

Endeavors for Resilience in Safeguards Implementation in 2020

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1. Introduction

The World Health Organization (WHO) declared COVID-19 a Pandemic on March 11. Through this, economic damage has increased worldwide, and daily life itself has changed significantly, including policy changes in many countries and restrictions on movement. This naturally led to changes in IAEA safeguards activities and SSAC of IAEA member states. Under these circumstances, the ROK has made efforts from various perspectives to successfully carry out IAEA safeguards activities. In the early days of the Pandemic, there were various difficult situations such as travel restrictions and entry restrictions around the world under COVID-19, but the Korean government has cooperated closely with IAEA for the SG verification activities from the very early stage of the Pandemic to the present. As a result, total 104 SGs activities (95 inspections and 9 CAs) could be successfully performed in ROK.

Especially, in order to achieve the IAEA safeguards objectives, the ROK adjusted the operating schedule of domestic nuclear facilities and closely and actively cooperated with the IAEA so that IAEA inspections could be conducted in a timely manner. In addition, for the timely access to nuclear facilities, the Korean government has made efforts to successfully complete the IAEA inspection by conducting a lot of consultations with nuclear facilities.

2. The IAEA's Response to COVID-19

The IAEA Director General said to the Board of Governors that the safeguards implementation and supporting Member States relevant to COVID-19 are essential responsibilities of the IAEA and will continue the tasks in the face of the pandemic. The IAEA report with regard to COVID-19 pandemic passed the Board of Governors and has been released covering 1) support for IAEA Member States related to COVID-19, 2) status of IAEA safeguards implementation under the COVID-19 pandemic, and 3) nuclear and radioactive associated facilities and activities under the COVID-19 pandemic.

Meanwhile, for the successful implementation of in-field verification activities, one of the most important aspects of verification, the IAEA leased a chartered plane for the first time and dispatched 78 inspectors and technical experts to 4 countries. Also, the IAEA

conducted in-field inspections planned for 2020 by rescheduling tasks that could possibly be postponed and rearranging installations and maintenances of inspection equipment within a reasonable range. In terms of health and safety, the IAEA had difficulties early on in supplying personal protection equipment for inspectors due to the pandemic. However, it was able to continue its tasks thanks to the support and cooperation of Member States. As such, the IAEA was able to achieve its goals in a pandemic while meeting the aspects necessary for the implementation of IAEA safeguards, including travels, entry, departure, safety, and verification, through its own schemes and activities and cooperation of Member States.

3. ROK's Endeavors for Response to COVID-19

Rapid responses to COVID-19 were crucial in many corners in 2020. To fully implement safeguards such as support for IAEA inspection and national inspection, the Republic of Korea, thus, has developed measures to implement safeguards regulations in response to the COVID-19 pandemic. We, the Division of Safeguards at the Korea Institute of Nuclear Nonproliferation And Control (KINAC), have put the utmost effort through continuous communication and cooperation with the government and nuclear facilities to accomplish the IAEA safeguards verification objective. First of all, if we look at the trend of the most important proceedings of entry, travels, and departure of IAEA inspector to and from the Republic of Korea, overseas inbound arrivals are required to have a two-week quarantine period according to a domestic quarantine guideline. However, IAEA inspectors holding government official visas (A-2) are exempted from mandatory quarantine and classified to be managed apart. To be specific, at present, inspectors arriving the Republic of Korea move to temporary quarantine facilities to get COVID-19 test and are permitted to travel to destinations once they obtain negative test results immediately. In addition, active monitoring through self-check mobile application for 14 days and daily health check by the Korea Disease Control and Prevention Agency contacting through phone calls are performed. Regarding access to facilities, the access procedures agreed with nuclear facilities in early 2020 are being carefully followed: filling a health questionnaire, temperature screening, wearing a mask, and using hand sanitizer. Furthermore, as COVID-19 test result is required when departing, we provide a list

of available hospitals in each region to prevent possible issues for inspectors to return.

3.1 Development of the Information Package under COVID-19

the Division of Safeguards prepared the Information Package to comply with travel and quarantine regulation which is considered another significant side along with verification. By sending the Package to the IAEA and the Nuclear Safety and Security Commission (NSSC), we immediately provide information such as changes in quarantine system between the Republic of Korea and the IAEA, notes to beware when they arrive and depart the country, and others, and contributed to the building of a prompt channel for cooperation between the NSSC and the IAEA.

