



*Republic of the Philippines*  
**Department of Environment and Natural Resources**  
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**DENR ADMINISTRATIVE ORDER**  
No. 2019 - 17

NOV 08 2019

**Subject: CHEMICAL CONTROL ORDER (CCO) FOR ARSENIC AND ARSENIC COMPOUNDS**

Pursuant to Republic Act 6969 otherwise known as the "Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990", DENR Administrative Order (DAO) No. 29, Series of 1992, the "Implementing Rules and Regulations of Republic Act 6969" and DAO 05, Series of 2005 "Toxic Chemical Substances for Issuance of Chemical Control Orders", this Order is hereby issued to provide consolidated rules and regulations for Arsenic and Arsenic compounds, and its wastes.

**Section 1.0 Policy and Objectives**

It is the policy of the State to regulate, restrict or prohibit the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to health or the environment; to prohibit the entry, even in transit, of hazardous and nuclear wastes and their disposal into the Philippine territorial limits for whatever purpose; and to provide advancement and facilitate research and studies on toxic chemicals. Pursuant to this policy statement, this Order aims to do the following:

- a. Reduce the risk of exposure to human health and the environment of arsenic and arsenic compounds used in industrial processes.
- b. Increase awareness about the toxicity of arsenic and its compounds, as well as the availability of technically superior and safer alternatives;
- c. Develop the framework for proper implementation of appropriate prevention-based programs to mitigate, reduce and eliminate risks from the use of arsenic and arsenic compounds; and
- d. Provide guidelines to identify potential arsenic release/exposure in industrial facilities to reduce workers' arsenic exposure.

**Section 2.0 Definition of Terms**

- a. Applicant – person(s) or entities engaged in importation, manufacture, use, distribution, transport, recycling and providing service (Treatment, Storage and Disposal) on arsenic and arsenic compounds.
- b. Arsenic – a metalloid widely distributed in the earth's crust and present at an average concentration of 2 mg/kg. It occurs in trace quantities in all rock, soil, water and air. Arsenic can exist in four valency states: -3, 0, +3 and +5. Under reducing conditions, arsenite (As(III)) is the dominant form; arsenate (As(V)) is generally the stable form in oxygenated environments. Elemental arsenic is not soluble in water. Arsenic salts

exhibit a wide range of solubilities depending on pH and the ionic environment (WHO\_EHC224).

- c. Arsenic Compounds – chemical compounds that contain Arsenic (Organic and Inorganic, including Arsine Gas).
- d. Arsenic Wastes – discarded materials that contain or have been contaminated with arsenic or arsenic compounds that are without any safe commercial, industrial, agricultural or economical usage and contain the Arsenic concentration as specified under Table 2.1 of sec. 2.0 of DAO 2013-22 “Revised Procedures and Standards for Hazardous Wastes Management”.
- e. Bureau – refers to the Environmental Management Bureau of the Department of Environment and Natural Resources.
- f. Chemical Control Order (CCO) – a policy issuance that prohibits, limits or regulates the use, manufacture, import, export, transport, process, storage, possession and distribution of chemicals that DENR determined to be regulated, phased-out or banned due to the serious risks they pose to public health, workplace and the environment.
- g. Chemical Weapons – Toxic chemicals and their precursors, munition and devices, as listed by the Organisation for the Prohibition of Chemical Weapons for the Chemical Weapons Convention
- h. Department – refers to the Department of Environment and Natural Resources
- i. Importer – any juridical person or corporation that undertakes the entry of a chemical or chemical substances into the country.
- j. Industrial User – any entity or corporation that uses and processes arsenic and/or arsenic compounds for industrial purposes only; includes using arsenic and/or its compounds by laboratories of the industries.
- k. Manufacturer – any juridical person or corporation that undertakes the physical or chemical transformation of substances into new products performed either by power-driven machines or by hand and markets it under his name or trademark.
- l. Premises - shall include, but not limited to, buildings or parts of buildings, tents, stalls or other facility structures whether permanent or temporary.
- m. Preparations – mixtures or solutions (in the form of liquid, semi-solid and solid materials), in this case, containing arsenic which will be used in any industrial application/processes.
- n. Storage – containment area for supply or stock reserve kept for future use, safekeeping or disposal.
- o. Treatment, Storage, and Disposal (TSD) Facilities – facilities where hazardous wastes are transported, stored, treated, recycled, reprocessed, or disposed of.
- p. Waste Generator - a person who generates or produces hazardous waste, through any institutional, commercial, industrial or trade activities

