



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

IN REPLY
REFER TO

DNSC-C2

June 17, 2003

Dear Prospective Manganese Customer:

On Friday, July 18, 2003 at 2:00 PM, local time, the Defense Logistics Agency, Defense National Stockpile Center (DNSC), will open and consider offers for the sale of 167,000 short dry tons of Manganese Metallurgical Grade under Solicitation of Offers, **DLA-Manganese Metallurgical Grade Ore-002**, subsequent offers will be held daily at 2:00 p.m., local time Fort Belvoir, VA. Offers are to be addressed as follows:

Attn: DNSC Bid Custodian
Defense National Stockpile Center
8725 John J. Kingman Road
Suite 3229
Fort Belvoir, VA 22060-6223

Facsimile offers and modifications will be accepted any time prior to the exact time set for receipt of offers. Offerors must transmit offers to facsimile number (703) 767-5541.

The format of the solicitation is negotiated, which allows the Government to discuss issues regarding price, removal period, quantity, prompt payment, discounts, or any other provisions of the solicitation.

Thank you for your interest in the Defense National Stockpile Center's Manganese sales program. If you have any questions concerning our Manganese sales, please contact me at (703) 767-5495.

Sincerely,

//s//

CELIA L. GOLSON
Contract Specialist

Enclosure

ISSUE DATE: June 17, 2003

DLA-MANGANESE METALLURGICAL GRADE-002

SOLICITATION OF OFFERS

FOR

MANGANESE METALLURGICAL GRADE ORE



*Defense Logistics Agency
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Fort Belvoir, VA 22060*

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SCHEDULE

SECTION A - SOLICITATION

A.1 Introduction (SEP 02)

- a. The Defense Logistics Agency (DLA), Defense National Stockpile Center (DNSC), is soliciting offers for the sale of approximately 167,000 SDT of Metallurgical Grade Manganese under DLA-MANGANESE METALLURGICAL-002 in Fiscal Year 2003. The initial opening will be held on July 18, 2003 at 2:00 p.m. local time, Ft. Belvoir, VA. If all material is not sold, subsequent offerings will be held daily, at 2:00 P.M, local time, until all material is sold. Offers must be received at the address in Section B.2.a. by 2:00 p.m., local time, Ft. Belvoir, VA. **In the event DNSC is closed at the time set, offers will be received at 2:00 p.m., local time, Ft. Belvoir, VA on the next DNSC business day.**
- b. Offerors are advised to telephone the Directorate of Stockpile Contracts at (703)767-6500 to ascertain the availability of material.
- c. Handling and outloading will be performed by and at the expense of the contractor. (See F.1.d)

A.2 Description (JAN 95)

- a. The manganese ore offered for sale is stored outside in bulk piles. The origin of the ore is Domestic, Chile, Russia, India and South Africa. Ninety six percent of the ore is of Domestic origin, which came from various mine operations throughout the United States. The ore was purchased between 1947 and 1960. There are no current assays for this ore, analytical data is from the original assays at time of purchase. It is recommended that prospective buyers take samples from ore piled before submitting an offer.
- b. Government analyses indicate that the material conforms to the data listed in Paragraph A.2.a, Section I.2, and Section J.1; 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 02)

- a. The Defense National Stockpile Center (DNSC) will establish a financial exposure limit (maximum level of business the DNSC will 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, subsequent sales will cease until such time as the Contractor satisfactorily performs existing contracts or the DNSC increases the exposure limit.

A.4 Foreign Trade Statistics Regulations (MAR 02)

- 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 Export Administration Foreign Trade Statistics and Export Administration Regulations as set forth in 15 CFR Parts 30 and 732 (as amended by 65 FR 42556-42575, July 10, 2000 or any subsequent rule making).
- c. If the Contractor is not a United States domestic entity or does not have a physical presence in the United States, and the material is to be exported, the Contractor shall either --
 - (1) Engage a United States forwarding agent or other agent in accordance with 15 CFR 30.4(a) and (c); or
 - (2) Engage a United States Order Party, in accordance with 15 CFR 30.4(a)(1)(iii), to conduct all negotiations, correspondence, and arrangements for sale, and to arrange for export of the material purchased.
- d. The Defense National Stockpile Center shall not be named as the United States Principal Party in Interest and will not execute any Shipper's Export Declaration required by the Foreign Trade Statistics regulations.

SECTION B – PREPARATION AND SUBMISSION OF OFFERS**B.1 Submittals (FEB 03)**

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

- a. **Section I.1, Sale of Government Property Negotiated Sales Contract (MAY 03)** with the section entitled “Execution by Contractor” completed.
- b. **Section I.2, Item Offer Page(s) – DLA-Manganese Metallurgical Grade-002 (MAY 03)** with (1) unit price column; (2) quantity (3) total offered price column; (4) company name; (5) name and title; and (6) signature and date blocks completed.
- c. **Section I.4, Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters (JUL 97).**
- d. **Representations, Certifications and Identifications at Section I.5 through I.8.** Offerors please note: If Annual Representations, Certifications and Identifications have previously been submitted they need not be resubmitted. However, **I.3 Certificate of Independent Price Determination and I.4 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters shall be submitted with each offer.**
- e. 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. DNSC may require the contractor to submit updated information at any time.
- f. Offerors shall submit the financial information requested in paragraph f. to the following address/facsimile number:

