

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 is the report of the Director General to the Board of Governors on the implementation of the NPT Safeguards Agreement in the Syrian Arab Republic¹ (Syria); it includes developments since the last report was issued in May 2010.²

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.³

3. Syria has maintained, since May 2008, that the destroyed building was a non-nuclear military installation and that it had had no nuclear related cooperation with the DPRK.⁴ 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

¹ INFCIRC/407.

² GOV/2010/29 (31May 2010).

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

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

similar to what may be found at nuclear reactor sites.⁵ While Syria has indicated that its efforts to procure pumping equipment and large quantities of graphite were civilian and non-nuclear in nature, the Agency has assessed that these items could also support the construction of a nuclear reactor.⁶

4. As described in the Director General's report GOV/2009/36, Syria has made a number of statements regarding the purpose of the procurement of large quantities of barite.⁷ These statements are not supported by the information available to the Agency, in particular with respect to the stated end use for the barite. In letters dated 4 June 2009 and 23 October 2009, the Agency requested that Syria provide access to project documentation and plans related to relevant activities to allow the Agency to confirm Syria's statements. Syria has not yet responded to these requests.

5. As indicated in previous reports, the Agency was provided with access to the Dair Alzour site on 23 June 2008, at which time it was permitted to take environmental samples but was not provided with the requested access to documentation relevant to the destroyed building and other buildings, or to debris and equipment from the destroyed building.⁸ Analysis of the samples indicated the presence of particles of anthropogenic⁹ natural uranium of a type not included in Syria's declared inventory of nuclear material. The Agency has assessed that the probability the particles originated from the missiles used to destroy the building is low.¹⁰ According to the Agency's current assessment, there is also a low probability that the particles were introduced by aerial dispersion from aircraft involved in the destruction of the building due to, inter alia, the particles' pattern of distribution among the sampling locations. 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 a satisfactory explanation for the origin and presence of these particles. In this context, information yet to be provided by Israel might be helpful in clarifying the matter.¹¹

6. Syria has previously made a number of statements concerning the destruction of the building¹², the Dair Alzour site, the three other locations¹³ allegedly functionally related to it, the procurement activities referred to above and the alleged foreign assistance. The statements are limited in detail and no documentation has been provided by Syria to support them. Syria has also maintained its position that, due to the disposal of the debris from the Dair Alzour site, it is impossible to grant the Agency's request for access to the debris. 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, or to substantiate Syria's claims regarding its procurement efforts.

7. The Agency has repeatedly requested that Syria have substantive discussions with it on the nature of the destroyed building, and discuss relevant satellite imagery and other information available to the Agency. Since the Agency's visit to the Dair Alzour site in June 2008, Syria has declined to engage substantively with the Agency in this regard. Furthermore, Syria has maintained that, due to the

⁵ GOV/2008/60, paras 10 and 11.

⁶ GOV/2009/36, para. 14.

⁷ GOV/2009/36, para. 14.

⁸ GOV/2008/60, para. 4.

⁹ "Anthropogenic" refers to material that has been produced as a result of chemical processing.

¹⁰ GOV/2009/9, para. 7.

¹¹ GOV/2009/36, para. 7.

¹² UN Document A/61/1041-S/2007/537, 10 September 2007; the Syrian President's 1 October 2007 interview with the BBC, "Assad sets conference conditions"; GOV/2008/60, para. 1; GOV/2009/56, para. 9.

¹³ GOV/2008/60, paras 3 and 14.

military and non-nuclear nature of the Dair Alzour site and the three other locations, it had no obligation to provide more information under its Safeguards Agreement with the Agency.¹⁴ In this regard, the Agency has previously 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 made repeated requests to Syria for:¹⁵

- 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.

8. The Agency has repeatedly proposed to Syria the establishment of the necessary modalities for managed access to sensitive information and locations, including the Dair Alzour site and the three other locations. Such access is essential to enable the Agency to establish the facts and make progress in its verification, while protecting military and other information which Syria considers to be sensitive. In view of Syria's reluctance to engage with the Agency on this matter and the continuing degradation of information with the passage of time, the Agency requests that Syria increase its cooperation and provide prompt access to all relevant information and locations as requested by the Agency.

B. Activities at the MNSR Site

9. 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.¹⁶

10. Syria has since then explained that the anthropogenic particles originated from previously unreported activities related to the production of uranyl nitrate performed at the MNSR, using yellowcake material produced at Homs¹⁷. Syria further explained that the purified uranyl nitrate was then used along with imported depleted uranyl nitrate in irradiation experiments at the MNSR. During the March 2010 physical inventory verification (PIV) at the MNSR, the Agency was provided with access to the location and material which Syria stated had been used in the production of uranyl nitrate

¹⁴ GOV/2009/56, para. 9 and GOV/2008/60, para. 14.

¹⁵ GOV/2010/29, para. 5.

¹⁶ GOV/2009/75, para. 6.

¹⁷ 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 produced as a by-product of the purification process.

and irradiation activities at the MNSR, where the Agency took a number of samples. The Agency was also provided with access to some supporting documentation.¹⁸ In a letter dated 30 June 2010, Syria submitted inventory change reports for the newly declared material shown to the Agency during the PIV. In a letter dated 16 August 2010, the Agency provided Syria with the results of the analysis of samples taken during the March 2010 PIV and requested discussions with Syria concerning inconsistencies and questions raised by those results.

11. Information in publicly available scientific publications indicates the past use of nuclear material in experiments and the possible presence of additional unreported nuclear material in Syria. The experiments described in the publications are not included in the activities which Syria has declared as having occurred at the MNSR.

12. In a letter to Syria dated 20 August 2010, the Agency requested access to the Homs phosphoric acid purification plant and its associated buildings for the purpose of determining the extent of any uranium processing activities and nuclear material at the plant.

13. During a meeting in Vienna on 3 September 2010, the Agency provided Syria with additional information concerning the results of the samples taken during the March 2010 PIV, discussions were held regarding the above issues and agreement was reached on a plan of action for resolving the Agency's questions and for addressing the Agency's request for access to the plant at Homs.

14. The Agency remains engaged with Syria to clarify the origin of the anthropogenic natural uranium particles. Conclusions will only be possible once the Agency has exhausted its investigations on the material and activities at the MNSR site and related locations.

C. Summary

15. 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.

16. With the passage of time, some of the necessary information concerning the Dair Alzour site is further deteriorating or has been lost entirely. After two years of investigations constrained by Syria's lack of cooperation, it is critical that Syria positively engage with the Agency on these issues without further delay.

17. Syria has provided information on previously unreported uranyl nitrate production and irradiation activities at the MNSR and additional explanations concerning the presence of the anthropogenic natural uranium particles at the MNSR. More recently, it has submitted inventory change reports concerning the newly declared nuclear material. The Agency has provided Syria with the results of the PIV sampling and met with Syria to discuss the outstanding issues concerning the MNSR, the other uranium experiments and the possible presence of additional unreported nuclear material in Syria. Agreement was reached on a plan of action for addressing these issues.

¹⁸ GOV/2010/29, para. 10.

18. 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.

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