Building Future Safeguards Capabilities
SYMPOSIUM
ON INTERNATIONAL SAFEGUARDS

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Implementation experiences on IAEA remote monitoring in India

Communication of "attended and unattended transmission of information generated by Agency surveillance or measurement devices"is a provision as per Article 6 of Protocol additional to India's Safeguards Agreement INFCIRC/754. Facilitating remote monitoring in one of India's Safeguarded facilities is the result of such an efficient approach to safeguards implementation through innovation and cooperation with State authorities and operators to enhance efficiency in IAEA verification activities. This paper describes the implementation methodology of remote monitoring in detail highlighting benefits such as improved efficacy of Agency's burden on physical verification activities and finances etc.

The remote monitoring was implemented in the facility from 2017 beginning. The service is using public internet connection with hardware encrypted (using Agency's encryption hardware) signal transmission over a virtual private network. A dedicated broadband telephone connection provided by one of the State's internet service provider is used for transmitting the data (a standalone connection, without any of the facility's common service). The speed of connection is nominal, of the order of 2 MBPS.

A similar hardware decryption system along with a network (internet enabled) server is installed in the DAE, the Safeguards implementation authority in India so that the seal information of the Safeguarded facility is received back after the verification process in IAEA headquarters. The seal information from the facility is uploaded to IAEA server on daily basis using the Agency's secured hardware and the Agency sends the information back to DAE, India on a monthly basis after receiving the monthly declaration from India.

This paper provides the technical details of the remote monitoring system which is effectively established successfully since its installation in 2017. The paper also addresses the details of discussions with the Agency on information security issues and the philosophy of layered data encapsulation which includes state of health (SoH) check status etc, apart from the basic seal data information. Overall block schematic of the remote monitoring as well as practical implementation issues such as internet disruption from service provider side, hardware related problems etc, will be detailed in the paper.

Which "Key Question" does your Abstract address?

SGI1.3

Which alternative "Key Question" does your Abstract address? (if any)

SGI1.1

Topics

SGI1

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