not a waiver of the Government's right to default the Contractor for failure to remove the material (See Section **G.7 Default**).

**END OF SECTION E**

## **SECTION F – SHIPPING**

### **F.1 Request for Shipment (MAR 11)**

- a.** Handling and outloading will be by and at the expense of the Contractor. At least **five (5)** working days prior to the date shipment is required to commence, the Contractor shall furnish commercial bills of lading to the designated depot. Simultaneously, the Contractor shall submit shipping instructions to the Contracting Officer by completing and faxing the form in **Section J.3 Shipping Instructions**. The Government will only accept shipping instructions from those individuals designated in **Section I.8 Persons Authorized to Request Shipment of Material**. **No material will be shipped under the provisions of this contract or any other contract the Contractor has with DLA Strategic Materials until all outstanding delinquent charges and payments have been satisfied.**
  
- b.** “Shipping Instructions” shall include the following:
  - (1) Quantity of material to be released, unit price and total dollar value.
  - (2) Designation of type and kind of conveyance.
  - (3) Name of the carrier (including a telephone number where contact can be reached).
  - (4) “Ship to” location.
  - (5) Minimum load per conveyance (optional)
  - (6) Desired shipping schedule.
  - (7) Name and telephone number of an agent who can furnish additional shipping information if needed.
  - (8) Any additional pertinent information, including outloader and sampler information.
  
- c.** The shipping schedule shall allow sufficient time for the Government to reasonably meet such schedule prior to the last day of the contract period commensurate with existing loading facilities and other commitments at the Government’s storage locations. Information regarding Government commitments may be obtained from the address specified in **Section J.1**. The Government shall determine the order in which the material is scheduled, coordinated, and outloaded. The material offered under the Solicitation is located at an unstaffed storage site in Wenden, AZ.
  
- d.** The Contractor’s designee shall perform any necessary procedure(s) to ensure cargo is safely secured and meets all Department of Transportation (DOT) requirements prior to leaving the storage site. See also **Section F.1.h**.
  
- e.** Outloading will be accomplished by truck. The Contractor will be responsible for any damage to the roads at the storage location above normal wear and tear.

- f.** Contractor operations at the storage site will be limited to those activities related to outloading of the material; i.e., transportation, sampling, weighing, and outloading. No processing of the material of any kind will be permitted on the storage site.
- g.** Upon completion of the outloading, the Contractor and/or its agent(s) and employees shall make certain that the storage site is clean and in a condition acceptable to the Government. Any debris or foreign matter generated through the use of materials and/or equipment brought into the storage area to facilitate the outloading shall be removed from the storage location by the Contractor and/or its agent(s) at the Contractor's expense.
- h.** The Contractor, its agent and employees shall comply with all applicable rules at the storage depot; Federal, state and local load limitations; and all safety, health, and environmental requirements, including the Environmental Safety and Occupational Health Policy of DLA Strategic Materials. See also Section **F.7** Environmental Policy (**MAR 11**).
- i.** Requests for shipment shall be for a minimum of 500 SDT, or an entire line item, whichever is less. Shipping instructions and information requested in paragraph **b.**, above, are to be furnished to the following address:

DLA Strategic Materials  
ATTN: METALLURGICAL GRADE MANGANESE ORE Contracting  
Officer  
8725 John J. Kingman Road  
Suite 3229  
Fort Belvoir, VA 22060-6223  
Facsimile Number: (703) 767-5484 or (703) 767-4074
- j.** The Contractor shall pay \$100 per day if the Contractor's conveyance fails to report to an unstaffed storage location as scheduled.

## **F.2 Insurance Requirements (DEC 07)**

The Contractor shall procure and maintain, and require any subcontractor to procure and maintain, during the entire period of performance under this contract, such insurance as stipulated herein.

- a.** Workers' compensation and employer's liability. The Contractor is required to comply with applicable Federal and State workers' compensation and occupational disease statutes. Employer's liability coverage of at least \$100,000 is required, except in States with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.
- b.** General liability. Bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$500,000 per occurrence.

- c. Automobile liability insurance written on the comprehensive form of policy is required. The policy shall provide for bodily injury and property damage liability covering the operation of all motor vehicles used in connection with performing the contract. Policies covering motor vehicles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

### **F.3 Weighing (AUG 12)**

- a. Conveyance (truck, van, or railroad cars as applicable by location) shall be light (tare) and heavy weighed (gross), with the tare weight of the conveyance deducted to arrive at the net weight of the material. The stenciled tare weight of a railroad car and the actual tare weight of trucks or vans shall be used. Weighing shall be done by and at the expense of the Contractor on state certified truck or rail scales. All weighing may be witnessed by a Government representative, with the exception of weighing on railroad scales, which will be witnessed by the railroad. Weighing shall be done on the nearest railroad scale or state certified truck scale.
- b. A Government representative shall certify the correctness of the weighing method and that truck scales have been inspected and certified. The Contractor shall arrange for the use of state certified truck scales and the Contractor, or its agent, will provide certified scale tickets. Truck or railroad scale tickets will be provided by the Contractor or its agent within ten working days after the entire requested release quantity has been shipped, or at the end of each week's shipments, whichever is sooner.
- c. Weight certificates shall be provided by and at the expense of the Government. The scale tickets shall be final for payment purposes.

### **F.4 Moisture Determination (AUG 12)**

- a. Moisture determination shall be made in accordance with standard commercial procedures by an independent sampler/analyst, to be designated by the contractor and acceptable to the Government, with the results of such analyses being final and binding. Certificates of moisture shall be furnished simultaneously to both parties by the independent sampler/analyst.
- b. The independent sampler/analyst shall furnish to the Government for review and approval of the proposed sampling methods and moisture analysis procedures prior to outloading. These documents, as well as the certificate of moisture, shall be forwarded to:

DLA Strategic Materials  
Attn: Directorate of Material Management  
8725 John J. Kingman Road, Suite 3229  
Fort Belvoir, VA 22060-6223  
FAX: (703) 767-7608

- c. The net weight, as determined in Section **F.3**, less the moisture content represented by the sample taken (in accordance with paragraph **a.**, above) shall be used to determine the dry weight expressed in dry tons of material. The dry ton weight determination shall be final for the computation of the dollar value of the metallurgical grade manganese ore.
- d. The contractor shall make the necessary arrangements to procure the services of the independent sampler/analyst and the Contractor shall bear the cost of these services.
- e. Should moisture determination by an independent sampler/analyst be waived by the contractor, the Government's moisture analysis of record, as specified in Section J.2 of this Solicitation, will be used to determine the dry weight expressed in dry tons of material. The dry ton weight so determined from the net weight shall be final for the computation of the dollar value of the metallurgical grade manganese ore.

#### **F.5 Assumption of Risk and Disclaimer of Liability (JAN 02)**

The Contractor, its assigns or agents, assumes full responsibility for all injury or damage to persons or property occasioned by or occurring in connection with, or incident to any use or possession of, this material by the Contractor, Contractor's employees, or any person subject to the Contractor's control. The Government assumes no liability for any damages to the property of the Contractor, any other person or property, or any personal injury, illness, disability or death to the Contractor, Contractor's employees or any other person subject to Contractor's control, or for any other consequential damages arising from or incident to the purchase, use, loading, processing, disposition, or any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, material or substance.

#### **F.6 Adjustment for Variation in Quantity or Weight (MAR 11)**

The Government reserves the right to vary the quantity or weight delivered by **ten (10)** percent from the quantity or weight listed in the contract and the Contractor agrees to accept delivery of any quantity or weight within these limits. The contract price will be adjusted upward or downward in accordance with the unit price and on the basis of the quantity or weight actually delivered.

## **F.7 Environmental Policy (MAR 11)**

The Contractor, its agents and employees shall comply with the Environmental Safety and Occupational Health Policy of DLA Strategic Materials while on storage facilities where stockpile material is stored. The Contractor shall review information on the DLA Strategic Materials Environmental Safety and Occupational Health Policy on the DLA Strategic Materials Website at <https://www.dnsc.dla.mil/iamthekey>. The DLA Strategic Materials Environmental Safety and Occupational Health Policy may be found in Interpretive Guidance Document 1001, Environmental, Safety and Occupational Health Policy, Section 2.1. Contractors shall also review the policy statement for the DLA Strategic Materials Environmental, Safety and Occupational Health Management System (ESOHMS) and each depot's ESOHMS Orientation Guide for Contractors and Visitors. All documentation is available on the DLA Strategic Materials website.