Attn: DNSC-C2 Manganese Contract Specialist
Defense National Stockpile Center
8725 John J. Kingman Road
Suite 3229
Fort Belvoir, VA 22060-6223
Facsimile Number (703) 767-5411
- g. Any other terms the Offeror wishes to negotiate. (See Section **B.8.c.**)

B.2 General Information (JUL 97)

- a. Facsimile offers and modifications will be accepted in accordance with Section **B.7**. Offers may also be submitted by mail or hand delivered enclosed in a sealed envelope and addressed to:

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

Place the name and address of the Offeror in the upper left corner and the following information in the lower left corner on the face of the envelope:

SOLICITATION OF OFFERS
DLA-MANGANESE METALLURGICAL GRADE-002

- b. 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**.
- c. Unless a designation of agent is on file at DNSC, 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 (JAN 95)

The minimum offer quantity shall be 500 SDT unless a smaller quantity is all that is available for that line item. An offer for less than the minimum quantity may render the Offeror ineligible for award.

B.4 Unit Pricing –Manganese (DEC 02)

All offers shall be submitted as a fixed price in dollars.

B.5 Submission of Offers (JAN 95)

Offers for (Metallurgical Grade Manganese) may be submitted as follows:

- a. Whole pile accepting the Government's weights and analysis of record for final settlement. A Government representative will witness outloading to ensure all material is removed and the site is left in satisfactory condition.
- b. A portion of a pile accepting the material in short dry tons (SDT) with the analysis of record used for final payment. Offeror shall, at its expense, weigh the material on an approved and certified scale and have the material analyzed for moisture by an independent sampler/analyst approved by the Government. A Government representative will witness all weighing, sampling, and outloading to ensure accuracy of weights and that all material is removed and the site is left in satisfactory condition.
- c. A whole pile or portion of a pile accepting the material by short ton unit (STU). Offeror shall, at its expense, weigh the material on an approved and certified scale and have the material sampled and analyzed for moisture content only by an independent sampler/analyst. A Government representative will witness all weighing, sampling and outloading to ensure accuracy of weights and that all material is removed and site is left in satisfactory condition.

B.6 Late Submissions, Modifications, and Withdrawals of Offers (NOV 00)

- 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 and transmission method authorized by the solicitation (i.e., regular mail, electronic commerce or facsimile).
 - b. 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.

- a. 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.
- b. 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.
- c. 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.
- d. 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.
- e. 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 Facsimile Submissions (JUL 97)

Facsimile offers and modifications will be accepted any time prior to the exact time set for receipt of offers. Facsimile withdrawals will be accepted any time before award. **Offerors must use the facsimile number: (703) 767-5541.**

- a. Definition: "Facsimile submission," as used in this Solicitation, means an offer, modification of an offer, or withdrawal of an offer that is transmitted to and received by the Government via electronic equipment that communicates and reproduces both printed and handwritten material.
- b. Offerors may submit facsimile submissions as responses to this Solicitation. These responses must arrive at the place, and by the time, specified in the Solicitation.
- c. Facsimile submissions that fail to furnish required representations 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. Facsimile submissions must contain the required signatures.
- e. The Government reserves the right to make award solely on the facsimile submission. However, if requested to do so by the Contracting Officer, the apparently successful Offeror agrees to promptly submit the complete original signed submission.
- f. If the Offeror chooses to transmit a facsimile submission, the Government will not be responsible for any failure attributable to the transmission or

receipt of the facsimile submission including, but not limited to, the following:

- (1) Receipt of garbled or incomplete submission.
- (2) Availability or condition of the receiving facsimile equipment.
- (3) Incompatibility between the sending and receiving equipment.
- (4) Delay in transmission or receipt of submission.
- (5) Failure of the Offeror to properly identify the submission.
- (6) Illegibility of submission.
- (7) Security of submission data.

B.8 Consideration of Offers (FEB 03)

- 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;
 - (4) Accept any one item or group of items in an offer, as may be in the best interest of the Government.
 - (5) Award quantities in excess of that stated as being available for sale.
- b. Offerors may submit multiple offers at various unit prices and may specify a 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 ineligible for award.
- d. "All or none" offers may not be considered.

B.9 Evaluation of Offers (FEB 03)

- a. General - The evaluation factors are listed below in descending order of importance:
 - (1) Unit price.
 - (2) Payment terms.
 - (3) Removal schedule.

All evaluation factors other than unit price, when combined, are significantly less important than unit price.

- b. To be considered, offers must meet the following minimum requirements:
 - (1) Submission of the information requested in Section **B.1**;
 - (2) Compliance with Section **B.8.d**.
- c. The maximum acceptable payment terms are net thirty (30) calendar days from DNSC's receipt of current, accurate, and complete Shipping Instructions.

B.10 Negotiation Procedures (SEP 02)

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** or a specifically authorized individual identified in **Section I.6 Authorized Negotiators (JUN 95)**. 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;
 - (iii) Payment terms (where requested); and
 - (iv) 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 best and final offers 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 BAFOs must be submitted;

- (3) Notice that BAFOs are subject to Section **B.6 Late Submissions, Modifications, and Withdrawals of Offers (NOV 00)**;
 - (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** - BAFOs should strictly conform to the best and final offer request. If no response is received to the BAFO request, the initial offer will be considered as the best and final offer. Changes, which 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 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 (DEC 97)

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.