### **Section 3.0 Coverage**

This Order shall cover the following:

- a. Importers
- b. Distributors
- c. Manufacturers, processors, and industrial users
- d. Transporters
- e. Treatment, Storage, and Disposal (TSD) Facilities
- f. Laboratory Facilities

#### **Section 4.0 Prohibited Use**

The use of arsenic and its compounds shall be strictly prohibited in the production/manufacturing of the following:

- a. Fertilizers
- b. Pesticides and Wood Preservatives
- c. Chemical Weapons

#### **Section 5.0 Requirements and Procedures**

In addition to the general requirements under Title II of DAO 29, the following requirements and procedures have been established for any person or entity importing, manufacturing, distributing, and allowed users of Arsenic and Arsenic compounds; and those treating, handling, transporting, storing and disposing of Arsenic-bearing or Arsenic-contaminated wastes. These are:

##### **5.1 Registration and Permitting**

The following applicant shall register with the Bureau by submitting a duly accomplished Registration Form (**Annex A**) with the prescribed attachments.

- a. Any person or entity that is newly involved in the importation, manufacture, distribution and industrial use of any arsenic and arsenic compounds;
- b. Any person or entity with existing Priority Chemical List (PCL) Compliance Certificate involved in the importation, manufacture, distribution and industrial use of any arsenic and arsenic compounds. Application may be applied from effectivity of this DAO to 30 working days prior to the expiration of their PCL Compliance Certificate;
- c. Any person or entity involved in the transport, recycling, treatment, storage and disposal of arsenic containing wastes.

##### **5.2 Importation Requirements**

Any person or entity that imports arsenic or arsenic compounds shall apply for an Importation Clearance from the Bureau using the appropriate form (**Annex B**) at least 30 working days before importation. The validity of the importation clearance shall be for a period of six months. Importation clearances shall be issued per trade name of products.

##### **5.3 Required Documents**

The application for registration and importation clearance, including importation clearance renewal, must be accompanied by the following documents:

- a. Photocopy of Environmental Permits such as the following:
  - Hazardous Waste Generator's ID
  - Valid Discharge Permit

- Valid Permit to Operate
- Environmental Compliance Certificate (ECC);
- b. Photocopy of registration with the Securities and Exchange Commission (SEC) or Department of Trade and Industry (DTI), with an updated list of its officers;
- c. Photocopy of Business Permit
- d. Photocopy of the Safety Data Sheet (SDS) from the manufacturing firm;
- e. Arsenic and Arsenic Compounds Management Plan (**Annex C**)
- f. Contingency Plan
- g. Photo of Storage facility
- h. Notarized Certificate of Liabilities to compensate damages
- i. Copy of PCO Accreditation Certificate
- j. Latest Self-Monitoring Report

#### **5.4 Arsenic and Arsenic Compounds Management Plan**

The applicant shall submit the Chemical Management Plan, following the prescribed outline in **Annex C**, and the chemical's Safety Data Sheet.

Furthermore, distributors of Arsenic and Arsenic Compounds are required to have a record of users of their materials.

#### **5.5 Labeling Requirements**

The applicant shall abide with the following:

- a. Labeling requirements conforming to the provisions of Globally Harmonized System (GHS) as promulgated by the Bureau in accordance to DAO 2015-009, "Rules and Procedures for the Implementation of Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in Preparation of Safety Data Sheet (SDS) and Labelling Requirements of Toxic Chemical Substances" and EMB MC 2015-011, "Guidance Manual for DAO 2015-009";
- b. Waste labeling shall be in accordance to DAO 2013-22 "Revised Procedures and Standards for Hazardous Wastes Management".

#### **5.6 Emergency and Contingency Plan**

The applicant shall provide the company's emergency plan in cases of accidents and unforeseeable incidents involving Arsenic or its compounds including but not limited to spills, fire, and natural calamities.