## **F.8 Environmental Protection (APR 10)**

### **a. Transportation Requirements**

- (1) The transportation of hazardous material is governed by Department of Transportation (DOT) Hazardous Materials Regulations (Title 49 Code of Federal Regulations, Parts 170-189). If the material being transported is covered by DOT Regulations, the Contractor or its agent is responsible for certifying to DOT that hazardous materials are properly classified, described, packaged, marked, and labeled and are in a condition safe to transport based on the Contractor's or its agent's own examination of the material. (See especially 49 CFR 173.7(a) (1).)
- (2) The Government reserves the right to conduct reasonable inspection of the Contractor's or its agent's transportation conveyances or other equipment utilized to effect removal of the material purchased under this Solicitation. Inspection may occur prior to, during, or subsequent to removal of the material from Government storage locations. The Contractor or its agent shall provide Government representatives with access and any reasonable assistance required to conduct this inspection.

### **b. Material Safety Data Sheets**

- (1) Offerors are warned that unprotected exposure to hazardous substances, hazardous materials and hazardous chemicals may significantly increase the risk of health problems. The Contractor shall comply with all applicable Occupational Safety and Health Administration (OSHA) and any other Federal, state or local laws, codes, ordinances, and regulations (including obtaining any required licenses or permits) governing exposure to, and storage, handling, transportation, and disposition of, this material.

- (2) Material Safety Data Sheets as required by OSHA Hazard Communication Standard - 29 CFR 1910.1200 are incorporated herein. (See Section **J.4.**) This data provides specific toxicity and health related data for the protection of human health and the environment. Offerors should review this information carefully. It is the responsibility of the Contractor to further communicate this information to the distributor, manufacturer, user and/or transporter of this material as may be required by Federal regulations.
- (3) Offerors shall also refer to 29 CFR 1910 Occupational Safety and Health Standards, specifically sections 1910.1000 through 1050. These occupational standards set standards for permissible exposures, methods of compliance, personal protective equipment, and other measures that must be taken when working with, or in proximity to, hazardous materials, chemicals and substances in the United States and its territories and possessions.

**c. Use and Disposition**

- (1) The Contractor certifies that it shall use and ultimately dispose of any hazardous material purchased under this Solicitation in accordance with all applicable Federal, state, local and international laws and regulations and in a manner safe for the public and the environment.
- (2) The material offered under this Solicitation is not, in its present form, subject to EPA Hazardous Waste Regulations (40 CFR Part 260, et seq.) issued under the Resource Conservation and Recovery Act. However, it is possible that use of this material will lead to the creation of a hazardous waste. 40 CFR Part 260, et seq., details the responsibilities of generators, transporters, treaters, storers, and disposers of hazardous waste. Failure to comply with these regulations can lead to civil and criminal penalties.

**F.9 Accident Reporting (AUG 09)**

In the event of an accident involving the Contractor, its employees, subcontractors or any person subject to the Contractor's control, as a result of activities occurring in performance of this contract, that results in the preparation of an accident report by the Contractor, its subcontractors or any person or entity subject to the Contractor's control, a copy of the accident report shall be forwarded to the Contracting Officer no later than 10 calendar days after the accident occurred.

**END OF SECTION F**

## **SECTION G – CONTRACT ADMINISTRATION DATA**

### **G.1 Amendments and Modifications (JAN 95)**

- a.** Changes in terms and conditions of this Solicitation shall be accomplished by written amendment only.
- b.** Changes in terms and conditions of any resulting contract shall be accomplished only by written modification signed by the Contracting Officer.

### **G.2 Title (JUL 02)**

Title to the material shall pass to the Contractor after payment is received or the material is shipped, whichever occurs first.

### **G.3 Risk of Loss (JUL 02)**

- a.** After the award of the contract and prior to receipt of payment for or shipment of the material, whichever occurs first, the Government shall be responsible for the care and protection of the material, and any loss, damage or destruction occurring during such time will be adjusted by the Government.
- b.** After receipt of payment but prior to either shipment or the end of the contract period, the Government shall be responsible only for the exercise of reasonable care for the protection of the material.
- c.** After shipment or the end of the contract period, whichever occurs first, all risk of loss, damage, or destruction from any cause whatsoever, shall be borne by the Contractor.

### **G.4 Limitation on Government's Liability (JAN 95)**

- a.** Except as provided in paragraph **b.** in any case where liability of the Government to the contractor has been established, the measure of the Government's liability shall not exceed refund of whatever portion of the purchase price the Contractor has paid.
- b.** Where specifically authorized in writing by the Contracting Officer, the Contractor may recover reasonable costs of packing, loading, and transportation incurred in connection with return of material to the Government.

## **G.5 Agency Protests (MAR 11)**

- a. General.** Companies may file a protest over sales under this Solicitation with the –
- (1) Contracting Officer;
  - (2) Director, Directorate of Contracting, DLA Strategic Materials, for a decision at a level above the Contracting Officer;

Unless otherwise specified, protests will be presumed to be protests to the Contracting Officer.

- b. Pre-Award Protests.** Protests based on alleged improprieties in the solicitation that are apparent prior to bid opening or the time set for receipt of initial offers shall be filed prior to bid opening or the time set for receipt of initial offers. In negotiated sales, protests based on alleged improprieties that do not exist in the initial solicitation, but that are subsequently incorporated into the solicitation must be filed not later than the next closing time set for receipt of offers following the incorporation.
- c. Post-Award Protests.** Protests after award shall be filed not later than 10 calendar days after the basis of the protest is known or should have been known, whichever is earlier, except for protests challenging a negotiated sale under which a debriefing is requested and provided. In that situation, and where the basis was not known prior to the debriefing, the initial protest shall be filed not later than 10 calendar days after the date of the debriefing.
- d. Service of Protest.**
- (1) Protests seeking a decision by the Contracting Officer shall be served in writing at the following address and may be filed by mail, hand delivery, commercial delivery service, or facsimile:

ATTN: Directorate of Contracting  
(Insert Name of the Contracting Officer)  
DLA Strategic Materials  
8725 John J. Kingman Road, Suite 3229  
Fort Belvoir, VA 22060-6223  
Facsimile No.: (703) 767-5484 or (703) 767-4074

- (2) As an alternative to filing a protest with the Contracting Officer, bidders or offerors may seek an independent review by filing an agency-level protest with the DLA Strategic Materials Director, Directorate of Contracting. This process allows for a higher level decision on the initial protest. It is not a review of a Contracting Officer's decision on a protest filed with the Contracting Officer. A protest seeking an agency-level decision should clearly state that it is an "Agency Level Protest Under Executive Order 12979." The protest shall be

served in writing at the following address and may be filed by mail, hand delivery, commercial delivery service, or facsimile:

ATTN: Director, Directorate of Contracting  
DLA Strategic Materials  
8725 John J. Kingman Road, Suite 3229  
Ft. Belvoir, VA 22060-6223  
Facsimile No.: (703) 767-4074

#### **G.6 Disputes (FEB 03)**

- a.** This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).
- b.** Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.
- c.** "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- d.** (1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.
  - (2) (i) The Contractor shall provide the certification specified in paragraph (d)(2)(iii) of this clause when submitting any claim exceeding \$100,000.
  - (ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.
  - (iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

- (3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.
- e. For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.
- f. The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.
- g. If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the offer.
- h. The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.
- i. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

#### **G.7 Default (AUG 09)**

- a. (1) The Government may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to –
  - (i) Make payment and remove the material within the time specified in this contract or any extension;
  - (ii) Remove the material within the time specified in this contract whether or not payment has been made;
  - (iii) Make progress, so as to endanger performance of this contract; or
  - (iv) Perform any of the other provisions of this contract.

(2) The Government's right to terminate this contract under a.(1)(iii) and a.(1)(iv) above, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure. Upon the Contractor's failure to cure such default within that period (or such further period as the Contracting Officer may allow), the Contractor shall lose all right, title and interest which it might otherwise have acquired in and to the material as to which a default has occurred.

(3) If at any time prior to the expiration of this contract, the Contractor makes it clear either by words, actions, or circumstances, that the Contractor is unwilling or unable to perform under this contract, the Government shall not be required to furnish the Contractor notice specifying the failure under this contract prior to exercising its right to terminate this contract for default and seek damages.