B.12 Responsibility Determination (SEP 02)

- 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, Offerors shall have adequate financial resources, a satisfactory performance record with DNSC, 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., checks returned for insufficient funds) or poor performance (e.g., failure to pay for or remove material on time). In addition to looking at past performance, DNSC 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 (JUL 97)

A written award or acceptance of an offer 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**.

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.

SECTION C – INSPECTION (SEP 02)

1. Offerors, or their designees, are encouraged to inspect material and take a grab sample, at their expense. Grab samples shall not exceed 50 pounds per pile. The Government does not warrant any samples to be representative of the entire pile. The Contractor shall provide the Government with any analysis derived from the grab sample(s).
2. Requests for an appointment to visually inspect the material at all locations must be made in writing or by facsimile submission on company letterhead to the Point of Contact identified in **Section J.3 Storage Locations**, at least fifteen (15) working days prior to the date of the requested inspection. Requests shall include the name and title of each individual wishing to visually inspect the material. The sample will be obtained in the presence of a DNSC representative. 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. Offerors, their agents and representatives shall comply at all times with the rules and regulations in existence at the storage depots.

SECTION D - PAYMENT**D.1 Payment (FEB 98)**

- a. Payment shall be made in U.S. dollars.
- b. Payment shall be made by wire transfer, U.S. Postal Service money order, or company check.
 - (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. If payment is by wire transfer and the wrong account number is used, shipment of material may be delayed by up to one week or the wire transfer may be returned to the sender.
 - (2) All checks must be drawn on a U.S. domestic bank or on the United States branch of an acceptable foreign bank and must be payable in United States currency. **A service charge of \$100.00 will be applied to all returned checks.**
- c. Payment shall be made to the **Defense Finance and Accounting Service - Columbus (DFAS-Columbus)**. If a check is not made payable to DFAS-Columbus, the check may be returned and the \$100.00 fee stated in **D.1.b.** charged. Payment shall be accompanied by **identifying information including the contract number, invoice number, and a description of the material purchased**. Payments without the required identification may be returned and shipment delayed. Payments shall be sent to:

ATTN: DNSC-R, Accounts Receivable
Defense National Stockpile Center
8725 John J. Kingman Road
Suite 3229
Fort Belvoir, VA 22060-6223
- d. Invoices issued for adjustments for variations in quantity or weight, storage charges or interest shall be paid promptly.
- e. If payment is not made in full within 30 calendar days of issuance of an invoice, the Government will issue a "demand" letter, demanding payment of the outstanding amount. If all moneys due are not paid within 30 calendar days after the date of the Government's demand letter, the Contractor will be considered delinquent and any outstanding charges will be reduced by any subsequent payments. No material will be released until all delinquent charges are paid. (See Sections **F.1.a.** and **G.10.**)

D.2 Payment Due Date (NOV 02)**a.** Payment due dates will be applied as follows:

1. If payment terms are not extended, 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 (MAY 03)**

2. If payment terms are approved, the Contractor shall pay the Government the full amount of each shipment no later than 30 calendar days after DNSC received current, accurate, and complete Shipping Instructions. Notwithstanding any other provision of the contract, payment is due with or without the issuance of an invoice by the Government. If the Contractor fails to make payment timely, the Contractor will be considered delinquent (see Sections **D.1.e, F.1.a., and G.10**), and the Government, at its sole discretion, may revoke payment terms and take other appropriate action in accordance with Section **G.7**.

b. If payment is not received by 4:30 a.m. local time Fort Belvoir, VA, on the payment due date, payment will not be credited until the next Government business day. Interest will accrue accordingly.

c. In the event the payment due date falls on a Saturday, Sunday, or holiday, then the payment due date will be extended to the next Government business day.

D.3 Interest (JUN 02)

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. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in 41 U.S.C. 611, which 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 (MAY 03)** (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.

SECTION E - REMOVAL**E.1 Removal of Material (JAN 02)**

- 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:

Quantity (Unit) SDT		Contract period in Calendar Days
2,000 -	6,000	30 days
6,001 -	25,000	90 days
25,001 -	55,000	180 days
55,001 -	100,000	365 days (1 year)

- b. If the Contractor fails to pay for and remove the material on or before the last day of the contract removal period, Contractor will be considered delinquent and no material will be shipped until payment has been received.
- c. The contract period includes Saturdays, Sundays, and holidays. If the last day of the contract period is a Saturday, Sunday, or holiday, or the storage location is otherwise closed that day, the period of contract performance will be extended to the next Government workday.
- d. Some of the ore piles may have a protective covering to guard against erosion. It is the responsibility of the contractor to remove and dispose of all pile coverings. All pile coverings must be disposed of before the contractor's outloading representative leaves the storage site. Pile coverings shall be disposed of in accordance with all federal, state and local regulations, and at the expense of the contractor.-

E.2 Storage Charges (JUL 97)

- 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 (if a fraction of a pound remains, the charge will be for a full pound) 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**).