#### **5.7 Manufacturing and Training Requirements**

The applicant shall comply with the following:

- a. Management Operation Flow Chart and process description where arsenic and arsenic compounds are used;
- b. Appropriate engineering controls and preventive measures and good housekeeping program to reduce the release of arsenic into the environment;
- c. Provision of appropriate personal protective equipment (PPE) to workers, as should be indicated in the Safety Data Sheet (SDS);

- d. Appropriate environmental permits or requirements such as Discharge Permit (RA 9275), Permit to Operate (RA 8749), DENR Hazardous Waste Generator's ID (RA 6969 Title III), and Environmental Compliance Certificate (ECC) (PD 1586); and
- e. Regular basic awareness, knowledge and training of employees and industrial users shall be conducted for appropriate work practices to minimize the creation and exposure to arsenic hazards during production or on the risks and hazard potentials involved in the storage, handling, use, manufacture, transport and/or disposal of generated wastes of arsenic and arsenic compounds. The following documents/records shall be submitted:
  - i. Training Modules/Plan on Arsenic Management (should include dates or frequency of training)
  - ii. Copies of Training Certificates
  - iii. Medical surveillance

### **5.8 Handling and Storage requirements**

The applicant shall comply with the following:

- a. Proper storage and handling stated in the SDS shall be followed. This includes proper inventory, stacking/stockpiling and security practices;
- b. Accessible SDS at all times;
- c. Adequate and secure storage facility with proper chemical labeling, signage and, compatibility with other chemicals and safety equipment; and
- d. Maintenance of storage records and packaging

### **5.9 Transport, Treatment, Storage and Disposal (TSD) Requirements**

All transporters and TSD facilities shall comply with DAO 2013-22, "Revised Procedures and Standards for the Management of Hazardous Wastes".

### **5.10 Substitution and Phase-out Plan**

The Department through the Bureau may develop a phase-out plan for uses of Arsenic and Arsenic Compounds. Such phase-out plan will be for consultation to related stakeholders and agencies.

## **Section 6.0 Information, Education and Communication (IEC)**

The Department, through the Bureau, in collaboration with the industry, concerned government agencies, the academe and the non-government organizations, shall promote industrial compliance and public awareness on this Order's requirements and on the hazards posed by the use and release of arsenic and arsenic compounds in the workplace and into the environment.

## **Section 7.0 Public Access to Records and Confidential Business Information (CBI)**

The public shall have access to records, reports or information obtained by the DENR upon request pursuant to this Order, in accordance with Section 12 of RA 6969 except information regarding trade secrets (formulations), sales figures, methods of production or industrial processes, distributions that would adversely affect the competitive position of such importers, manufacturers and industrial users.

Exemptions to this "no disclosure of information" shall be made subject to the conditions of Section 40 (3), DAO 92-29 of RA 6969 or as may be amended.

### **Section 8.0 Compliance Monitoring Procedure**

The EMB Regional Offices shall monitor compliance based on duly accomplished and submitted Self-Monitoring Report (SMR) per DAO No. 27, Series of 2003 and the EMB-CO shall integrate the regional monitoring report for management action. In any complaints of non-compliance, sampling and testing, if necessary, shall be made using a method that conforms to international and/or national standards.

### **Section 9.0 Revision of Requirements**

The Department may amend, modify, and/or supplement the requirements and standards in this Order after prior consultation with the stakeholders and after due notice and hearing with the public on matters to be revised. The Bureau Director may issue clarificatory guidelines, if necessary.

### **Section 10.0 Capacity Building**

In support to the effective implementation of this Order, the following activities shall be undertaken:

- a. Development and conduct of continuing training program for the industrial sector and involved agencies to ensure proper compliance of this Order.
- b. Continuing training and IEC activities on arsenic uses for both regulated community and regulators.
- c. Harmonization and facilitation in consulting and discussing arsenic uses and regulation of arsenic and its compounds with the following government agencies and parties:
  - Food and Drug Administration of the Department of Health
  - Bureau of Custom of the Department of Finance
  - Mines and Geosciences Bureau of the Department of Environment and Natural Resources
  - Fertilizer and Pesticide Authority of the Department of Agriculture

### **Section 11.0 Penalty Provision**

Any violation of the requirements specified in this Order shall subject the person(s) liable thereof to the applicable administrative and criminal sanctions as provided for under Sections 41 and 43 of DAO 92-29 and DENR Memorandum Circular No. 2005-003 (Prescribing Graduated Administrative Fines Pursuant to Republic Act No. 6969 and DENR Administrative Order No. 29, Series of 1992).

### **Section 12.0 Separability Clause**

Should any provisions or portion of this Order be declared unconstitutional or invalid, all the other provisions of this Order shall remain valid and enforceable.