- b.** If the contract is terminated, the Contractor could be held liable for damages resulting from the resale of the material, as described below. The Contractor may also be liable for additional charges including, not limited to: interest, storage charges, penalty charges, consideration fees, and administrative charges relating to the termination.
- c.** If the Government terminates the contract for default, it may subsequently resell the material for the Contractor's account, under the terms and in the manner the Contracting Officer considers appropriate, and assess the Contractor the difference between the contract price and the price obtained on resale. In no event will the Contractor be refunded any money if the Government obtains a greater price on resale, nor will an accounting of money be made until resale is complete. In the event that the Government does not resell the material within 12 months, the Contractor may be held liable for the full contract price for the quantity of material on which the default has occurred. In order to calculate the Government's damages on contracts where the contract price is determined on a formula-price basis, the Government will establish the contract price for the quantity of material on which the default has occurred as follows: Using the pricing mechanism set forth in the contract, the Government will set the price as though the material had been priced on the last day of the contract period or the date of the termination notice, whichever is earlier.
- d.** If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.
- e.** The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

**G.8 Applicable Law for Breach of Contract Claim (JUL 06)**

United States law will apply to resolve any claim of breach of this contract.

**G.9 Bankruptcy (JAN 07)**

In the event the contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the contracting officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed and the identity of the court in which the bankruptcy petition was filed.

**G.10 Termination for Convenience of the Government (DEC 97)**

- a. The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall only be liable for actual costs incurred by the Contractor before the effective date of termination.
- b. If a bona fide requirement for the material develops or exists prior to removal of the material from Government control, the Government may withdraw that material from the sale. In the event of a withdrawal under this condition, the Government shall be liable only for the refund of the contract price of the withdrawn material or such portion of the contract price as it may have received plus simple interest at the rate established by the Secretary of the Treasury.

**G.11 Excusable Delays (DEC 07)**

- a. In the event either party should be prevented from performing under this contract by reason of any unforeseeable cause beyond its control and without its fault or negligence, including, but not restricted to, acts of God or of the public enemy, sovereign acts of the United States, acts of a foreign Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather, performance under the contract shall be suspended in whole or in part until the cause ceases to exist and thereafter the time for fulfillment of the contract shall be extended by the length of time during which the cause prevented performance under the contract.
- b. The Contracting Officer shall make a written determination that an excusable delay condition exists.
- c. This section shall also apply to an excusable delay condition that prevents delivery at a consignee's plant if –

- (1) the delay meets the criteria in paragraph **a.** above; and
  - (2) the identity of the consignee is known to the Government prior to commencement of the excusable delay condition.
- d.** The Contractor shall notify the Contracting Officer, in writing, of the nature and extent of the excusable delay condition promptly after the commencement thereof, but in any event prior to outloading of the material from the storage location from which it is to be shipped. The Contractor shall notify the Contracting Officer, in writing, within ten (10) calendar days when the excusable delay condition ceases to exist.

#### **G.12 Setoff of Funds (MAY 04)**

The Contractor agrees that the Government may use all or a portion of any monies received by the Government to satisfy, in whole or in part, any debt (e.g., delinquent payments, interest, penalty charges, administrative charges, or storage charges), arising out of this or any other transaction.

#### **G.13 Indemnification Agreement (JAN 02)**

The Contractor shall save and hold harmless and indemnify the Government against any and all liabilities, claims, and costs of any kind and nature for injury to or death of any person or persons and for loss or damage to any property (Government or otherwise) occurring in conjunction with or in any way incident to or arising out of the occupancy, use, service, operations, or performance of work resulting from the acts or omissions of the Contractor, Contractor's employees, or any person subject to the Contractor's control in connection with the contract. Whether due to negligence or not of the Contractor, the Contractor agrees to reimburse the United States for any legal expenses (including salaries of attorneys) incurred by the United States in defending any and all claims or suits against the United States, whether well-founded or not, in any way whatsoever alleged to have arisen from the acts or omissions of the Contractor, Contractor's employees, or any person subject to the Contractor's control.

#### **G.14 Covenant Against Contingent Fees (JAN 95)**

- a.** The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to add to the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

- b.** “Bona fide agency,” as used in this paragraph, means an established commercial or selling agency, maintained by a Contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.
- c.** “Bona fide employee,” as used in the paragraph, means a person, employed by a Contractor and subject to the Contractor’s supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.
- d.** “Contingent fee,” as used in this paragraph, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.
- e.** “Improper influence,” as used in this paragraph, means any influence that induces or tends to induce a Government employee or office to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

**END OF SECTION G**

**SECTION H – DEFINITIONS (MAY 09)**

As used throughout this Solicitation, the following terms shall have the meaning set forth below:

- a.** The term “Contracting Officer” means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings.
- b.** The terms “Offeror”, “Purchaser”, or “Contractor” may be used interchangeably.
- c.** The terms “shall” and “must” are used interchangeably.
- d.** The term “electronic commerce” means electronic techniques for accomplishing business transactions including electronic mail or messaging and World Wide Web technology.

**END OF SECTION H**

**SECTION I – SUBMITTALS**

**COMPLETE AND RETURN ALL OF THE FOLLOWING:**

- I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)
- I.2 Item Offer Page – DLA METALLURGICAL GRADE MANGANESE ORE-001 (AUG 12)
- I.3 Proposed Removal Schedule (AUG 12)
- I.4 Certificate of Independent Price Determination (JAN 02)
- I.5 Certification Regarding Responsibility Matters (APR 10)
- I.6 Authorized Negotiators (MAR 11)
- I.7 Type of Business Organization (APR 96)
- I.8 Persons Authorized to Request Shipment of Material (MAR 11)
- I.9 Contractor’s Address and Billing Address (MAR 11)
- I.10 Disputes: Agreement to Use Alternative Dispute Resolution (JUL 06)

**Section B** Financial Information as appropriate in response to Section **B.1**, paragraph **g**.

**I.1 Sale of Government Property Negotiated Sales Contract (AUG 12)**

<b>SALE OF GOVERNMENT PROPERTY NEGOTIATED SALES CONTRACT</b>		<b>CONTRACT NUMBER</b> SP0833-		<b>PAGE</b> 1 of Pages	
<p>This contract is entered into by and between the United States of America, hereinafter called the "Government," represented by the Contracting Officer executing this contract and the Contractor below identified. The Government agrees to sell and the Contractor agrees to buy the material described below in accordance with the terms and conditions of DLA-METALLURGICAL GRADE MANGANESE ORE-001. In the event of a conflict between the terms of the Solicitation and this Negotiated Sales Contract, the terms of the Negotiated Sales Contract govern.</p>					
<i>ITEM</i>	<i>PROPERTY DESCRIPTION AND LOCATION</i>	<i>QUANTITY (No. of Unit(s))</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>AMOUNT</i>
	<p><u>METALLURGICAL GRADE MANGANESE ORE</u>            LOCATION: WENDEN, AZ STORAGE SITE</p> <p>CONTRACT PERIOD EXPIRES ON:</p>				
<b>EXECUTION BY CONTRACTOR</b>			<b>EXECUTION BY GOVERNMENT</b>		
<i>DATE (Day, Month, Year)</i>			<i>UNITED STATES OF AMERICA</i>		<i>DATE:</i>
<i>NAME OF CONTRACTOR</i>			BY:		
<i>ADDRESS (Street, City, State &amp; Zip Code) (Type or Print)</i>			<i>NAME AND TITLE OF CONTRACTING OFFICER</i>		
<p>Telephone Number: _____</p> <p>Email Address: _____</p>					
<i>SIGNATURE AND TITLE OF PERSON AUTHORIZED TO SIGN THIS CONTRACT (Type or print name and title under signature)</i>			<p>_____            Contracting Officer      <u>DLA Strategic Materials</u>            (Agency)</p>		

**I.2 Item Offer Page – DLA-METALLURGICAL GRADE MANGANESE ORE-001 (AUG 12)**

Item Number	Location	Pile	Origin	Net Weight Available (SDT)	Unit Price (\$ per SDT)	Quantity (SDT)	Total Offer Price (\$)
K00000448	Wenden, AZ	0B-9	Domestic	25,000.00	\$		\$
<b>Total:</b>				<b>25,000.00</b>	<b>\$</b>		<b>\$</b>

Company Name: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Facsimile: \_\_\_\_\_

Email Address: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**I.3 Proposed Removal Schedule (AUG 12)**

**In preparing this Section I.3, Offerors are advised to review the removal requirements shown in Section E.1 of this Solicitation and propose their own schedule for the quantity/quantities in their offer. The offer quantity shall be expressed in short dry tons (SDT) and the removal schedule shall be expressed in calendar days. Offerors are reminded that, in accordance with Section E.1, the final contract period will be based on the quantity awarded.**