SECTION F - SHIPPING

F.1 Request for Shipment (MAY 02)

- 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 complete and fax the form in Section **J.2 Shipping Instructions** to the Contracting Officer. The Government will only accept shipping instructions from those individuals designated in Section **I.7** as being authorized to release material on behalf of the Contractor. **No material will be released under the provisions of this contract or any other contract the contractor has with DNSC until all outstanding delinquent charges and payments have been satisfied.**
- b. "Shipping Instructions" shall include the following:
 - (1) Quantity of material to be released.
 - (2) Designation of type and kind of conveyance.
 - (3) Name of the carrier (please include a telephone number where this 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.
- 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.3**.
- d. Outloading can be accomplished by truck at all storage locations. Outloading can be accomplished by truck and rail at the Anniston, AL, location, by truck and barge at the Granite City, IL location, and by truck, rail and barge at the Theodore, AL, location (See **J.2**, Storage Location). The Contractor will be responsible for all outloading costs and performance
- e. 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.
- f. The Government shall determine the order in which the material is scheduled, coordinated, and outloaded.
- g. The Contractor shall pay \$100 per day if the Contractor's conveyance fails to report to an unstaffed storage location as scheduled. See Section **J.3** for identification of unstaffed locations.

- h.** Requests for shipment shall be for a minimum of 500 tons or if the remaining balance is less than this quantity, for the balance at that particular location or on the contract. Shipping instructions and information requested in paragraph **a.**, above, are to be furnished to the following address:

Defense National Stockpile Center
ATTN: **MANGANESE** Contracting Officer
8725 John J. Kingman Road
Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile Number: (703) 767-5484

F.2 Insurance Requirements (APR 95)

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 automobiles used in connection with performing the contract. Policies covering automobiles 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 (FEB 03)

- 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. All weighing shall 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 nearest public truck scale.
- b.** A Government representative shall certify the correctness of the weighing method used and that the truck scales have been inspected and certified. The contractor will provide certified scale tickets within ten working days after the

entire requested release quantity has been shipped, or at the end of each week's shipment, whichever is sooner.

- c. Weight certificates shall be provided at the expense of the Government. Scale tickets shall be provided by the contractor to the Government representative on site and will be final for payment purposes.

F.4 Moisture Determination (FEB 03)

- 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:

DNSC-O/Defense National Stockpile Center
Attn: Directorate of Stockpile Operations
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 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 wet weight at time of outloading will be recorded as dry weight for payment purposes.

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 or any other person or property, or for 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 (JAN 95)

The Government reserves the right to vary the quantity or weight delivered by 10% (after adjustment for moisture content) from the quantity or weight listed in the Solicitation 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 Protection (JUN 95)

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.

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 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 comes first, the Government shall be responsible for the care and protection of the material, and any loss, damage or destruction occurring during such period 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 comes 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 (NOV 02)

a. **General.** Companies may file a protest over sales under this Solicitation with the -

- (1) General Accounting Office (GAO);
- (2) Director, Directorate of Stockpile Contracts, DNSC, for a decision at a level above the Contracting Officer;
- (3) 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 a 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 to the General Accounting Office shall be filed in writing, in accordance with 4 CFR 21, at the following address:

General Counsel
Attn: Procurement Law Control Group
U.S. General Accounting Office
441 G Street, NW
Washington, DC 20548

A copy of any protest to the GAO shall be served on the Contracting Officer at the address in (3) below, within one day of filing the protest. Firms seeking to file a protest with GAO are advised to consult the GAO regulations at 4 CFR 21 and the GAO publication, **Bid Protests at GAO: A Descriptive Guide**. Copies of these documents are available from the General Accounting Office.

- (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 DNSC Director, Directorate of Stockpile Contracts. 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 carrier, or fax:

Attn: DNSC-C, Director, Directorate of Stockpile Contracts
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile No.: (703) 767-5411

- (3) 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 carrier, or fax:

Attn: DNSC-C – (Richard A. Talbott)
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile No.: (703) 767-5484 or (703) 767-5494

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 (FEB 03)

- 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 Government terminates the contract, the Contractor shall be held liable for damages as described below. However, in no event will damages exceed the original contract price.
- 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 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.9 Excusable Delays (MAY 95)

- 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. 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.
- c. 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.10 Setoff of Funds (JUL 98)

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

G.11 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 connection 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 persons subject to the Contractor's control.

G.12 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 this 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 officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

SECTION H - DEFINITIONS (NOV 00)

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.

SECTION I - SUBMITTALS

COMPLETE AND RETURN ALL OF THE FOLLOWING WITH YOUR OFFER, UNLESS ANNUAL REPRESENTATIONS, CERTIFICATIONS, AND IDENTIFICATIONS HAVE BEEN SUBMITTED THEN SUBMIT I.1, I.2, I.3, AND I.4 ONLY:

- I.1 Sale of Government Property Negotiated Sales Contract (MAY 03)**
- I.2 Item Offer Page - DLA-Manganese Metallurgical Grade – 002 (MAY 03)**
- I.3 Certificate of Independent Price Determination (JAN 01)**
- I.4 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance, and Other Responsibility Matters (JUL 97)**
- I.5 Type of Business Organization (APR 96)**
- I.6 Authorized Negotiators (JUN 95)**
- I.7 Persons Authorized to Request Shipment of Material (FEB 98)**
- I.8 Offeror's Billing Address (JUL 95)**

I.1 Sale of Government Property Negotiated Sales Contract (JUL 97)

SALE OF GOVERNMENT PROPERTY NEGOTIATED SALES CONTRACT	CONTRACT NUMBER	PAGE 1 OF 1

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-FERROMANGANESE-003. In the event of a conflict between the terms of the Solicitation, and the Negotiated Sales Contract, the terms of the Negotiated Sales Contract shall govern.