### **Section 13.0 Liability**

The Secretary or his duly authorized representative may cause the impoundment or confiscation of any chemical substance and its conveyance and container if there is reasonable

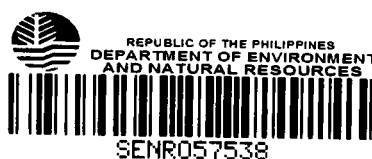
ground to believe that the sale, storage, possession, use, manufacture, transport, import for the chemical substance does not comply with this CCO. Any importer or distributor selling to non-authorized persons or end-users shall be held liable under RA 6969.

Chemicals may be confiscated and storage fees of confiscated chemicals shall be charged jointly and solidarity to the importer and/or distributor and end-user. The importer and distributor shall likewise be held liable together with the end-user in cases of injury or damage to public health and the environment and shall properly compensate the affected parties and restore the damaged area or areas resulting from any incident or accident involving the use, sale, manufacture and distribution, of Arsenic and Arsenic compounds, and storage, transport, treatment and disposal of Arsenic-bearing or Arsenic contaminated wastes.

#### **Section 14.0 Effectivity**

This Administrative Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and upon acknowledgement of receipt of a copy thereof by the Office of the National Administrative Register (ONAR), UP Law Center.

  
**ROY A. CIMATU**  
Secretary



**ANNEX A**

**CCO FOR ARSENIC AND ARSENIC COMPOUNDS  
REGISTRATION FORM**





Republic of the Philippines  
 Department of Environment and Natural Resources  
**ENVIRONMENTAL MANAGEMENT BUREAU**  
 Email: [chemicals@emb.gov.ph](mailto:chemicals@emb.gov.ph)  
 Visit us at: [www.emb.gov.ph](http://www.emb.gov.ph)

**ARSENIC AND ARSENIC COMPOUNDS REGISTRATION FORM**

**I. GENERAL INFORMATION**

1. COMPANY NAME \_\_\_\_\_  
 OFFICE ADDRESS \_\_\_\_\_  
 PLANT ADDRESS / STORAGE FACILITY (If different from above) \_\_\_\_\_
2. CONTACT PERSON / DESIGNATION \_\_\_\_\_
3. TELEPHONE NUMBER \_\_\_\_\_  
 FAX NUMBER \_\_\_\_\_  
 EMAIL ADDRESS \_\_\_\_\_

4. CATEGORY OF APPLICANT / TYPE OF BUSINESS (Check all applicable)
  - Importer
  - Distributor
  - Industrial User
  - Manufacturer
  - Recycler
  - Waste Service Provider (transporter, treater, disposer)

5. STATUS OF COMPLIANCE TO ENVIRONMENTAL AND OTHER PERMITS

	Date Issued	Validity Date
• Environmental Compliance Certificate	_____	_____
• DENR ID Number	_____	_____
• Permit to Operate (Air)	_____	_____
• Discharge Permit (Water)	_____	_____
• TSD Permit	_____	_____
• SEC Registration	_____	_____
• Business Permit	_____	_____

**II. ARSENIC SPECIFIC INFORMATION (For all categories, if applicable)**

1. Arsenic Application(s)

Trade Name	
Arsenic Component Chemical Name	
Intended Use	
Average Annual Quantity Imported (MT/yr)	
Average Annual Quantity Used (MT/yr)	
Quantity Of Products Produced (MT/year)	

Quantity Of Arsenic Treated (for TSD, in MT/year)	
Quantity Of Arsenic Waste Produced / Generated Annually / Quarterly (MT / year)	

\* Applicant may add additional tables for multiple products

2. PROCESS FLOW CHART AND TYPE OF ACTIVITY USING ARSENIC (Use additional sheet, if necessary)

### III. MANAGEMENT INFORMATION

1. TOTAL NUMBER OF WORKFORCE \_\_\_\_\_
2. NUMBER OF EMPLOYEES DIRECTLY HANDLING LEAD THAT MAY BE EXPOSED TO LEAD RELEASES. ASSESS THE NATURE AND EXTENT OF EXPOSURE TO LEAD (provide additional sheet if necessary)

\_\_\_\_\_

3. EDUCATION AND TRAINING PROGRAM ORGANIZED FOR ARSENIC MANAGEMENT (HANDLING, STORAGE, DISPOSAL) OVER THE LAST YEAR (provide additional sheet if necessary)

#### DETAILS OF THOSE TRAINING PROGRAMS ORGANIZED

Title / Name	Organizer	Date/Duration
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