<b>Item</b>	<b>Offer Quantity (SDT)</b>	<b>Removal Schedule (Calendar Days)</b>

#### **I.4 Certificate of Independent Price Determination (JAN 02)**

- a.** The Offeror certifies that:
- (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;
  - (2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
  - (3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- b.** Each signature on the offer is considered to be a certification by the signatory that the signatory:
- (1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or offer, and that the signatory has not participated and will not participate in any action contrary to subparagraphs **a.(1)** through **a.(3)** above; or
  - (2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs **a.(1)** through **a.(3)**, above
- 
- (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or offer, and the title of his or her position in the offeror's organization);*
- (ii) As an authorized agent, does certify that the principals named in subparagraph **b.(2)(i)** above have not participated, and will not participate, in any action contrary to subparagraphs **a.(1)** through **a.(3)** above; and
  - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs **a.(1)** through **a.(3)** above.
- c. If the offeror deletes or modifies subparagraph a.(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.**

## I.5 Certification Regarding Responsibility Matters (APR 10)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that—

(i) The Offeror and/or any of its Principals—

(A) Are  are not  presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have  have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property;

(C) Are  are not  presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision;

(D) Have , have not , within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

(i) *The tax liability is finally determined.* The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(ii) *The taxpayer is delinquent in making payment.* A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) *Examples.*

(i) The taxpayer has received a statutory notice of deficiency, under I.R.C. § 6212, which entitles the taxpayer to seek Tax Court review of

a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

- (ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. § 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.
- (iii) The taxpayer has entered into an installment agreement pursuant to I.R.C. § 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.
- (iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

- (ii) The Offeror has  has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

- (2) “Principal,” for the purposes of this certification, means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (*e.g.*, general manager; plant manager; head of a division or business segment; and similar positions).

**This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.**

- (b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the

certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

**I.6 Authorized Negotiators (MAR 11)**

The Offeror represents that the following individuals are authorized to negotiate on its behalf.

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Name	Email Address
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Title	Telephone
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Name	Email Address
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Title	Telephone
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**I.7 Type of Business Organization (APR 96)**

The Contractor represents that –

- a. It operates as ( ) a corporation incorporated under the laws of the State of \_\_\_\_\_, ( ) an individual, ( ) a partnership, ( ) a nonprofit organization, or ( ) a joint venture.
- b. If the Contractor is a foreign entity, it operates as ( ) an individual, ( ) a partnership, ( ) a nonprofit organization, ( ) a joint venture, or ( ) a corporation registered for business in \_\_\_\_\_ (country).
- c. If the Contractor is a corporation, it is ( ) independent (not owned or controlled by another company), ( ) owned or controlled by \_\_\_\_\_ corporation company registered for business in \_\_\_\_\_ (state/country).
- e. If the Contractor is owned or controlled by another, state the relationship (e.g., wholly owned subsidiary, etc.): \_\_\_\_\_
- f. The Contractor agrees to provide additional information relating to the above representations if requested to do so by the Contracting Officer.

**I.8 Persons Authorized to Request Shipment of Material (MAR 11)**

The Contractor shall provide the name(s), title(s), signature(s), and telephone number(s), and email addresses of representative(s) authorized to sign Section **J.3** Shipping Instructions:

_____ Typed Name	_____ Title	
_____ Signature	_____ Telephone	_____ Email Address
_____ Typed Name	_____ Title	
_____ Signature	_____ Telephone	_____ Email Address
_____ Typed Name	_____ Title	
_____ Signature	_____ Telephone	_____ Email Address

**I.9 Contractor's Address and Billing Address (MAR 11)**

The Contractor shall provide its address, telephone number, facsimile number, and email address in the space provided below:

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The Contractor shall provide its billing address, billing telephone number, billing facsimile number, and billing email address below, if different from the address information shown above.

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**I.10 Disputes: Agreement to Use Alternative Dispute Resolution (JUL 06)**

- a. The parties agree to negotiate with each other to try to resolve any disputes that may arise. If unassisted negotiations are unsuccessful, the parties will use alternative dispute resolution (ADR) techniques to try to resolve the dispute. Litigation will only be considered as a last resort when ADR is unsuccessful or has been documented by the party rejecting ADR to be inappropriate for resolving the dispute.
- b. Before either party determines ADR inappropriate, that party must discuss the use of ADR with the other party. The documentation rejecting ADR must be signed by an official authorized to bind the contractor, or, for the Agency, by the contracting officer, and approved at a level above the contracting officer after consultation with the ADR Specialist and with legal counsel. Contractor personnel are also encouraged to include the ADR Specialist in their discussions with the contracting officer before determining ADR to be inappropriate.
- c. If you wish to opt out of this clause, check here (\_\_\_). Alternate wording may be negotiated with the contracting officer.

**END OF SECTION I**

**SECTION J – LIST OF ATTACHMENTS**

- J.1 Storage Location
- J.2 Analysis
- J.3 Shipping Instructions (MAR 11)
- J.4 Material Safety Data Sheet (DEC 08)
- J.5 Fedwire and International Wire Transfer Procedures (MAR 11)

## **J.1 Storage Location**

### **Wenden, AZ Storage Site / DLA Strategic Materials**

**Operational Status:** Unstaffed

**Responsible Depot:** Hammond Depot, Defense Logistics Agency / DLA Strategic Materials  
Hammond, IN

**Depot Manager:** John Olszewski

**Telephone:** (219) 937-5383

**Facsimile:** (219) 937-5284

**Outloading Hours:** 7:00 AM – 3:00 PM –MONDAY - FRIDAY  
Truck  
Rail spur is not operational

Prior arrangements must be made before shipping.  
The Site is located on US Highway 60, 2 miles East of  
Wenden, AZ (Mile Marker 63) in La Paz County.

### **DLA/Strategic Materials Headquarters Contact:**

Mr. Charles Harder  
Operations and Logistics Division  
DLA Strategic Materials  
8725 John J. Kingman Road, Suite 3229  
Fort Belvoir, VA 22060-6223

**Telephone:** (703) 767-1163

**Facsimile:** (703) 767-7608

## J.2 Analysis

### Percent

Location	Pile	Mn	Fe	Al	Si	P	S	As	Cu	Pb	Zn	Sn	Cr	Moisture
Wenden, AZ	0B9	20.90	3.73	7.48	39.02	0.05	0.13	0.09	0.03	0.73	0.16	-	0.01	5.68

Government records and analyses indicate that the material conforms to the data provided; however, no warranty or guarantee is made that the material so conforms or that it will be suitable for any particular purpose. See Section **A.2**.

**J.3 Shipping Instructions (MAR 11)**

Shipping Request Number: \_\_\_\_\_

**SHIPPING INSTRUCTIONS**

1. a. Contractor: \_\_\_\_\_

b. Point of Contact: \_\_\_\_\_ c. Telephone No.: \_\_\_\_\_

2. a. DLA Contract No \_\_\_\_\_ b. Commodity: \_\_\_\_\_

3. Item/Pile: \_\_\_\_\_

4. Depot: \_\_\_\_\_

5. a. Quantity: \_\_\_\_\_

b. Unit Price: \_\_\_\_\_ c. Total Dollar Value: \_\_\_\_\_

6. Shipping Method: \_\_\_\_\_

7. a. Carrier Name: \_\_\_\_\_

b. Point of Contact: \_\_\_\_\_ c. Telephone No.: \_\_\_\_\_

8. Date Shipment Desired: \_\_\_\_\_

9. Ship To: \_\_\_\_\_

10. Minimum Load: \_\_\_\_\_

11. a. Outloader: \_\_\_\_\_ b. Telephone No.: \_\_\_\_\_

12. a. Sampler: \_\_\_\_\_ b. Telephone No.: \_\_\_\_\_

13. Copy of Payment Attached: Yes \_\_\_\_\_ No \_\_\_\_\_

14. Remarks: \_\_\_\_\_

15. Contractor's Signature: \_\_\_\_\_

Date

Telephone

16. Release Approved and Authorized: \_\_\_\_\_

Contracting Officer

Date

**J.4 Material Safety Data Sheet – METALLURGICAL GRADE MANGANESE ORE (DEC 08)**

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## MATERIAL SAFETY DATA SHEET