ITEM	PROPERTY DESCRIPTION AND LOCATION	QUANTITY (No. of Unit(s))	UNIT	UNIT PRICE	AMOUNT
	<p>Notes:</p> <ol style="list-style-type: none"> 1. Contractor shall pay for the material before shipment. 2. Contract period expires <p>Account Number:</p>				

EXECUTION BY CONTRACTOR	EXECUTION BY GOVERNMENT	
<i>DATE (Day, Month, Year)</i>	<i>UNITED STATES OF AMERICA BY:</i>	<i>DATE:</i>
<i>NAME OF CONTRACTOR</i>		
<i>ADDRESS (Street, City, State & Zip Code) (Type or Print)</i>	<i>NAME AND TITLE OF CONTRACTING OFFICER</i>	
<p>Fax:</p> <p>Fax:</p>		
SIGNATURE AND TITLE OF PERSON AUTHORIZED TO SIGN THIS CONTRACT (Type or print name and title under signature)	<p>_____</p> <p>Contracting Officer <u>DNSC-C</u></p>	

I.2 Item Offer Page - DLA Manganese Metallurgical Grade-002 (MAY 03)

Item	Location	Pile	Type	Net Weight (SDT)	Origin	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
1	Anniston, AL	1	Fines	29,977	Chile	\$		\$
2	Chambersburg, PA	4	Fines	19,690	Russia	\$		\$
3	Chambersburg, PA	6	Fines	13,354	Russia	\$		\$
9	Marietta, PA	1	Fines	6,120	Russia	\$		\$
10	Marietta, PA	8A	Lumpy	928	India	\$		\$
23	Ravenna, OH	6	Lumpy	1,846	S. Africa	\$		\$
24	Arco, ID	1	Nodules	21,476	Domestic	\$		\$
25	Batesville, AR	1	Fines	7,797	Domestic	\$		\$
26	Batesville, AR	2	Fines	7,313	Domestic	\$		\$
27	Clearfield, UT	3	Nodules	2,375	Domestic	\$		\$
28	Clearfield, UT	4	Fines	379	Domestic	\$		\$
29	Fort Worth, TX	9D	Lumpy	295	Domestic	\$		\$
30	Fort Worth, TX	11D	Fines	140,498	Domestic	\$		\$
31	Fort Worth, TX	12D	Lumpy	3,482	Domestic	\$		\$
32	Fort Worth, TX	14D	Fines	15,056	Domestic	\$		\$
33	Fort Worth, TX	16D	Fines	4,726	Domestic	\$		\$
34	Hawthorne, NV	2	Fines	22,073	Domestic	\$		\$
35	Hawthorne, NV	8	Lumpy	139	Domestic	\$		\$
38	Herlong, CA	7	Lumpy	2,478	Domestic	\$		\$
39	Herlong, CA	8	Fines	1,075	Domestic	\$		\$
40	Herlong, CA	10	Fines	856	Domestic	\$		\$
41	Herlong, CA	13	Fines	2,759	Domestic	\$		\$
42	Herlong, CA	14	Lumpy	17,091	Domestic	\$		\$
43	Herlong, CA	17	Lumpy	37	Domestic	\$		\$
47	Pueblo, CO	1	Lumpy	2,009	Domestic	\$		\$
48	Pueblo, CO	2A	Lumpy	109	Domestic	\$		\$
49	Pueblo, CO	2B	Lumpy	125	Domestic	\$		\$
50	Pueblo, CO	2C	Fines	808	Domestic	\$		\$
51	Pueblo, CO	2D	Fines	325	Domestic	\$		\$
52	Pueblo, CO	3	Nodules	712	Domestic	\$		\$
53	Pueblo, CO	4	Lumpy	338	Domestic	\$		\$
54	Pueblo, CO	5	Lumpy	416	Domestic	\$		\$
55	Shumaker, AR	3	Fines	2,030	Domestic	\$		\$
57	Tooele, UT	2	Fines	50	Domestic	\$		\$
58	Tooele, UT	3	Fines	49	Domestic	\$		\$
59	Tooele, UT	4	Fines	1,048	Domestic	\$		\$
60	Tooele, UT	5	Nodules	161	Domestic	\$		\$
61	Tooele, UT	6	Fines	77	Domestic	\$		\$
62	Tooele, UT	7	Fines	15,882	Domestic	\$		\$
63	Tooele, UT	8	Fines	1,099	Domestic	\$		\$
64	Wenden, AZ	OB9	Lumpy	367,902	Domestic	\$		\$
Total Offered:				714,960				

COMPANY NAME _____
NAME and TITLE _____

SIGNATURE and DATE _____

I.3 Certificate of Independent Price Determination (JAN 01)**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.4 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters (JUL 97)

- 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, or receiving stolen property; and
 - (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 subdivision **a. (1)(i)(B)** of this provision.
 - (D) Are are not presently indicted for or otherwise criminally or civilly charged by a Federal, state or local entity with violation of any environmental laws; and
 - (E) Have have not within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for violation of a Federal, state or local environmental statute or regulation.
 - (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) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (3) If the Offeror answers affirmatively to **(a)(1)**, above, the Offeror shall include in its offer an explanation of the circumstances, including the outcome.