### IV. PREVENTIVE AND CONTROL MEASURES

1. DESCRIBE THE GENERAL PREVENTIVE AND CONTROL PROGRAM OF THE COMPANY FOR ARSENIC (provide additional sheet if necessary)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. DESCRIBE HOUSEKEEPING PRACTICES DEVELOPED AND IMPLEMENTED (provide additional sheet if necessary)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3. IDENTIFY AND DESCRIBE EQUIPMENT(S) USED IN RELATION TO ARSENIC (provide additional sheet if necessary)

\_\_\_\_\_  
 \_\_\_\_\_

4. LIST OF PERSONAL PROTECTIVE EQUIPMENT (PPE) AVAILABLE FOR PERSONNEL / WORKER DURING HANDLING AT THE PREMISE AND DURING TRANSPORTING

\_\_\_\_\_

\_\_\_\_\_

5. DESCRIBE IN BRIEF THE CONTINGENCY PROCEDURES / PLAN (In case of emergency).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**V. TREATMENT, STORAGE & DISPOSAL INFORMATION (For all categories)**

1. DESCRIBE STORAGE METHODS, PROCEDURES, FACILITIES AND LOCATION (provide additional sheet if necessary)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. LIST OF ATTACHMENTS

- Pertinent Environmental Permits
- Arsenic and Arsenic Compounds Management Plan
- Process flow chart
- Latest waste water / ground water analysis report.
- Copy of PCO accreditation certificate or relevant training certificate
- Photos of storage area

**NOTARIZED CERTIFICATION**

THE UNDERSIGNED CERTIFY THAT THE INFORMATION PROVIDED IN THIS FORM IS TRUE AND ACCURATE.

NAME: \_\_\_\_\_

DESIGNATION / POSITION: \_\_\_\_\_

SIGNATURE : \_\_\_\_\_ DATE: \_\_\_\_\_

I acknowledge that this application form is a legally binding document, and I declare, under the penalties of perjury, that the same has been accomplished in good faith, verified by me, and, to the best of my knowledge and belief, is true and correct pursuant to the regulations issued under authority thereof.

**ANNEX B**

**CCO FOR ARSENIC AND ARSENIC COMPOUNDS  
IMPORTATION CLEARANCE FORM**



Republic of the Philippines  
 Department of Environment and Natural Resources  
 Environmental Management Bureau  
 DENR Compound, Visayas Ave., Diliman, Quezon City  
 Tel. No.: (02)928-8892  
 e-mail ad: [chemicals@emb.gov.ph](mailto:chemicals@emb.gov.ph)

**APPLICATION FOR THE IMPORTATION OF ARSENIC AND ARSENIC COMPOUNDS**

- I. **Applicant's (Juridicial) Name:** \_\_\_\_\_
- II. **Business Address:** \_\_\_\_\_  
**Storage Facility:** \_\_\_\_\_
- III. **Contact Person:** \_\_\_\_\_ **Contact Number:** \_\_\_\_\_  
**Position/Designation:** \_\_\_\_\_ **Fax Number:** \_\_\_\_\_
- IV. **Type of Importer:** (please mark X the appropriate box/boxes and fill-up the corresponding fields)  
 Importer – Distributor  
 Importer – End-user
- V. **Environmental and Other Permits Issued:** (please attach copy)  
 CCO for Arsenic and Arsenic Compounds Registration No.: \_\_\_\_\_  
 ECC No. \_\_\_\_\_ DP No. \_\_\_\_\_  
 PO No. \_\_\_\_\_ DENR ID No. \_\_\_\_\_  
 Business Permit No. \_\_\_\_\_

VI. **Summary of Importation from the previous year**

Date of Importation	Invoice No.	Name of Supplier and Country of Origin	Actual Arrival Quantity (tonnes/kg/liter)	Total Cost/ amount

\*(provide additional sheet if necessary)

VII. **List of Projected Importers/Client(s) (for distributors):**

Name of Person / Company	Address & Contact No.	Category (Distributor/ Manufacturer/ End-user)	Volume (Tonnes)

\*(provide additional sheet if necessary)

VIII. **List of Importers/Client(s) supplied to (for renewal application of distributors):**

Date of Sale	Name of Person / Company	Address & Contact No.	Category (Distributor/ Manufacturer/ End-user)	Volume (Tonnes)

\*(provide additional sheet if necessary)