### 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: MANGANESE, METALLURGICAL**

**TRADE NAMES/SYNONYMS:**  
DLA13623

**CREATION DATE:** Jul 01 1992  
**REVISION DATE:** Dec 11 2008

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

**COMPONENT: MANGANESE**  
**CAS NUMBER:** 7439-96-5  
**EC NUMBER (EINECS):** 231-105-1  
**PERCENTAGE:** >48.00

**COMPONENT: IRON**  
**CAS NUMBER:** 7439-89-6  
**EC NUMBER (EINECS):** 231-096-4  
**PERCENTAGE:** <4.00

**COMPONENT: ALUMINUM OXIDE**  
**CAS NUMBER:** 1344-28-1  
**EC NUMBER (EINECS):** 215-691-6  
**PERCENTAGE:** <15.00

**COMPONENT: SILICON DIOXIDE**  
**CAS NUMBER:** 7631-86-9  
**EC NUMBER (EINECS):** 231-545-4  
**PERCENTAGE:** <9.00

**COMPONENT:** LEAD  
**CAS NUMBER:** 7439-92-1  
**EC NUMBER (EINECS):** 231-100-4  
**PERCENTAGE:** <0.20

**COMPONENT:** PHOSPHORUS, WHITE  
**CAS NUMBER:** 7723-14-0  
**EC NUMBER (EINECS):** 231-768-7  
**PERCENTAGE:** <0.05

**COMPONENT:** ARSENIC  
**CAS NUMBER:** 7440-38-2  
**EC NUMBER (EINECS):** 231-148-6  
**PERCENTAGE:** <0.05

**COMPONENT:** COPPER  
**CAS NUMBER:** 7440-50-8  
**EC NUMBER (EINECS):** 231-159-6  
**PERCENTAGE:** <0.20

**COMPONENT:** CHROMIUM  
**CAS NUMBER:** 7440-47-3  
**EC NUMBER (EINECS):** 231-157-5  
**PERCENTAGE:** <0.30

**COMPONENT:** ZINC  
**CAS NUMBER:** 7440-66-6  
**EC NUMBER (EINECS):** 231-175-3  
**PERCENTAGE:** <0.20

### 3. HAZARDS IDENTIFICATION

**NFPA RATINGS (SCALE 0-4):** HEALTH=1 FIRE=0 REACTIVITY=0



#### **EMERGENCY OVERVIEW:**

**PHYSICAL DESCRIPTION:** Reddish-gray or silvery, brittle, metallic solid

**MAJOR HEALTH HAZARDS:** nerve damage, cancer

**PHYSICAL HAZARDS:** Negligible fire and explosion hazard in bulk form. Dust/air mixtures may ignite or explode.

#### **POTENTIAL HEALTH EFFECTS:**

##### **INHALATION:**

**SHORT TERM EXPOSURE:** irritation, changes in body temperature, metal fume fever, nausea, vomiting, diarrhea, chest pain, difficulty breathing, headache

**LONG TERM EXPOSURE:** irritation, cough, loss of appetite, weight loss, chest pain, difficulty breathing, disorientation, difficulty speaking, sleep disturbances, emotional disturbances, hallucinations, mood swings, tremors, muscle cramps, loss of coordination, hearing loss, visual disturbances, bluish skin color, lung congestion, lung damage, blood disorders, kidney damage, liver damage, nerve damage, cancer

##### **SKIN CONTACT:**

**SHORT TERM EXPOSURE:** irritation  
**LONG TERM EXPOSURE:** irritation, skin disorders  
**EYE CONTACT:**  
**SHORT TERM EXPOSURE:** irritation, eye damage  
**LONG TERM EXPOSURE:** irritation, eye damage  
**INGESTION:**  
**SHORT TERM EXPOSURE:** irritation, nausea, vomiting, diarrhea  
**LONG TERM EXPOSURE:** drowsiness

**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 and explosion hazard in bulk form. Dust/air mixtures may ignite or explode.

**EXTINGUISHING MEDIA:** dolomite, dry powder for metal fires, dry sand, graphite, soda ash, sodium chloride

**FIRE FIGHTING:** Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

**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:**

Collect spilled material in appropriate container for disposal. 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. See original container for storage recommendations. Keep separated from incompatible substances.

**HANDLING:** Use methods to minimize dust.

**8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

**EXPOSURE LIMITS:**

**MANGANESE, METALLURGICAL:**

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.

**MANGANESE AND COMPOUNDS (as Mn):**

5 mg/m3 OSHA ceiling (metal) (fume) (compounds)  
1 mg/m3 OSHA TWA (particulate) (vacated by 58 FR 35338, June 30, 1993)  
3 mg/m3 OSHA STEL (particulate) (vacated by 58 FR 35338, June 30, 1993)  
0.2 mg/m3 ACGIH TWA (metal and inorganic compounds)  
1 mg/m3 NIOSH recommended TWA 10 hour(s) (metal) (fume) (compounds)  
3 mg/m3 NIOSH recommended STEL (metal) (fume) (compounds)  
0.5 mg/m3 DFG MAK (inhalable fraction) (metal and inorganic compounds)  
0.5 mg/m3 UK WEL TWA (metal) (inorganic compounds)

**MEASUREMENT METHOD:** NIOSH IV # 7300, 7301, 7303, 9102; OSHA # ID121, ID125G

**IRON OXIDE DUST AND FUME (as Fe):**

10 mg/m3 OSHA TWA  
5 mg(Fe2O3)/m3 ACGIH TWA (respirable fraction)  
5 mg/m3 NIOSH recommended TWA 10 hour(s) (total particulate)  
1.5 mg/m3 DFG MAK (respirable fraction)  
5 mg/m3 UK WEL TWA  
10 mg/m3 UK WEL STEL

**MEASUREMENT METHOD:** NIOSH IV # 7300, 7301, 7303, 9102; OSHA ID121, ID125G

**ALUMINUM OXIDE (ALUMINA):**

5 mg/m3 OSHA TWA (respirable dust fraction)  
15 mg/m3 OSHA TWA (total dust)  
10 mg/m3 OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)  
1 mg/m3 ACGIH TWA (respirable fraction) (insoluble compounds)

1.5 mg/m<sup>3</sup> DFG MAK (respirable dust fraction)  
4 mg(Al)/m<sup>3</sup> DFG MAK (inhalable dust fraction)  
0.25 fibers/cc AGS TRK (fibrous forms) (effective 1 Jan 2005 no longer valid per amendment)  
10 mg/m<sup>3</sup> UK WEL TWA (total inhalable dust)  
4 mg/m<sup>3</sup> UK WEL TWA (respirable dust)

**MEASUREMENT METHOD:** NIOSH IV # 0500, 0600; OSHA ID109SG, ID198SG

**SILICON DIOXIDE, AMORPHOUS (SILICA, AMORPHOUS):**

20 mppcf OSHA TWA (<1% crystalline silica)  
OSHA TWA (<1% crystalline silica) (80 mg/m<sup>3</sup> divided by %SiO<sub>2</sub>)  
6 mg/m<sup>3</sup> NIOSH recommended TWA 10 hour(s)  
4 mg/m<sup>3</sup> DFG MAK (inhalable fraction)  
0.3 mg/m<sup>3</sup> DFG MAK (respirable fraction)  
6 mg/m<sup>3</sup> UK WEL TWA (total inhalable dust)  
2.4 mg/m<sup>3</sup> UK WEL TWA (respirable dust)

**MEASUREMENT METHOD:** NIOSH IV # 7501

**LEAD, INORGANIC FUMES AND DUST (as Pb):**

50 ug/m<sup>3</sup> OSHA TWA 8 hour(s)  
30 ug/m<sup>3</sup> OSHA action level 8 hour(s)  
0.05 mg/m<sup>3</sup> ACGIH TWA (metal and inorganic compounds)  
0.050 mg/m<sup>3</sup> NIOSH recommended TWA 10 hour(s) (metal and compounds)  
0.15 mg/m<sup>3</sup> EC OEL TWA (BOELV)

**MEASUREMENT METHOD:** NIOSH IV # 7082, 7105, 7300, 7301, 7303, 7700, 7701, 7702, 9102, 9105; OSHA ID121, ID125G, ID206

**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 particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-

pressure mode.

**For Unknown Concentrations or Immediately Dangerous to Life or Health -**

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL DESCRIPTION:** Reddish-gray or silvery, brittle, metallic solid

**BOILING POINT:** Not applicable

**MELTING POINT:** Not available

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

**SPECIFIC GRAVITY:** Not available

**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:** mineral acids

## 10. STABILITY AND REACTIVITY

**REACTIVITY:** Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:** None reported.

**INCOMPATIBILITIES:** metals, oxidizing materials, halogens, peroxides, combustible materials, acids, bases, halo carbons, metal salts

MANGANESE:

ALUMINUM (DUST): Forms explosive mixtures with air.