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 a 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 the other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this Solicitation for default.

I.5 Type of Business Organization (APR 96)

The Offeror 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 offeror 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 offeror 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).
- d. If the offeror is owned or controlled by another, state the relationship (e.g., wholly owned subsidiary, etc.): _____

- e. The offeror agrees to provide additional information relating to the above representations if requested to do so by the Contracting Officer.

I.6 Authorized Negotiators (JUN 95)

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

TYPED NAME	TITLE	TELEPHONE NO.

I.7 Persons Authorized to Request Shipment of Material (FEB 98)

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

TYPED NAME	SIGNATURE	TITLE	TELEPHONE NO.

I.8 Offeror's Billing Address (JUL 95)

The Offeror shall provide its billing address and billing facsimile number below.

SECTION J - LIST OF ATTACHMENTS

J.1 DESCRIPTION OR ANALYSIS (MAY 03)

J.2 SHIPPING INSTRUCTIONS (JAN 95)

J.3 STORAGE LOCATIONS (MAY 03)

J.4 MATERIAL SAFETY DATA SHEET

J.5 FEDWIRE PROCEDURES (JAN 95)

J.2 Shipping Instructions

Shipping Request Number: _____

1. a. Contractor: _____

b. Point of Contact: _____ c. Telephone No.: _____

2. a. DNSC Contract No.: SP0833-03-S- _____ b. Commodity: Manganese Metallurgical Grade-002

3. Item/Pile: _____

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. Shipment Approved and Authorized: _____
Contracting Officer Date

J.3 STORAGE LOCATIONS

Location	Operational Status	Days	Hours	Accessibility	Responsible Depot	Depot Manager
Anniston, AL	Un-Staffed	Monday - Friday	0700 - 1430	Truck / Rail	Baton, Rouge, LA	Ronnie Favors Phone: (225) 389-0278
Note 1: Prior arrangements required before material can be shipped						
Chambersburg, PA	Un-Staffed	Monday - Tuesday - Thursday Friday -	1000 - 1500 0700 - 1500 0700 - 1200	Truck / Rail*	Somerville, NJ	James Farley Phone: (908) 725-6400
Note 1: Prior arrangements required before material can be shipped						
Note 2: Rail access for Ore piles only						
Marietta, PA	Un-Staffed	Monday - Tuesday - Thursday Friday -	1000 - 1500 0700 - 1500 0700 - 1100	Truck /	Somerville, NJ	James Farley Phone: (908) 725-6400
Note 1: Prior arrangements required before material can be shipped						
Ravenna, OH	Un-Staffed	Monday - Friday	0745 - 1430	Truck /	Warren, OH	John Pittano Phone: (330) 652-1456
Note 1: Prior arrangements required before material can be shipped						
Arco, ID	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
Note 1: Prior arrangements required before material can be shipped						
Batesville, AR	Un-Staffed	Tuesday - Thursday	0730 - 1500	Truck /	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
Note 1: Prior arrangements required before material can be shipped						
Clearfield, UT	Staffed	Monday - Thursday - Friday	0700 - 1500 0700 - 1400	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
Note 1: Prior arrangements required before material can be shipped						
Fort Worth, TX	Un-Staffed	Monday - Tuesday - Thursday Friday -	1200 - 1500 0700 - 1500 0700 - 1200	Truck /	Baton, Rouge, LA	Ronnie Favors Phone: (225) 389-0278
Note 1: Prior arrangements required before material can be shipped						
Hawthorne, NV	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
Note 1: Prior arrangements required before material can be shipped						

J.3 STORAGE LOCATIONS

Location	Operational Status	Days	Hours	Accessibility	Responsible Depot	Depot Manager
Herlong, CA	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
<i>Note 1: Prior arrangements required before material can be shipped</i>						
Pueblo, CO	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
<i>Note 1: Prior arrangements required before material can be shipped</i>						
Shumaker, AR	Un-Staffed	Tuesday - Thursday	0730 - 1500	Truck* /	New Haven, IN	John Olszewski Phone: (219) 937-5383 X104
<i>Note 1: Prior arrangements required before material can be shipped</i>						
<i>Note 2: Currently road access does not exist, material located in swampy area.</i>						
Tooele, UT	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
<i>Note 1: Prior arrangements required before material can be shipped</i>						
Wenden, AZ	Un-Staffed	Monday - Friday	0700 - 1500	Truck /	Clearfield, UT	Leonard Dillon Phone: (801) 825-2749
<i>Note 1: Prior arrangements required before material can be shipped</i>						

Point of Contact

Defense Logistics Agency
Defense National Stockpile Center
Attn: Robert F Clark
8725 John J Kingman Road, Suite 4617
Fort Belvoir, VA 22060-6223

