


Operating Experience Feedback Program in Korea

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1. OEF Program in Korea



General Process of OEF in Korea

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    graph TD
      Collection[Collection] --> Screening[Screening]
      Screening --> Communication[Communication]
      Communication --> Eval[Evaluation / Application]
      Eval --> Reg[Regulatory Action]
      Reg --> Tracking[Tracking]
      Eval --> Immediate[Immediate Actions]
      Immediate --> Reg
      Tracking --> Storage[Storage]
      Storage --> Information[Information]
      Information --> Storage
  
```

- Collection**
 - MEST Notice 2009-37
 - IRS, INES
 - US NRC IN, GL, etc.
 - JNES PRI, etc.
- Screening**
 - By OE Department
 - By Technical Groups (9 fields)
- Communication**
- Evaluation / Application**
 - Inspections
 - Safety Reviews
- Immediate Actions**
 - Investigation
- Regulatory Action**
 - Corrective Actions
- Tracking**
 - CATS
- Storage**
- Information**
 - OPIS
 - Public
 - International

Reference : IAEA Safety Guide No. NS-G-2.11 "A System for the Feedback of Experience from Events in Nuclear Installations"

1. OEF Program in Korea KINS

- **Event Reporting (MEST Notice 2009-37)**
 - Reactor SCRAM (automatic, manual), ESF Actuation, Radioactive material release, External events (fire, earthquake, ..), etc.
 - Safety-related equipment failure (TS LCO entry) is also reported by the utility
 - Corrective Actions imposed by the official letter of MEST/KINS
 - Manages the Lessons-learned (corrective actions) efficiently and effectively using the IT based System (CATS : Corrective Actions Tracking System)

- **Safety Issues & Experiences of Safety Review & Inspection for NPP**
 - Resolving in each regulatory project on safety issues
 - under development of IT based Systematic Feedback Process
 - Currently Safety Issues are managed & evaluated by 8 Expert Groups (Mechanical, Electrical, Radioactive, Reactor ..)

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1. OEF Program in Korea KINS

▶ **Process of OEF on events**

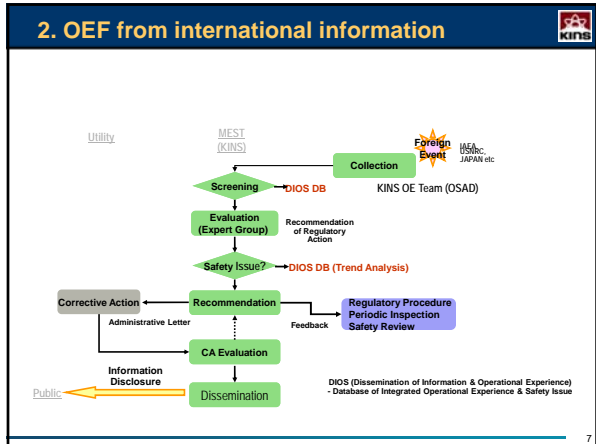
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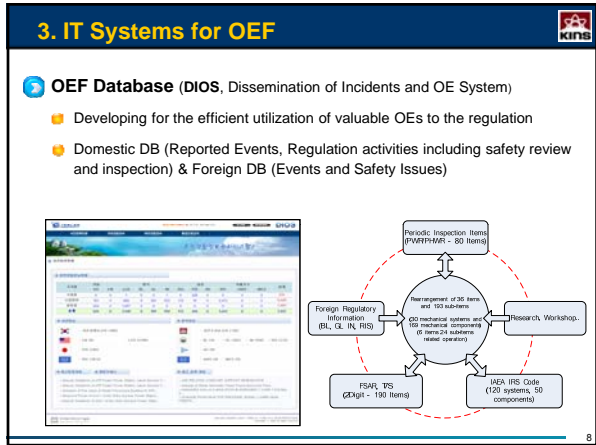
2. OEF from international information KINS

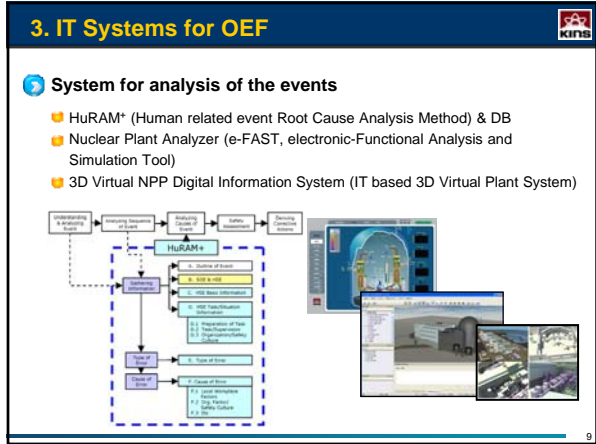
- **Foreign OEF Inputs**
 - IAEA IRS (Incident Reporting System), INES (International Nuclear Event Scale)
 - U.S. NRC GL, IN, LER etc.
 - JAPAN PRI (Public Release Information)
 - Other OEF data

- **Feedback to KINS Regulation**
 - Collection & Storage of information in Database System
 - OEs Screened & analyzed by OE Team/ Expert Group
 - Feedback & Follow-up of Corrective Actions

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4. Recent Activities for OEF

Annual National Workshop on OEF

- Workshop on OEF has been held for 7 years
- Participation of MEST, KINS, licensee, industries and others
- Major discussions about
 - Optimization of the immediate response for NPP Events
 - Consistent and Reasonable Evaluation for the events
 - more exchange of information



