

# Board of Governors

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## Implementation of the NPT Safeguards Agreement in the Syrian Arab Republic

*Report by the Director General*

1. This report of the Director General to the Board of Governors is on the implementation of the NPT Safeguards Agreement in the Syrian Arab Republic<sup>1</sup> (Syria); it includes developments since the last report was issued in September 2010.<sup>2</sup>

### **A. The Dair Alzour Site**

2. On 2 June 2008, the Director General informed the Board of Governors that the Agency had been provided with information alleging that an installation at the Dair Alzour site in Syria, destroyed by Israel in September 2007, had been a nuclear reactor. The information further alleged that the reactor was under construction but not operational at the time of its destruction, and that it had been built with the assistance of the Democratic People's Republic of Korea (DPRK). By the end of October 2007, large scale clearing and levelling operations had taken place at the site which had removed or obscured the remains of the destroyed building.<sup>3</sup>

3. Syria has maintained, since May 2008, that the destroyed building was a non-nuclear military installation and that Syria had had no nuclear related cooperation with the DPRK.<sup>4</sup> While it cannot be excluded that the destroyed building was intended for non-nuclear use, the Agency has assessed that the features of the building and its connectivity to adequate pumping capacity of cooling water are

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<sup>1</sup> INFCIRC/407.

<sup>2</sup> GOV/2010/47 (6 September 2010).

<sup>3</sup> GOV/OR.1206, para. 26 and GOV/2008/60, para. 16.

<sup>4</sup> GOV/2008/60, para. 1 and GOV/2009/36, para. 15.

similar to what may be found at nuclear reactor sites.<sup>5</sup> While Syria has indicated that its efforts to procure pumping equipment and large quantities of graphite and barite were civilian and non-nuclear in nature, the Agency has assessed that these items could also support the construction of a nuclear reactor.<sup>6</sup> Additionally, Syria's statements concerning the end use of the barite, which was purchased by the Syrian Arab Republic Atomic Energy Commission (AECS), are not consistent with other information available to the Agency. Syria has also maintained that the particles of anthropogenic natural uranium found in samples taken during the Agency's June 2008 visit to the Dair Alzour site originated from the missiles used to destroy the building.<sup>7</sup>

4. As indicated in previous reports, the Agency has assessed that the probability that the particles originated from the missiles used to destroy the building is low. The Agency also assessed that there is a low probability that the particles were introduced by aerial dispersion. The presence of such uranium particles points to the possibility of nuclear related activities at the site and adds to questions concerning the nature of the destroyed building. Syria has yet to provide satisfactory explanations for the origin and presence of these particles.<sup>8</sup> In this context, information yet to be provided by Israel might be helpful in clarifying the matter.<sup>9</sup>

5. Syria's statements concerning the nature of the destroyed building, the Dair Alzour site, the three other locations allegedly functionally related to it, the procurement activities referred to above and the alleged foreign assistance are limited in detail and no supporting documentation has been provided by Syria. The information and access provided by Syria to date have not allowed the Agency to confirm Syria's statements regarding the non-nuclear nature of the destroyed building. Since the Agency's visit to the Dair Alzour site in June 2008, the Agency has made repeated requests to Syria for:

- information concerning the Dair Alzour site, the infrastructure observed at the site and certain procurement efforts which Syria has stated were related to civilian non-nuclear activities;
- access to technical documentation and any other information related to the construction of the destroyed building;
- access to locations where the debris from the destroyed building, the remains of munitions, the debris from equipment and any salvaged equipment had been and/or are now situated; and
- further access to the Dair Alzour site and access to three other locations allegedly functionally related to the Dair Alzour site.

6. Syria has maintained that, due to the military and non-nuclear nature of the Dair Alzour site and three other locations allegedly functionally related to Dair Alzour, it had no obligation to provide more information under its Safeguards Agreement with the Agency.<sup>10</sup> The Agency has explained to Syria that there is no limitation in comprehensive safeguards agreements on Agency access to information, activities or locations simply because they may be military related. The Agency has repeatedly offered to establish the necessary modalities for managed access to sensitive information and locations, including the Dair Alzour site and the three other locations.

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<sup>5</sup> GOV/2008/60, paras 10 and 11.

<sup>6</sup> GOV/2009/36, para. 14.

<sup>7</sup> GOV/2008/60, para. 8.

<sup>8</sup> GOV/2010/47, para. 5.

<sup>9</sup> GOV/2009/36, para. 7.

<sup>10</sup> GOV/2009/56, para. 9 and GOV/2008/60, para. 14.

7. Syria has not engaged substantively with the Agency on the nature of the Dair Alzour site since the Agency's June 2008 visit and, since August 2009, has not responded to the issues noted in paragraph 5. The Agency continues to request Syria to provide access to the information, material, equipment and locations previously indicated by the Agency.

