

## DECOMMISSIONING OF DAMAGED NUCLEAR FACILITIES AT AL-TWAIHA NUCLEAR CENTER-BAGHDAD -IRAQ.

Thursday, 26 May 2016 11:55 (25 minutes)

Qussay, Albustani &Khudhair,Waheeb  
Iraqi Decommissioning Directorate , Ministry of Science and Technology,  
AL-Jaderyia street,Baghdad,Iraq.  
E-mail address: qussayalbostany@yahoo.com  
: khudhair\_57@yahoo.com

### 1. INTRODUCTION

The purpose of participation in this conference is to share knowledge and experience gained in addressing the challenges associated with the decommissioning and remediation of four damaged nuclear facilities at AL-Tuwaitha nuclear center which includes 18 damaged nuclear farcialities , our case is considered as special case because these facilities have been destroyed by bombing. For safely removal of these facilities , it is require to maintain the communication with experts from IAEA and various member states those who have cases of damaged nuclear facilities and then disseminate and benefit from practical information and lessons learned deriving from these cases.

### 2. METHDOS

Figure (1) shows the decommissioning process flowchart that designated for removal the former nuclear facilities at AL-Tuwaitha nuclear center.

### 3. RESULTS

Table (1) below shows the Master decommissioning schedule,the removal of all formerdamaged nuclear facilities at AL-Tuwaitha center divided into three main phases , scienc wehave no experience in decommissioning,so at the beginning we concentrate on building capacities of our operation staff and then moved them to the decommissioning area starting with low risk facilities those included in phase (1).

Phase( 1):Decommissioning of (Geopilot, LAMA, Radioactive Isotope production Facility).

Phase(2):Decommissioning planning (Tammuz-2, Adaya, IRT-5000, Fuel Fabrication Facility).

Phase(3):Decommissioning of the remaining facilities based on prioritization scheme .

### 4.CONCLUSIONS

For phase(1), all project were accomplished 100% with deviation of one year, . In phase (2) ,Decommissioning of Tammuz-2 reactor and fuel fabrication factory about 65% of the two projects were accomplished . But Adaya was deferred because of security situation and also IRT5000 reactor was differed because of lack in funding.

### REFERENCES

- [1] SRS-45.Standard Format and content for safety related decommissioning document, Vienna, July 2005.
- [2] IAEA safety standards series No. WS-G-5.2: Safety assessment for the decommissioning of facilities using radioactive material,Vienna,2008.
- [3] IAEA, Characterization of Radioactively Contaminated Sites for Remediation Purposes, IAEA-TECDOC-1017, IAEA Vienna, 1998.
- [4] IAEA Safety Standards Series Ds298 Draft 5: Fundamentals of Nuclear, Radiation, Radioactive Waste and Transport Safety, IAEA Safety Standards Series Ds298 Draft 5, 2003.
- [5] Jarjies, A., Abass, M., Fernandes, H., and Coates, R. Development and Application of a Prioritization Methodology for Decommissioning the Iraq Former Nuclear Complex, 2008.
- [6] IAEA Technical Reports Series No. 463 (2008): Decommissioning of Research Reactors and OtherSmall Facilities by Making Optimal Use of Available Resources, IAEA, and Vienna, Austria.
- [7] Mahmoud, Tariq A., (1988), Environmental Technology and Science, Ministry of Higher Education and Scientific Researches, Al-Musil University, Iraq, pp. 327-340.
- [8] IAEA, Clearance levels for radionuclides in solid materials, Application of exemption principles, Interim

report for comment, IAEA-TECDOC-8S5, 1996.

[9] Safety series No.115 ,international Basic Safety Standards for protection against Ionization Radiation and for safety radiation sources. IAEA ,Vienna,1996

## **Country or International Organization**

Iraq

## **Type "YES" to confirm submission of required <br> Forms A and B via the official channels**

yes

**Primary author:** Mr ALBOSTANI, QUSAY (Ministry of Science and Technology- Iraqi Decommissioning Directorate)

**Co-author:** AL-JUMAILI, Khudhair (Iraqi Decommissioning Directorate -Ministry of Science and Technology)

**Presenters:** AL-JUMAILI, Khudhair (Iraqi Decommissioning Directorate -Ministry of Science and Technology); Mr ALBOSTANI, QUSAY (Ministry of Science and Technology- Iraqi Decommissioning Directorate)

**Session Classification:** Session 5B - 2

**Track Classification:** Case Studies and Waste Management in Environmental Remediation