AMMONIUM NITRATE (FUSED): Violent or explosive reaction.

BROMINE PENTAFLUORIDE: Violent reaction and possible ignition.

CARBON DIOXIDE: Ignites.

CHLORINE: Ignites.

FLUORINE: Incandescent reaction.

HYDROGEN PEROXIDE: Violent decomposition and/or ignition.

NITRIC ACID: Incandescent reaction and feeble explosion.

NITROGEN DIOXIDE: Ignition.

OXIDIZERS (STRONG): Fire and explosion hazard.

PHOSPHORUS: Incandescent reaction when heated.

SULFUR DIOXIDE: Burns brilliantly on warming.

IRON:

ACETALDEHYDE: Polymerizes readily.  
AMMONIUM NITRATE: Violent or explosive reaction.  
AMMONIUM PEROXODISULFATE: Violent reaction.  
BROMINE PENTAFLUORIDE: Violent reaction and possible ignition.  
CHLORIC ACID: Forms explosive compound.  
CHLORINE (GAS): Ignites.  
CHLORINE TRIFLUORIDE: Violent reaction and possible ignition.  
CHLOROFORMAMIDINIUM NITRATE: Explosive ignition.  
DINITROGEN TETRAOXIDE: Ignites.  
FLUORINE: Ignites.  
HYDROGEN PEROXIDE: Violent decomposition.  
MINERAL ACIDS: Readily attacked.  
NITROGEN DIOXIDE: Incandescent reaction.  
NITRYL FLUORIDE: Incandesces when heated.  
ORGANIC ACIDS: Attacked or dissolved.  
PEROXYFORMIC ACID: Incompatible.  
PHOSPHORUS: Incandesces when heated.  
POLYSTYRENE BEADS: Possible static ignition.  
POTASSIUM DICHROMATE: Ignites on contact.  
POTASSIUM PERCHLORATE + MANGANESE DIOXIDE: Ignites.  
SODIUM ACETYLIDE: Possible violent reaction.  
SODIUM PEROXIDE: Ignites under friction @ 240 C.  
SULFURIC ACID: Possible explosion hazard.

ALUMINUM OXIDE (ALUMINA):  
CHLORINATED RUBBER (HOT): Incompatible.  
CHLORINE TRIFLUORIDE: Violent reaction and possible ignition.  
ETHYLENE OXIDE: May initiate explosive polymerization.  
HALOCARBONS: Exothermic reaction above 200 C.  
HALOCARBONS + METALS: Exothermic reaction at ambient temperatures.  
OXYGEN DIFLUORIDE: Exothermic reaction.  
SODIUM NITRATE: May form explosive mixture.  
VINYL ACETATE: Possible vigorous reaction.

SILICON DIOXIDE:  
CHLORINE TRIFLUORIDE: Fire hazard.  
FLUORINE: Fire hazard.  
HYDROCHLORIC ACID + WATER: Explosion hazard with gel form.  
HYDROFLUORIC ACID: Dissolves, releasing silicon tetrafluoride.  
HYDROGEN FLUORIDE: Incompatible.  
HYDROGENATED VEGETABLE OILS: Incompatible.  
MAGNESIUM (POWDERED): Explosion hazard on heating in the presence of moisture.  
MANGANESE TRIFLUORIDE: May react violently on heating, releasing silicon tetrafluoride.  
OXIDIZERS (STRONG): Fire and explosion hazard.  
OXYGEN DIFLUORIDE: Explosion hazard under certain conditions and in the presence of moisture.  
OZONE: Potential explosion hazard at low temperatures if organic material is present.  
PHOSPHORIC ACID (CONCENTRATED): Attacks on heating.  
SODIUM (BURNING): Reacts with finely divided silica.

VINYL ACETATE (VAPOR): May react vigorously with gel form.  
XENON HEXAFLUORIDE: May react explosively by forming xenon trioxide.

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: miscellaneous decomposition products

**POLYMERIZATION:** Will not polymerize.

**11. TOXICOLOGICAL INFORMATION**

**MANGANESE:**

**IRRITATION DATA:** 500 mg/24 hour(s) skin-rabbit mild; 500 mg/24 hour(s) eyes-rabbit mild  
**TOXICITY DATA:** 2300 ug/m<sup>3</sup> inhalation-man TCLo; 9 gm/kg oral-rat LD50; 3709 mg/m<sup>3</sup>/6 hour(s)-13 week(s) intermittent inhalation-rat TCLo; 180 mg/kg/30 day(s) intermittent intraperitoneal-rat TDLo; 210 ug/m<sup>3</sup>/5 year(s) intermittent inhalation-man TCLo; 0.3 mg/m<sup>3</sup>/5 hour(s)-26 week(s) intermittent inhalation-rat TCLo; 0.3 mg/m<sup>3</sup>/5 hour(s)-26 week(s) intermittent inhalation-monkey TCLo; 0.7 mg/m<sup>3</sup>/24 hour(s)-22 week(s) continuous inhalation-rat TCLo; 0.7 mg/m<sup>3</sup>/24 hour(s)-22 week(s) continuous inhalation-mouse TCLo; 250 mg/m<sup>3</sup>/1 year(s) intermittent inhalation-human TCLo; 0.5 mg/m<sup>3</sup>/39 week(s) intermittent inhalation-human TCLo; 200 mg/kg/20 day(s) intermittent oral-rat TDLo; 216 mg/kg/15 week(s) intermittent intraperitoneal-rat TDLo; 144 mg/kg/5 week(s) intermittent intraperitoneal-rat TDLo; 24 mg/kg/5 week(s) intermittent unreported-rat TDLo; 72 mg/kg/5 week(s) intermittent unreported-rat TDLo; 57.6 mg/kg/4 week(s) intermittent intraperitoneal-rat TDLo; 0.71 mg/m<sup>3</sup>/2 hour(s)-10 day(s) intermittent inhalation-rat; 5.25 mg/kg/21 day(s) intermittent oral-rat; 185 mg/kg/37 day(s) continuous oral-rat TDLo

**ACUTE TOXICITY LEVEL:**

Slightly Toxic: ingestion

**TARGET ORGANS:** nervous system

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** history of alcoholism, blood system disorders, liver disorders, nervous system disorders, respiratory disorders

**TUMORIGENIC DATA:** 400 mg/kg intramuscular-rat TDLo/1 year(s) intermittent

**MUTAGENIC DATA:** dominant lethal test - rat intraperitoneal 25 mg/kg

**REPRODUCTIVE EFFECTS DATA:** 50 mg/kg oral-rat TDLo 20 day(s) post pregnancy continuous; 322.5 mg/kg oral-mouse TDLo 43 day(s) male; 1290 mg/kg oral-mouse TDLo 43 day(s) male; 0.71 mg/m<sup>3</sup> inhalation-rat TCLo 15-16 day(s) pregnant female continuous; 0.71 mg/m<sup>3</sup> inhalation-rat TCLo multigenerations; 90 mg/kg oral-rat TDLo 18 day(s) post pregnancy continuous

**ADDITIONAL DATA:** Symptoms may depend on a combination of contributing factors including genetic predisposition, age, nutrition, anemia or alcohol.

**IRON:**

**TOXICITY DATA:** 77 mg/kg oral-child TDLo; 30 gm/kg oral-rat LD50; 20 mg/kg intraperitoneal-rabbit LDLo; 20 gm/kg oral-guinea pig LD50; 200 mg/kg oral-human LD50; 63 gm/kg/6 week(s) continuous oral-rat TDLo; 250 mg/m<sup>3</sup>/6 hour(s)-4 week(s) intermittent inhalation-rat TCLo; 150 mg/m<sup>3</sup>/4 hour(s)-78 week(s) intermittent inhalation-rat TCLo; 105 mg/kg/5 week(s) continuous oral-rat TDLo; 16800 mg/kg/4 week(s) continuous oral-rat TDLo; 41.4 mg/kg/2 week(s) intermittent subcutaneous-mouse TDLo; 219.6 gm/kg/183 day(s) continuous oral-rat TDLo

**CARCINOGEN STATUS:** Iron itself has not been evaluated by IARC. However iron and steel founding has been evaluated as IARC Group 1 (Human Sufficient Evidence). Studies have shown that certain exposures in iron and steel founding can cause lung cancer in humans. Excesses of leukemia and urogenital and digestive system cancers have also been reported.