J.4 Material Safety Data Sheet**MATERIAL SAFETY DATA SHEET****SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****SUBSTANCE: MANGANESE, METALLURGICAL****TRADE NAMES/SYNONYMS:**

DLA13623

CREATION DATE: Jul 01 1992**REVISION DATE:** Sep 16 2002**SECTION 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**DEFENSE LOGISTICS AGENCY EMERGENCY TELEPHONE NUMBER:****DEFENSE NATIONAL STOCKPILE CENTER 1-800-424-9300 (NORTH AMERICA)****8725 JOHN J. KINGMAN ROAD 1-703-527-3887 (INTERNATIONAL)****SUITE 3339****FORT BELVOIR, VA 22060-6223****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

SECTION 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, metal fume fever, chest pain, difficulty breathing

LONG TERM EXPOSURE: irritation, 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, 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

SECTION 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.

SECTION 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.

SECTION 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).

SECTION 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.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

MANGANESE, METALLURGICAL:

If any employee is exposed to lead for more than 8 hours per day, use the following formula for the maximum permissible limit (in ug(Pb/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 (peak limitation category-III) (inhalable dust fraction) (metal and inorganic compounds)

1 mg/m³ UK OES TWA (metal) (fume)
5 mg/m³ UK OES TWA (metal) (compounds)
3 mg/m³ UK OES STEL (metal) (fume)

MEASUREMENT METHOD: Particulate filter; Acid; Inductively coupled plasma; NIOSH IV # 7300, Elements

IRON OXIDE DUST AND FUME (as Fe):

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

MEASUREMENT METHOD: Particulate filter; Acid; Inductively coupled plasma; NIOSH IV # 7300, Elements

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)
10 mg/m³ ACGIH TWA
1.5 mg/m³ DFG MAK (respirable dust fraction)
1.5 mg/m³ DFG MAK (peak limitation category-II, 2) (respirable dust fraction) (fume)
0.25 fibers/cc AGS TRK (fibrous forms)
10 mg/m³ UK OES TWA (total inhalable dust)
4 mg/m³ UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH IV # 0500, Nuisance Dust (total), # 0600 (respirable)

SILICON DIOXIDE, AMORPHOUS (SILICA, AMORPHOUS):

6 mg/m³ OSHA TWA (<1% crystalline silica)
10 mg/m³ ACGIH TWA (total particulate) (<1% quartz)
6 mg/m³ NIOSH recommended TWA 10 hour(s)
4 mg/m³ DFG MAK (inhalable dust fraction)
6 mg/m³ UK OES TWA (total inhalable dust)
2.4 mg/m³ UK OES TWA (respirable dust)

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

LEAD, INORGANIC FUMES AND DUST (as Pb):

50 ug/m³ OSHA TWA 8 hour(s)
30 ug/m³ OSHA action level 8 hour(s)
0.05 mg/m³ ACGIH TWA
0.100 mg/m³ NIOSH recommended TWA 10 hour(s)
0.1 mg/m³ DFG MAK (peak limitation category-III) (inhalable dust fraction)

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

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

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

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

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

Any powered, air-purifying respirator with a dust, mist, and fume filter.

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

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

SECTION 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

SECTION 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.
CHLOROFORMAMIDIUM 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.

SECTION 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/m³ inhalation-man TCLo; 9 gm/kg oral-rat LD₅₀; 3709 mg/m³/6 hour(s)-13 week(s) intermittent inhalation-rat TCLo; 180 mg/kg/30 day(s) intermittent intraperitoneal-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

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 oralguinea pig LD₅₀; 63 gm/kg/6 week(s) continuous oral-rat TDLo; 250 mg/m³/6 hour(s)-4 week(s) intermittent inhalation-rat TCLo

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:

CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen

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:

CARCINOGEN STATUS: IARC: Human Limited Evidence, Animal Sufficient Evidence, Group 2A (Crystalline silica), Human Inadequate Evidence, Animal Inadequate Evidence, Group 3 (Amorphous silica); 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.

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/m³/10 year(s) intermittent inhalation-human LCLo; 90 mg/kg intravenous-rat LDLo; 200 mg/kg intratracheal-rat LDLo; 40 mg/kg intravenous-mouse LDLo; >20 mg/kg intratracheal-mouse LD; 20 mg/kg intravenous-dog LDLo; 80 mg/m³/26 week(s) intermittent inhalation-rat TCLo; 108 mg/m³/6 hour(s)-3 day(s) intermittent inhalation-rat TCLo; 58 mg/m³/13 week(s) intermittent inhalation-rat TCLo; 1475 ug/m³/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLo; 4932 ug/m³/24 hour(s)-39 week(s) continuous inhalation-mouse TCLo; 28 mg/m³/3 week(s) intermittent inhalation-guinea pig TCLo; 3 mg/m³/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLo; 1000 gm/m³/10 day(s) intermittent inhalation-domestic animal TCLo

CARCINOGEN STATUS: NTP: Known Human Carcinogen; IARC: Human Sufficient Evidence, Animal Sufficient Evidence, Group 1; ACGIH: A2 -Suspected Human Carcinogen; EC: Category 2 Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica. Malignant lymphomas developed in rats after intrapleural and intraperitoneal injections of quartz suspensions and intrapleural injection of cristobalite and tridymite. Epidemiologic studies indicate lung cancer occurs more frequently among silicotics than in the general population.

