For Radiation Facilities (users of ionizing radiation in medical, industrial and research applications), obtaining License from the Competent Authority is a statutory responsibility under the provisions of Atomic Energy (Radiation Protection) Rules (AERPR), 2004 for handling of radiation sources i.e. radioactive material and radiation generating equipments. Chairman, Atomic Energy Regulatory Board (AERB) is the Competent Authority for enforcing AERPR, 2004. AERB was accepting paper based submissions from the Radiation Facilities (RFs) for review and providing required regulatory consents and licensing them. In the modern era of computers and as a part of e-Governance initiative of AERB for delivering regulatory services and exchange of information between AERB and its licensed radiation facilities, AERB is implementing web-based system, named eLORA (e-Licensing of Radiation Applications).

eLORA system is aimed for complete computerization of regulatory processes associated with the use of ionizing radiation in India. The regulatory framework of eLORA system is in compliance with AERB’s Safety Guide on Consenting Process (SG/G-3), Safety Manual (draft) on Regulatory Inspection Process (SM/G-3) and applicable safety codes. eLORA system is built on web-based technology to ensure its availability across the country through internet. Its robust architecture ensures complete business continuity and information security. Logically eLORA system is divided in to two parts, namely Internet Interface Module (IIM) and Back Office Module (BOM). In this paper, we have discussed the various modules applicable to Industrial Radiography, released and made operational; the common reasons for rejection for various applications received through these modules and the modules under development for radiography facilities and its important features.

Radiation Professional Registration and Institute Registration are two important modules of eLORA. Each radiography institute and radiation professionals (term ‘Radiation Professional’ referred in eLORA pertains to qualified radiation worker whose role is defined in relevant AERB safety code such as Radiographer and Site in charge) are required to get registered in eLORA through this modules.
Radiation Professional Registration

On March 26, 2014, eLORA system was made operational for registration of Radiation Professional (RP) in Industrial Radiography. This module permits Radiation Professionals to submit on-line application for registering themselves as Radiation Professional. Each radiography personnel i.e radiographer and site-in-charge upon registering as Radiation Professional will get unique RP identification number and this number will be the future reference number throughout his/her carrier in radiation profession in India. On successful registration, the Radiation Professional will get a user identification code and password, which can be utilized for updating certain information in their profile.

Common reasons for rejection of Radiation Professional Registration Application

During our review process, we observed few common reasons for rejection of RP registration application and the list of the same is given below.

1. All the pages of the Radiographer/Site in Charge training course passing certificate have not submitted: Usually the certificate has two pages (front and back). In case of book type certificate, it contains more than two pages. All the pages are required to be uploaded. Since, it is the baseline data of the professionals, any other certificate as proof of Radiographer/Site in Charge will not be accepted.
2. Inconsistency in date of birth (DOB) proof certificate no. entered in the application form and that in the certificate attached.
3. The name entered in the application form is not matching with that in the Radiographer/Site in Charge training course passing certificate; The name in the application form should be entered as in the Radiographer/Site in Charge training course passing certificate.
4. Inconsistency in the certificate name mentioned in the application and document attached; eg. The name of the DOB proof may be mentioned as PAN card, but the certificate attached may be Passport.
5. The attachment as a proof of DOB does not contain the exact DOB: Certain documents shows only the year of birth or age as on date etc. Such documents are not acceptable.

Institute Registration

On April 26, 2014, eLORA system was made operational for registration of existing and new/up-coming radiography institutes under Institute Registration module. Each radiography institutes required to register their institute in eLORA for getting access for carrying out routine regulatory activities online through e-LORA. Employer and Licensee will get user identification code and password for utilizing the e-LORA online with limited accessibility as per the regulatory requirement. Radiography Device/source suppliers and radiography work contract awarding parties also can register to eLORA through this module. Applicable regulatory service for both these stake holders of AERB can be accessed through their profile in eLORA, once all the system is made operational.