IX. **Data on Substance Subject to Importation:**

Brand/Trade/Commercial Name: \_\_\_\_\_  
 Chemical Name of Arsenic (Compound) in Substance: \_\_\_\_\_  
 % Arsenic (Compound) in Substance: \_\_\_\_\_ CAS No.: \_\_\_\_\_  
 Allowed Quantity per year: \_\_\_\_\_ Used Quantity from prev. permit: \_\_\_\_\_  
 Quantity to be applied (in tonnes): \_\_\_\_\_  
 Intended Use: \_\_\_\_\_

**X. Shipper's Information/Transaction Data**

Country of Origin: \_\_\_\_\_  
Name of Exporting Company: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
Mode of Shipment (by air/sea) \_\_\_\_\_ Expected Date of Arrival: \_\_\_\_\_  
Expected Port of Entry/Loading: \_\_\_\_\_  
Port Address: \_\_\_\_\_

**XI. Present Inventory of Substance Subject for Importation (under applicant's custody)**

Quantity (in tonnes): \_\_\_\_\_ Size of Storage Area (in m<sup>2</sup>): \_\_\_\_\_

**XII. Attachments:**

- Pro forma Invoice
- Quarterly Self-Monitoring Report
- Training/Seminar attended by the Chemical Handler
- Other documents as required in the previous Permit's Terms and Conditions (for renewal applications)

**XIII. Fees** \_\_\_\_\_ **OR#** \_\_\_\_\_ **Date** \_\_\_\_\_

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I acknowledge that this application form is a legally binding document, and I declare, under the penalties of perjury, that the same has been accomplished in good faith, verified by me, and to the best of my knowledge and belief, is true and correct pursuant to the regulations issued under authority thereof.

\_\_\_\_\_  
(Authorized Signature over Printed Name)

**ANNEX C**

**ARSENIC AND ARSENIC COMPOUNDS  
MANAGEMENT PLAN**

## **ARSENIC AND ARSENIC COMPOUNDS MANAGEMENT PLAN OUTLINE**

This Outline serves as a guideline for the company's Management Plan. The details of the management plan will vary depending on the type or premises and the type of activity that is being conducted with a timetable for completion of particular actions.

### **I. STRUCTURE AND RESPONSIBILITIES / ACCOUNTABILITIES**

- a. Management (e.g. CEO, Line Managers, Supervisors)
- b. Safety Officers and Pollution Control Officers
- c. Emergency Response Team
- d. Production Operators
- e. Drivers

### **II. PROCESS DESCRIPTION WHERE LEAD AND LEAD COMPOUNDS ARE USED**

### **III. TRANSPORT**

- a. Transport procedure within the facility
- b. Transport procedure outside the facility
  - b.1 Labeling
  - b.2 Documents necessary during transport (e.g. SDS, relevant permits)
  - b.3 Safety equipment/PPEs on board (e.g. fire extinguisher, mask)

### **IV. STORAGE**

- a. Storage specification
  - a.1 Stacking
  - a.2 Storage temperature / ventilation
  - a.3 Security
  - a.4 Storage compatibility with other chemicals
  - a.5 Packaging
- b. Safety
  - b.1 Emergency Equipment (e.g. fire extinguishers, emergency shower, emergency eyewash, vacuum, etc.)
  - b.2 Signage/Labeling.
  - b.3 Containment

### **V. HANDLING**

- a. Personal Protective Equipment.
- b. Production Equipment using lead (general description).
  - b.1 equipment maintenance (e.g. filter cleaning, exhaust check)
- c. Handling procedure / precautions
- d. Inventory

### **VI. DISPOSAL**

- a. Waste handling
- b. Waste storage
- c. Waste inventory / tracking
- d. Transport



- e. Treatment (on-site)
- f. Treatment (3<sup>rd</sup> party)

#### VII. SUBSTITUTION AND PHASE-OUT PLAN

- a. Alternatives
- b. Phase out timelines

#### VIII. CONTINGENCY PLAN

- a. Spills / leaks
- b. Contact (inhalation, ingestion, contact)
- c. Remediation plan/clean-up plan in case of environmental contamination to restore damaged areas; The company shall be responsible for all costs of managing arsenic and arsenic compounds including the use, storage, handling, disposal and clean-ups.

#### IX. RECORDS

- a. Inventory reports
- b. Training Records of personnel
- c. Medical Surveillance Report
- d. Record of Transport and Treatment
- e. Waste water/Ground water analysis
- f. Accident / Incident reports