## **B. Activities at Other Locations in Syria**

8. As previously reported, particles of anthropogenic uranium of a type not included in Syria's reported inventory were found at the Miniature Neutron Source Reactor (MNSR) in 2008 and in 2009. Syria's initial explanations in June 2009 that the particles had originated either from standard reference materials used in neutron activation analysis or from a shielded transport container were not supported by the results of sampling carried out by the Agency.<sup>11</sup> During the November 2009 inspection, Syria explained that the anthropogenic particles had originated from previously unreported activities performed at the MNSR related to the preparation of tens of grams of uranyl nitrate using yellowcake produced at Homs.<sup>12</sup> At the March 2010 physical inventory verification (PIV), another small quantity of undeclared uranyl nitrate was found at the MNSR. Syria explained that the unreported activities had taken place in a different location in the MNSR than previously declared to the Agency.<sup>13</sup> As reported earlier, Syria submitted inventory change reports in June 2010 for the newly declared material shown to the Agency during the PIV. However, inconsistencies between Syria's declarations and the Agency's findings remained unresolved.

9. During a meeting on 3 September 2010, agreement was reached with Syria on a plan of action for resolving these inconsistencies. The plan included actions relating to:

- the amount and types of nuclear material used in the preparation of uranyl nitrate, the irradiation activities at the MNSR and the processes used;
- scientific publications by the AECS that indicate uranium conversion experiments different from those declared by Syria to have occurred at the MNSR;
- information indicating the presence of nuclear material under the control of the Waste Management Department of the AECS but not part of Syria's declared inventory; and
- access to Homs for the purpose of determining the extent of any uranium processing activities and nuclear material at that location.

10. In a letter dated 9 September 2010, the Agency provided Syria with a detailed request for clarification concerning inconsistencies regarding the amounts and types of nuclear material involved in the preparation of the uranyl nitrate. In response, Syria sent two letters to the Agency dated 28 October 2010; these did not clarify the issues identified in the Agency's letter and the plan of action. In addition, the letters appear to have added further inconsistencies concerning the preparation of the uranyl nitrate and subsequent irradiation activities.

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<sup>11</sup> GOV/2009/75, para. 6.

<sup>12</sup> A pilot plant for the purification of phosphoric acid was constructed and commissioned in 1997 at Homs, Syria, with the support of the United Nations Development Programme and the IAEA. Yellowcake was also produced as a result of the acid purification process. During a July 2004 visit to the Homs phosphoric acid purification plant, Agency inspectors observed some hundreds of kilograms of yellowcake.

<sup>13</sup> GOV/2010/47, para. 10.

11. In a letter dated 13 September 2010, the Agency provided Syria with a list of the locations to be accessed and the activities to be performed during the visit to Homs. In its letter of 29 October 2010, the AECS responded that the pilot plant in Homs and the activities being carried out there are not subject to Syria's Safeguards Agreement with the Agency and that further aspects of the Agency's request for access needed to be discussed and clarified with the Agency before the AECS is able to request permission for the visit.

12. In a letter to the Agency, dated 28 October 2010, with respect to the nuclear material inventory under the control of the Waste Management Department of the AECS, Syria acknowledged the presence of some of the nuclear material previously identified by the Agency and conveyed that the material and related documents will be available for Agency verification in March/April 2011. In a letter dated 12 November 2010, the Agency reminded Syria to provide the necessary inventory change report concerning this nuclear material and reiterated its request that Syria provide information on other nuclear material identified by the Agency in earlier letters.<sup>14</sup>

13. In two letters dated 12 November 2010 and during a meeting in Vienna on 15 November 2010, the Agency provided Syria with assessments of the information contained in Syria's October 2010 letters and explained why further clarifications were necessary. During that meeting, Syria reaffirmed its commitment to resolving the MNSR issues within the scope of its Safeguards Agreement, to respond to the Agency's questions concerning inconsistencies, and to discuss with the Agency its earlier requests for access to the pilot plant at Homs. The Agency also reiterated the importance of a prompt and positive reaction from Syria on these issues.

## **C. Summary**

14. Syria has not cooperated with the Agency since June 2008 in connection with the unresolved issues related to the Dair Alzour site and the other three locations allegedly functionally related to it. As a consequence, the Agency has not been able to make progress towards resolving the outstanding issues related to those sites.

15. With the passage of time, some of the information concerning the Dair Alzour site is further deteriorating or has been lost entirely. It is critical, therefore, that Syria actively cooperate with the Agency on these unresolved safeguards implementation issues without further delay.

16. Concerning the MNSR, Syria's responses to date, under the agreed plan of action, do not resolve the inconsistencies identified by the Agency. Conclusions about the source of the uranium particles at the MNSR will only be possible once Syria has provided clarification regarding outstanding inconsistencies.

17. The Director General urges Syria to bring into force an Additional Protocol to its Safeguards Agreement, which would further facilitate the Agency's work in verifying the correctness and completeness of Syria's declarations.

18. The Director General will continue to report as appropriate.

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<sup>14</sup> The Agency previously sent letters to Syria, dated 14 May 2010 and 29 July 2010, regarding the possible presence of undeclared nuclear material at waste management facilities under the control the AECS. Syria responded, in letters dated 23 May 2010 and 15 August 2010, that no such material was present and that its declared inventory was complete.