

 EHS	Document Owner:EHS	Release Date: 4/15/05
Document Title: MacroTechnology Works Permit Required Confined Space Entry	Document No:	Document Rev: 01

1. **Purpose** – To address permit required confined space entries at MacroTechnology Works
2. **References**
 - a. 29 CFR Part 1910.146
3. **Definitions**
 - a. Confined Space
 - i. A space that can be bodily entered
 - ii. A space with limited entrance and egress
 - iii. A space that is not meant for normal occupancy
 - b. Permit Required Confined Space
 - i. A confined space with one or more of the following;
 - ii. Contains or has potential to contain a hazardous atmosphere
 - iii. Contains a material that could engulf an entrant
 - iv. Configuration that entrant could be trapped
 - v. Contains any other recognized serious safety or health hazard
4. **Equipment – Materials**
 - a. Entry Equipment;
 - i. Air monitoring (LEL, O2, H2S, CO)
 - ii. Air monitoring designated for contaminant
 - iii. Retrieval System
 - iv. Confined Space Entry Permit
5. **Responsibility**
 - a. EHS
 - i. Identifying and inventorying permit required confined spaces
 - ii. Making employees and contractors aware of confined spaces and limitations
 - iii. Reviewing Contractor/Vendor confined space entry permits
6. **Procedures**
 - a. Contractor/Vendor is required to enter a confined space entry.
 - b. Contractor/Vendor contacts EHS department at least 24 hours prior
 - c. EHS reviews permit required confined space plan of contractor/vendor
 - d. Contractor/Vendor may enter space, ensuring that all regulations are followed
7. **Inventory of Permit Required Confined Spaces at MacroTechnology Works are as follows;**
 - a. **Building 1**
 - i. Note – Building 1 has a pit, this pit is designated as a Non-Permit Confined Space for routine inspections, and is designated as a Permit Required Confined space for any Maintenance or Hazardous Work Operations
 - ii. Note – The cooling towers are designated as a Non-Permit Confined space after

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lockout tagout of the electrical disconnect for the fan. The physical hazard of the fan has been mitigated.

- iii. RO/DI/UPW Room 1101U1
 - 1. RO cleaning Skid Tank
 - 2. Tank S406A
 - 3. Tank S406B
 - 4. Tank F404A
 - 5. Tank F404B
 - 6. LIT 401 Blend Water Storage Tank
 - 7. LIT417 High Purity Water Storage Tank
 - 8. LIT 428 Bine Maker Tank
- iv. AWN Pit
 - 1. Piping Tunnel
 - 2. Tank 150
 - 3. Tank 103B
 - 4. Tank 103C
 - 5. Tank 103A
 - 6. Tank 101
 - 7. Tank 130B
 - 8. Tank130A
 - 9. Tank 110A
 - 10. Tank 110B
 - 11. Tank 120B
 - 12. Tank 120A
- v.
- b. Building 2**
 - i. Fan Deck
 - 1. Tank 350
 - 2. Acid Exhuast Scrubber 376
 - 3. Acid Exhuast Scrubber 375
 - 4. Ammonia Exhaust Scrubber
 - 5.
- c. **Building 3** – Not Applicable
- d. **Building 4** – Not Applicable
- e. Building 5**
 - i. Room 1508U1
 - 1. Piping Vault
- f. **Building 6** – Not Applicable
- g. Outside Locations**
 - i. 2 Electrical Tunnel access manholes located between Building 1 and 2

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- ii. Outside North of Building 6 Vault
- iii. Outside West of building 5 at loading dock Solvent Collection Tank
- iv. Outside South of Building 1 Diesel Tank
- v. Outside West of Building 1 Final Flume Vault
- vi. Outside South of Building 4 Grease Trap
- vii. Outside South East of Building 5 in parking lot – Electrical Manhole

8. Notes

- a. The Tempe Fire Department is designated as the sites permit required confined space entry rescue team, unless a contractor/vendor has their own
- b. ASU employees do not enter permit required confined spaces, employee access is controlled through signage on confined spaces stating “Danger Permit Required Confined Space Entry” EHS does not issue permits for employees.

9. Records

- a. EHS retains copy of permit for Contractors/Vendors

10. Revision Update

- a. Document created by James Kotonias on 4-15-05