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4. Recent Activities for OEF

International activities for OEF information exchange

- RCOP-1**
 - to improve nuclear safety by feedback operating experiences of NPP in Northeast Asia
- IAEA ANSN**
 - to analyze and share nuclear safety information existing and new knowledge and practical experience among the countries
 - to construct a complete Asian network for sharing safety information
- 2nd TRM (Top Regulators Meeting) ('09.8.27 ~ 28, Seoul)**
 - Northeast Asian OEF Clearinghouse Initiative
 - Operation of an Early Notice System among China, Japan and Korea
 - Exchange of Experts and Regulatory Information on Event and Emergency Preparedness Response
- IAEA (IRS, INES), OECD/NEA WGOE


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4. Recent Activities for OEF

Examples of Recent Assessment in Korea

- Loss of offsite power and SDG startup due to opening of switchyard breaker (Wolsong 2, Sept 3, 2009)
- Reactor trip by turbine trip due to spurious actuation of turbine protection system (Kori 2, Dec 19, 2008)
- Reactor trip due to RCP trip caused by lightning and subsequent SI due to inverter instability (Kori 1, Aug 8, 2008)
- Reactor trip due to S/G low level with steam flow/feed flow mismatch caused by loss of steam pressure signal (Ulchin 1, July 3, 2008)
- Indication of boric acid at S/G bowl drain nozzle (May 27, 2008)
- Safety injection due to inadvertent opening of the pressurizer PORV during hot standby operation (Kori 3, May 25, 2008)


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5. Current Issues and Future Activities 

Current Issues

- Establishment of robust and solid National Operating Experience Feedback Program (N-OEF)
 - How all of the regulatory activities could be integrated into the OE program
 - How lessons-learned and insights from OE could be effectively & efficiently utilized and communicated to achieve regulatory goals
- Establishment of an centralized system managing OEs and development of web-based N-OEF supporting system
 - To ensure efficient and effective collection, storage, screening, communication, evaluation, and application
 - To avoid missing the important information on decision making

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5. Current Issues and Future Activities 

Future Activities

- Establishments of steering & working group
 - Development of the framework for the N-OEF program
 - clearly defined roles, responsibilities, work flow for the process of dealing operating experience information
 - Development of the techniques such as screening criteria and trend analysis methods, etc.
 - Development of the infrastructure for communication
 - Development of the program for effectively utilizing the international operating experience information
- Development of web-based N-OEF supporting system
 - For the optimization of the OE information retrieval function among various data bases such as the results of events, inspections, and safety reviews
 - For the efficient/ effective communication with stakeholders

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