**ACUTE TOXICITY LEVEL:**

Relatively Non-toxic: ingestion

**TUMORIGENIC DATA:** 450 mg/kg intratracheal-rat TDLo/15 week(s) intermittent

**ALUMINUM OXIDE:**

**TOXICITY DATA:** >3600 mg/kg intraperitoneal-mouse LD50; 200 mg/m<sup>3</sup>/5 hour(s)-28 week(s) intermittent inhalation-rat TCLo; 200 mg/m<sup>3</sup>/5 hour(s)-28 week(s) intermittent inhalation-rabbit TCLo

**CARCINOGEN STATUS:** ACGIH: A4 -Not Classifiable as a Human Carcinogen (Aluminum insoluble compounds)

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** respiratory disorders

**TUMORIGENIC DATA:** 90 mg/kg intrapleural-rat TDLo; 200 mg/kg implant-rat TDLo; 200 mg/kg implant-rat TD

**SILICON DIOXIDE:**

**TOXICITY DATA:** >200 gm/m<sup>3</sup>/1 hour(s) inhalation-rat LC; 1 mg/kg intratracheal-rat TDLo; 224 mg/kg/4 week(s) continuous oral-dog TDLo

**CARCINOGEN STATUS:** IARC: Human Inadequate Evidence, Animal Inadequate Evidence, Group 3 (Amorphous silica)

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** respiratory disorders

**QUARTZ:**

**TOXICITY DATA:** 16 mppcf/8 hour(s)-17.9 year(s) intermittent inhalation-human TCLo; 300 ug/m<sup>3</sup>/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; 100 mg/kg intratracheal-mouse TDLo; 1 mg/kg inhalation-rat TCLo; 10 mg/kg intratracheal-rat TDLo; 1250 ug/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo; 30 mg/kg intratracheal-rat TDLo; 50 mg/kg intratracheal-rat TDLo; 5 mg/kg intratracheal-rat TDLo; 1 mg/kg intratracheal-rat TDLo; 80 mg/m<sup>3</sup>/26 week(s) intermittent inhalation-rat TCLo; 108 mg/m<sup>3</sup>/6 hour(s)-3 day(s) intermittent inhalation-rat TCLo; 58 mg/m<sup>3</sup>/13 week(s) intermittent inhalation-rat TCLo; 1475 ug/m<sup>3</sup>/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLo; 4932 ug/m<sup>3</sup>/24 hour(s)-39 week(s) continuous inhalation-mouse TCLo; 28 mg/m<sup>3</sup>/3 week(s) intermittent inhalation-guinea pig TCLo; 3 mg/m<sup>3</sup>/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLo; 1000 gm/m<sup>3</sup>/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/m<sup>3</sup>/26 week(s) intermittent inhalation-rat TCLo; 0.74 mg/m<sup>3</sup>/2 year(s) intermittent inhalation-rat TCLo; 10 mg/m<sup>3</sup>/75 day(s) intermittent inhalation-rat TCLo; 10 mg/m<sup>3</sup>/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; 160 mg/kg/2 week(s) intermittent inhalation-mouse TCLo; 6.2 mg/m<sup>3</sup>/6 hour(s)-6 week(s) intermittent inhalation-rat TCLo; 15 mg/m<sup>3</sup>/79 day(s) intermittent inhalation-rat TCLo; 300 ug/kg/12 week(s) intermittent intratracheal-rat TDLo; 25 mg/m<sup>3</sup>/5 day(s) intermittent inhalation-rat TCLo

**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.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** respiratory disorders  
**TUMORIGENIC DATA:** 50 mg/m<sup>3</sup> 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  
**MUTAGENIC DATA:** micronucleus test - human lung 40 ug/cm<sup>2</sup>; micronucleus test - hamster lung 160 ug/cm<sup>2</sup>; DNA damage - rat intratracheal 3 mg/kg  
**ADDITIONAL DATA:** Smoking may enhance the toxic effects.

**LEAD:**

**TOXICITY DATA:** 450 mg/kg/6 year(s) oral-woman TDLo; 10 ug/m<sup>3</sup> inhalation-human TCLo; 1 gm/kg intraperitoneal-rat LDLo; 160 mg/kg oral-pigeon LDLo; 271 mg/m<sup>3</sup> inhalation-human LCLo; 155 mg/kg oral-human LDLo; 50 mg/kg intraperitoneal-rabbit TDLo; 88 mg/kg parenteral-chicken TDLo; 0.2 mg/kg oral-rat TDLo; 1050 ug/kg/30 week(s) intermittent oral-rat TDLo; 6879 mg/kg/5 week(s) continuous oral-mouse TDLo; 20 mg/m<sup>3</sup>/6 hour(s)-30 day(s) intermittent inhalation-guinea pig TCLo; 200 ug/m<sup>3</sup>/6 hour(s)-26 week(s) intermittent inhalation-guinea pig TCLo; 582 mg/kg/30 day(s) continuous oral-non-mammalian species 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/m<sup>3</sup>/122 day(s) intermittent inhalation-human TCLo; 0.011 mg/m<sup>3</sup>/26 week(s) intermittent inhalation-human TCLo; 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/m<sup>3</sup>/1 year(s) intermittent inhalation-man TCLo; 0.03 mg/m<sup>3</sup>/5 year(s) intermittent inhalation-man TCLo; 0.109 mg/m<sup>3</sup>/5 year(s) intermittent inhalation-man TCLo; 43.75 mg/kg/1 week(s) continuous oral-rat TDLo  
**CARCINOGEN STATUS:** IARC: Human Limited Evidence, Animal Inadequate Evidence, Group 2A (Inorganic lead compounds); ACGIH: A3 -Confirmed Animal Carcinogen  
Renal tumors were produced in animals by lead acetate, lead subacetate, and lead phosphate given orally, subcutaneously, or intraperitoneally. Two studies in rats exposed to lead powder orally or by intramuscular injection and one study on intrarenal injection did not produce tumors.

**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/m<sup>3</sup>; cytogenetic analysis - rat inhalation 23 ug/m<sup>3</sup> 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/m<sup>3</sup> inhalation-rat TCLo/24 hour(s) 1-21 day(s) pregnant female continuous; 3 mg/m<sup>3</sup> 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; 24 ug/kg oral-mouse TDLo multigenerations; 1545 gm/kg oral-rat TDLo 8 week(s) pre pregnancy/21 day(s) post pregnancy continuous

**ADDITIONAL DATA:** May cross the placenta. Smoking may result in higher blood lead levels. May be excreted in breast milk.

**HEALTH EFFECTS:**

**INHALATION:**

**ALUMINUM OXIDE (ALUMINA):** Inhalation of high concentrations may cause coughing, shortness of breath, respiratory tract irritation due to mechanical action, unpleasant deposits in the nasal passages, and exacerbation of symptoms in persons with impaired pulmonary function. Humans exposed chronically to aluminum oxide, particle size approximately 1.2 microns, did not experience either systemic or respiratory adverse effects. Hydrated aluminum oxide, injected intratracheally, produced dense and numerous nodules of advanced fibrosis in rats, a reticulin network with occasional collagen fibers in mice and guinea pigs, and only a slight reticulin network in rabbits. A production process in which aluminum oxide (bauxite), iron, coke, and silica are fused at 2000 C poses a threat of Shaver's disease, a rapidly progressive and often fatal interstitial fibrosis of the lungs. See information on metal fume fever.

**ACUTE EXPOSURE:**

**MANGANESE:** Dust or fumes may be irritating to the mucous membranes. Occupational exposure to dust or fumes has been reported to cause upper respiratory tract problems, black mucous membrane discharge from the nose, and neurological damage. Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

**IRON:** Dust may cause mucous membrane and respiratory irritation due to mechanical action. Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed iron oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes. Lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

**METAL FUME FEVER:** Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

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

**QUARTZ:** Exposure to high concentrations may cause physical discomfort of the upper respiratory tract.

**CHRONIC EXPOSURE:**

**MANGANESE:** If sufficient quantities of manganese dust or fumes are inhaled and absorbed, systemic poisoning known as "manganism", a Parkinsonian-like syndrome may occur. It is characterized initially by anorexia, asthenia, headache, insomnia or somnolence, irritability, restlessness, and spasm or pain in the muscles. Manganese psychosis may follow with uncontrollable behavior, unaccountable laughing or crying, visual hallucinations, confusion and euphoria. Sexual excitement followed by impotence may occur. These symptoms may disappear with the onset of true neurological manifestations of slow, slurred and irregular speech, monotonous tone, double vision, impaired hearing, difficulty with fine motor movements, and disturbances in gait and balance with frequent propulsion or retropulsion. Mask-like face, decreased movement of the eyelids and eyes and tremors of the upper extremities and head may also occur. Other signs and symptoms may include urinary bladder disturbances, excessive salivation and sweating, hematological changes, vasomotor disorders, decreased pulmonary function, kidney and possibly liver damage. Removal from exposure shortly after onset of symptoms usually results in improvement, although there may be residual disturbances in gait and speech. Once manganism is well established it becomes irreversible and progressive, but not fatal. An increased incidence of bronchitis and pneumonitis has been reported in studies of workers exposed to manganese dust and fume, and although these effects have been confirmed by animal experiments, they may represent an aggravation of a pre-existing condition. Allergic diseases of the respiratory tract have also been reported in one study.