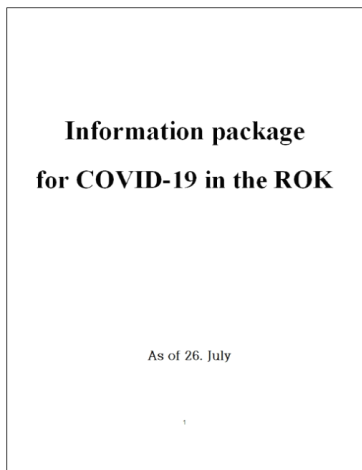
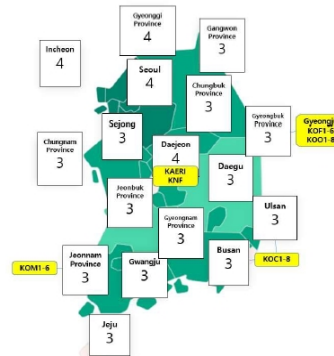


Fig. 1. Information Package

This work is updated each time there is a change in the national quarantine policy and arrival procedures and is expected to be continued in 2021. The result has been of considerable assistance for IAEA inspectors in performing safeguards activities in the Republic of Korea, and the Head of Section expressed their gratitude several times during consultations with IAEA SGOA3. As of August, 2021, there have been 29 updates starting with the preparation in February 2020. Moreover, we are regularly in contact with various authorities such as the Korea Disease Control and Prevention Agency, the Ministry of Health and Welfare, the Ministry of Foreign Affairs, temporary COVID-19 testing facilities, airport quarantine station, nuclear facilities in order to prepare detailed and accurate information for the Package. The main content of the Package includes a special entry program, guidelines on levels of social distancing, mandatory mask-wearing, safeguards contact list, procedures to access each nuclear facility, testing facilities for departure, issues in the quarantine system, glossary, and others.

- ☞ COVID-19 New Social distancing rules (from 1st, July, 2021)
- The ROK government announced on 23rd, July that the level 4 restrictions will be maintained in the greater Seoul area (Seoul, Gyeonggi Province and Incheon, 40 km west of the Capital) until August 8.
 - In addition, on July 25, the government has decided to raise social distancing to level 3 for all regions outside the greater Seoul area for two weeks from July 27 to August 8.
 - Especially, Daejeon mayor announced on July 25 that level 4 will apply for the same two week period starting on July 27.
 - IAEA inspectors can freely use public transportation such as buses, taxis after arriving at Gyeongju or Shingyeongju Station.

Note: Regarding KNF PIV starting July 26, Please do not gather more than 3 people, especially at restaurants, cafes, etc. after 6 p.m.



<Social Distancing in the ROK; from 7.27. ~ 8.8.>

Fig. 2. Major Contents of Information Package

3.2 Efforts to achieve IAEA Inspection objectives

In 2020, a total of 95 inspections were performed at the IAEA inspection, including Unannounced Inspections (UI) and Physical Inventory Verification (PIV) for which a total of 289PDI (Person Day Inspection) inspection resources were used. Complementary Accesses (CA) were made for 9 times under the Additional Protocol, such as checking information on the extension report of the Additional Protocol using 18 PDI inspection resources. We endeavored to prevent the possibility of transmission of the virus by minimizing in-field visits by national inspectors, and the task could be safely delivered by NPP site-resident inspectors. By scheduling verification tasks, nuclear facilities also have been a great help in achieving 100% of IAEA verification. In addition, through continuous updates and provision of the information package, the IAEA was able to make plans for inspections at its headquarters in advance. Based on this, inspection activities in ROK were also able to be carried out without any problems. This can be said to have been achieved through the ongoing construction of a Government-IAEA-Facility cooperation. As a result, despite the unprecedented pandemic due to COVID-19, such efforts paid off and KINAC successfully conducted the national and IAEA inspections of domestic nuclear facilities on time. The SC (Safeguards Conclusion) of IAEA inspections conducted after the outbreak of COVID-19 were 'Satisfactory' for all the items. Moreover, a Broader Conclusion (BC) was made, certifying that there are no undeclared nuclear activities.

4. Conclusions

In 2021, KINAC plans to conduct non-face-to-face inspections for each phase of social distancing in preparation for the prolonged COVID-19 situation and intensive inspection of selected key items for improving efficiency and vulnerability. KINAC will continue to come up with the best measures for environmental changes, such as strictly following quarantine rules and minimizing the lead time through advanced planning for field activities and actively support and make every utmost effort to carry out IAEA safeguards activities successfully.

REFERENCES

- [1] <https://www.iaea.org/about/governance/board-of-governors>
- [2] Information Package for COVID-19 in the ROK