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Media Briefing  
**Action Plan**

**Environmental Remediation in and around UCIL, Bhopal**  
Round Table Meeting, April 25-26, 2013



# Action Plan

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- **Developed by Expert Participants over two days of deliberations**
  - Time bound and action oriented that do not pile up over those from past
  - Address the existing institutional logjam
  - Implemented through a fast track transparent mechanism with CPCB as the nodal supervisory agency
  - Involve local community from Bhopal



# Immediate Measures

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- **Securing the site and preventing annual runoff of contaminated water (*Three months*)**
  - a. Fencing and guarding of UCIL site and the landfill area within the SEP to prevent access to people (*Immediate*)
  - b. Stopping construction at the SEP area (*Immediate*)
  - c. Measures to be taken to protect annual runoff from the site during monsoon (*Immediate*)



# UCIL Site and SEP Area, As of 2009

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***Solar Evaporation Pond Area***



***Children playing at the UCIL site***



# Immediate Measures

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- **Excavation, recovery and characterisation of waste dumped at the UCIL site (*Six months*)**
  - a. Clearing of vegetation and dewatering the site (*One month, post monsoon*)
  - b. Identification and refurbishment of a temporary storage area for the excavated waste (*Three months*)
  - c. Excavation and recovery of dump materials from already identified and new sites (*Three months*)
  - d. Recovery of mercury present in drains, pan filters, buried in soil with help of local community (*Three months*)
  - e. Characterisation and inventorisation of the collected waste for proper treatment and/or disposal (*Six months*)



# Toxic Waste at UCIL, As of 2009

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***Waste dump site at UCIL***



***Mercury found at UCIL***



# Immediate Measures

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- **Characterisation and incineration of the stored waste at the UCIL site (*Six months*)**
  - a. Trial at the Pithampur incinerator with 10 tonnes of similar waste from Hindustan Insecticides Limited, Kerala (*Three months*)
  - b. Characterisation results of the stored UCIL waste to be made public and if required, further characterisation and inventorisation is to be done in parallel with trials (*Three months*)
  - c. Waste with high calorific value and hazardous in nature to be incinerated with continuous stack monitoring; remaining waste to be dealt with suitable decontamination/remediation measures (*Six months*)



## Medium-and Long-term Measures

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- **Groundwater contamination assessment and remediation outside the UCIL site (Two-three years)**
  - a. Field investigation and lab analysis of the groundwater (*One year*)
  - b. Possibility of hydraulic containment to be explored as an interim measure (*Six months-one year*)
  - c. Remediation/containment plan to be developed and implemented (*Two-three years*)





## Medium-and Long-term Measures

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- **Characterisation and remediation of waste dumped in landfill in the SEP area (*One-two years*)**
  - a. Characterisation of waste and development of a basket of disposal/decontamination/remediation methods (*One year*)
  - b. Disposal/remediation of the waste and decontamination of the landfill area (*One-two years*)



## Medium-and Long-term Measures

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- **Remediation of the entire SEP area (*Three-five years*)**
  - a. Assessment of the need of geo-hydrological and contamination analysis based on previous reports (*Three months*)
  - b. If required, SEP to be studied for waste characterisation and source of contamination (*One year*)
  - c. Development and implementation of remediation plan keeping residential purpose in mind (*Three-five years*)



## Medium and Long-term Measures

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- **Detoxification, dismantling and decommissioning of the UCIL plant, machinery and structure (*Two years*)**
  - a. MIC plant including the vent, vent scrubber, storage tanks and control room to be strengthened and preserved (*Two years*)
  - b. Remaining parts of the site to be decontaminated, dismantled and decommissioned as suggested by the IICT (*Two years*)



# Plant and Machinery, As of 2009

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***Vent Gas Scrubber at UCIL***



***Plant Machinery at UCIL***



# Medium and Long-term Measures

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- **Remediation of the UCIL site (*Three-five years*)**
  - a. Geo-hydrological and contamination studies based on stratified judgmental sampling (*Two years*)
  - b. Development of a basket of decontamination/disposal methods accordingly (*Two-three years*)
  - c. Remediation plan based on findings and future use as memorial and centre of excellence (*Two-three years*)
  - d. An international workshop/competition on master planning for conversion of the site (*One year*)
  - e. Implementation of the remediation and conversion of the site to a memorial and center of excellence (*Three-five years*)