**IRON:** Prolonged or repeated exposure may cause a mottling of the lungs, a condition called siderosis which is considered to be a benign pneumoconiosis that does not cause significant physiologic impairment. Symptoms may include chronic bronchitis, emphysema, and dyspnea on exertion.

**METAL FUME FEVER:** There is no form of chronic metal fume fever, however, repeated bouts with symptoms as described above are quite common. Resistance to the condition develops after a few days of exposure, but is quickly lost in 1 or 2 days.

**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 characterized 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.

**QUARTZ:** Inhalation of very high concentrations of finely divided crystalline silica dust, exposure ranging from a few weeks to 4-5 years, may cause a rapidly developing silicosis, characterized by pulmonary insufficiency with severe dyspnea, violent coughing, tachypnea, weight loss, and cyanosis leading to the development of cor pulmonale and death within a relatively short period of time. A slowly developing silicosis may result from exposure for 6 months-30 years to relatively low levels of the dust. The first symptom is usually a slowly increasing, non-disabling, exertional dyspnea due to pulmonary fibrosis and the emphysema associated with it. Continued exposure may increase the rate of progression of the disease. Also, the fibrogenic action may continue when exposure ceases. As the fibrosis advances, other symptoms may include shortness of breath, productive cough, wheezing, chest tightness or pain, marked weakness, decreased capacity for work, and repeated non-specific chest illnesses. Cyanosis, clubbing of digits, orthopnea, or serious weight loss are not usually evident until the disease is advanced. Pulmonary infections, which may be indicated by hemoptysis, and cardiac decompensation may exacerbate the symptoms. Three major complications, which are the most frequent causes of death, are

pulmonary tuberculosis, respiratory insufficiency which is due to the massive emphysematous and fibrotic changes and is sometimes accompanied by chronic cor pulmonale, and acute bronchopulmonary infection. A number of studies have shown that persons diagnosed as having silicosis have an increased risk for dying from lung cancer. This increase has been seen among miners, quarry workers, foundry workers, ceramic workers, granite workers, and stone cutters. In some of these studies, the risk of lung cancer increased with the duration of employment. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

**SKIN CONTACT:**

**ACUTE EXPOSURE:**

MANGANESE: 500 mg applied to the skin of rabbits caused mild irritation.

IRON: Dust may cause irritation. Penetration of iron particles in the skin may cause an exogenous siderosis which may be characterized by a red-brown pigmentation of the affected area.

ALUMINUM OXIDE (ALUMINA): Contact may cause an irritant dermatitis accompanied by pruritis.

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

QUARTZ: May cause irritation of intact skin due to mechanical abrasion. If the skin is abraded, a heavy growth of scar tissue may be induced.

**CHRONIC EXPOSURE:**

MANGANESE: Sensitization has been reported in guinea pigs.

IRON: May cause same effects as reported in acute exposure.

ALUMINUM OXIDE (ALUMINA): No data available.

SILICON DIOXIDE: No data available.

QUARTZ: No data available.

**EYE CONTACT:**

**ACUTE EXPOSURE:**

MANGANESE: Dust or fumes may be irritating to the eyes. 500 mg applied to the eyes of rabbits caused mild irritation.

IRON: May cause irritation due to mechanical action. Iron particles imbedded in the eye may cause ocular siderosis. Effects may include discoloration of the cornea and iris, and pupillary effects including poor reaction to light and accommodation. If a particle enters the lens there may be cataract formation. Glaucoma occurs rarely in some cases of ocular siderosis.

ALUMINUM OXIDE (ALUMINA): Dust may cause mechanical irritation with redness and possibly swelling of the conjunctiva.

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

QUARTZ: May cause irritation due to mechanical action. Particles of silica in the range of 2-3 micrometers introduced into the corneal stroma of rabbit eyes caused very little reaction. These same particles introduced into the anterior chamber resulted in an inflammatory reaction in 3-5 weeks with the

formation of fibrotic nodules in the iridocorneal angle. Finely divided silica injected into the vitreous of rabbit eyes has caused necrosis of the retina and atrophy of the choroid.

**CHRONIC EXPOSURE:**

MANGANESE: Fumes may cause conjunctivitis.

IRON: Repeated and prolonged contact may cause conjunctivitis and other effects reported in acute exposure.

ALUMINUM OXIDE (ALUMINA): No data available.

SILICON DIOXIDE: No data available.

QUARTZ: An abnormally high silicon content in the cornea, and a gradual decrease in visual acuity due to corneal opacities in the pupillary area, have been reported in a group of foundry workers.

**INGESTION:**

**ACUTE EXPOSURE:**

MANGANESE: Extremely large doses may cause gastrointestinal irritation and possibly systemic toxicity.

IRON: There are no reports available on poisoning from metallic iron, which is poorly absorbed. The principal manifestations of poisoning with iron compounds are vomiting, diarrhea, and circulatory collapse.

ALUMINUM OXIDE (ALUMINA): No data available.

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

QUARTZ: Effects of ingestion are due to mechanical action as crystalline silicas are biologically inert.

**CHRONIC EXPOSURE:**

MANGANESE: Manganese poisoning has been reported in persons drinking manganese-contaminated well water. Prolonged ingestion of manganese in water has produced lethargy, edema, and decreased movement of the eyes and eyelids.

IRON: Repeated or prolonged exposure may cause hemosiderosis or hemochromatosis.

ALUMINUM OXIDE (ALUMINA): Some aluminum compounds cause constipation.

SILICON DIOXIDE: No data available.

QUARTZ: No data available.

**12. ECOLOGICAL INFORMATION**

Not available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. 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.

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))

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart B):** Not regulated.

**SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart C):** Not regulated.

**SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):**

ACUTE: Yes

CHRONIC: Yes

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

**SARA TITLE III SECTION 313 (40 CFR 372.65):**

**MANGANESE AND COMPOUNDS (as Mn)**

**ALUMINUM OXIDE (ALUMINA):** fibrous forms

**LEAD**

**OSHA PROCESS SAFETY (29 CFR 1910.119):** 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)

**CANADIAN REGULATIONS:**

**WHMIS CLASSIFICATION:** Not determined.

**EUROPEAN REGULATIONS:**

**EC CLASSIFICATION (CALCULATED):** Not determined.

**NATIONAL INVENTORY STATUS:**

**U.S. INVENTORY (TSCA):** Listed on inventory.

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

16. OTHER INFORMATION

**MSDS SUMMARY OF CHANGES**

15. REGULATORY INFORMATION

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## J.5 FEDWIRE AND INTERNATIONAL WIRE TRANSFER PROCEDURES (MAR 11)

### Fedwire (domestic 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.frbervices.org>.

To ensure the funds are credited to DLA Strategic Materials 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 Identifier: 00006355  
Beneficiary Name: DFAS/STRATEGIC MATERIALS

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

**NOTE:**

Under Item 3, the number 00006355 is the ALC = Agency Location Code (this is the same as account number)

### International Wire Payment

The following information is required for payments made through international wire payment.

1. Bank Name, Bank Address, Swift Code, Account Number, ABA Number, Account Name.

Bank Name: Citibank  
Bank Address: 388 Greenwich Street, New York, NY 10013  
Swift Code: CITIUS33XXX  
Account Number: **36838868**  
ABA Number: 021000089  
Account Name: **Federal Reserve Bank of New York/ITS**

**IMPORTANT NOTE:** All international wire payments must include the following reference for payments to post to the Defense Finance and Accounting Service (DFAS) account:

**ITSALC00006355DOD Columbus**

2. Amount of funds to be transferred.

3. Addendum Information: Payment for Contract No. \_\_\_\_\_  
Invoice No. \_\_\_\_\_