Common reasons for rejection of Institute Registration Application

1. Invalid proof of Employership certificate; Proof of Employership certificate is a valid certificate to be attached to substantiate that the personnel nominated as the employer of
the institute has been recognized/document as the employer of the Institute. This document should contain the name and designation of the employer. Example for such documents are (i) Appointment Letter, (ii) Board Resolution, (iii) Any Govt./PUC document substantiating proprietorship (iv) Partnership deed (notorised) etc. It may also be noted that for already licensed radiography institutions the AERB issued Licence can also be submitted as a proof of employership.

2. Inconsistency in certificate no./PAN no. of the employer entered in the application form and that in the certificate/PAN card attached;

3. The designation of the employer is not entered correctly: In some of the cases, the designation of the employer was found entered as ‘RSO’, though they were Proprietor/Partner of the Institute.

4. Inconsistency in the certificate name mentioned in the application and document attached; e.g. the name of the Date of Birth (DOB) proof of employer may be mentioned as PAN card, but the certificate attached may be Passport.

Approval of Radiography Personnel and RSO Approval

AERB has already released and made operational one of the important module i.e. approval of radiography personnel and RSO for Industrial Radiography in the month of August, 2014. Through this module, institute can submit their applications for obtaining approval of any of his newly appointed radiation professionals to function as radiographer or site in charge and Radiological Safety Officer. For efficient smooth utilization of eLORA and data capture, all radiography institutes are required to obtain the electronic approval of their existing Radiation Safety Officers by using these modules. RSO will get user identification code and password for utilizing the e-LORA online with limited accessibility as per the regulatory requirement.

For existing Site-in-charge and radiographers, the institute is required to attach the approval letter issued by AERB with appointment letter while adding the employee in the institute profile using add employee.

Henceforth, institutes are also required to approach concern department of BARC with approval letter received through eLORA for obtaining personal monitoring services to the newly appointed and approved radiography personal.

Consenting Processes of Industrial Radiography

Similarly, module for all the consenting processes of Industrial radiography such as radiography device procurement, source procurement, source storage facility approval, enclosure approval, radiography site and movement approval, licence for radiography operation and disposal of radiography sources etc. will be released shortly. This will certainly going to ensure the efficient and transparent regulatory process for this wide spread industrial application of radiation.

To make these consenting processes online in eLORA, few modifications has been made in the existing approval processes and few additional processes has been introduced. Radiography institutions are required to understand these changes for effective utilization of eLORA system. The list of few such processes is given below.
i. Each source storage facility/enclosure used by radiography institution required to have approval received through eLORA.

ii. Radiography Enclosure approval will have two stages, first is layout approval and then permission to use radiography enclosure after completion of construction of enclosure. Existing radiography enclosure has to get approval through eLORA.

iii. Receipt intimations required to be submitted after newly procured radiography equipments, fresh source, and replacement source and each radiography device movement. Till the receipt intimation is received, the actual course of action ie. Procurement or movement will not be registered in eLORA.

iv. While submitting application for procurement of new radiography device, site of its storage after its receipt needs to be defined in the procurement application form.

v. For each newly procured radiography device consent for operation is required to be obtained.

vi. For source procurement/replacement approval, institution need to apply directly to AERB through eLORA and the approval received through eLORA should be submitted to BRIT for obtaining the source.

vii. The site or contract awarding party name, if not available in the system, it will be recorded in the system through the form designed for this purpose. The title of this form is “Recording of Site Name/Contract Awarding Party”.

Once all the consent processes are made operational on eLORA, user manual will be provided on eLORA webpage. Radiography institutes are required to follow the guidelines as given in the user manual for smooth utilization of eLORA.

**Conclusion:**

Once all the consenting processes becomes operational through eLORA it will enhance the efficiency and will bring better transparency in regulatory process for this wide spread industrial application of radiation. AERB is going to discontinue the acceptance of all manual paper submissions once this entire systems becomes operational, therefore radiography institutions required to become familiarize with eLORA systems for its effective utilization.