ACUTE TOXICITY LEVEL: Insufficient Data.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

TUMORIGENIC DATA:

50 mg/m³ inhalation-rat TCLo/6 hour(s)-71 week(s) intermittent; 45 mg/kg intraperitoneal-rat TDLo; 90 mg/kg intravenous-rat TDLo; 90 mg/kg intrapleural-rat TDLo; 111 mg/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo/19 week(s) intermittent; 900 mg/kg

implant-rat TDLo; 4000 mg/kg implantmouse TDLo; 83 mg/kg intrapleural-hamster TDLo; 90 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 450 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 4554 mg/kg implant-rat TD; 200 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD

MUTAGENIC DATA:

micronucleus test - human lung 40 ug/cm²; micronucleus test - hamster lung 160 ug/cm²

ADDITIONAL DATA: Smoking may enhance the toxic effects.

LEAD:**TOXICITY DATA:**

450 mg/kg/6 year(s) oral-woman TDLo; 10 ug/m³ inhalation-human TCLo; 1 gm/kg intraperitoneal-rat LDLo; 160 mg/kg oral-pigeon LDLo; 1050 ug/kg/30 week(s) intermittent oral-rat TDLo; 6879 mg/kg/5 week(s) continuous oral-mouse TDLo; 20 mg/m³/6 hour(s)-30 day(s) intermittent inhalation-guinea pig TCLo; 200 ug/m³/6 hour(s)-26 week(s) intermittent inhalation-guinea pig TCLo

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Sufficient Evidence, Group 2B (Lead and inorganic lead compounds); ACGIH: A3 -Animal Carcinogen (Lead and inorganic lead compounds) Renal tumors were produced in animals by lead acetate, subacetate and phosphate given orally, subcutaneously or intraperitoneally. No evaluation could be made of the carcinogenicity of powdered lead.

ACUTE TOXICITY LEVEL: Insufficient Data.

TARGET ORGANS: nervous system, kidneys, teratogen

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: blood system disorders, gastrointestinal disorders, nervous system disorders, respiratory disorders

MUTAGENIC DATA:

cytogenetic analysis - human unreported 50 ug/m³; cytogenetic analysis - rat inhalation 23 ug/m³ 16 week (s); cytogenetic analysis - monkey oral 42 mg/kg 30 week(s)

REPRODUCTIVE EFFECTS DATA:

790 mg/kg oral-rat TDLo multigenerations; 1140 mg/kg oral-rat TDLo 14 day(s) pre pregnancy/21 day(s) post pregnancy continuous; 520 mg/kg oral-rat TDLo 7-22 day(s) pregnant female/10 day(s) post pregnancy continuous; 1100 mg/kg oral-rat TDLo 1-22 day(s) pregnant female continuous; 10 mg/m³ inhalation-rat TCLo/24 hour(s) 1-21 day(s) pregnant female continuous; 3 mg/m³ inhalation-rat TCLo/24 hour(s) 1-21 day (s) pregnant female continuous; 1120 mg/kg oral-mouse TDLo multigenerations; 6300 mg/kg oral-mouse TDLo 1-21 day(s) pregnant female continuous; 300 mg/kg oral-mouse TDLo 1-2 day(s) pregnant female continuous; 4800 mg/kg oral-mouse TDLo 1-16 day(s) pregnant female continuous; 662 mg/kg oraldomestic 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

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, accommodation, and atropine. 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. 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.

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 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.

SECTION 14 TRANSPORT INFORMATION

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

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

SECTION 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 355.30): Not regulated.

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

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: Yes

CHRONIC: Yes

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):

MANGANESE AND COMPOUNDS (as Mn)

ALUMINUM OXIDE (ALUMINA): fibrous forms

LEAD

LEAD COMPOUNDS

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

STATE REGULATIONS:

California Proposition 65:

Known to the state of California to cause the following:

LEAD

Cancer (Oct 01, 1992)

Developmental toxicity (Feb 27, 1987)

Male reproductive toxicity (Feb 27, 1987)

Female reproductive toxicity (Feb 27, 1987)

LEAD COMPOUNDS

Cancer (Oct 01, 1992)

Developmental toxicity (Feb 27, 1987)

Male reproductive toxicity (Feb 27, 1987)

Female reproductive toxicity (Feb 27, 1987)

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.

SECTION 16 OTHER INFORMATION

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J.5 Fedwire Procedures (JAN 95)

The Sender should use a bank that offers wire transfer capability. The Federal Reserve Bank of New York will then process the money for deposit to the Defense National Stockpile Account with the Department of the Treasury.

PROCEDURES FOR DEPOSIT SLIP(S) FOR FEDWIRE:

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

1. Treasury Dept. Code – Routing No. to the Treasury
MUST BE ON SLIP "021030004".
2. Amount of funds to be transferred.
3. Treasury Department Name – **This item is critical** –
MUST APPEAR EXACTLY AS SHOWN BELOW
TREAS NYC/(CTR/BNF=/AC-00006355)
4. Third Party Information – Purchaser's Name, Commodity, and Contract Number.