

Korean Industry Perspective on CFSIs

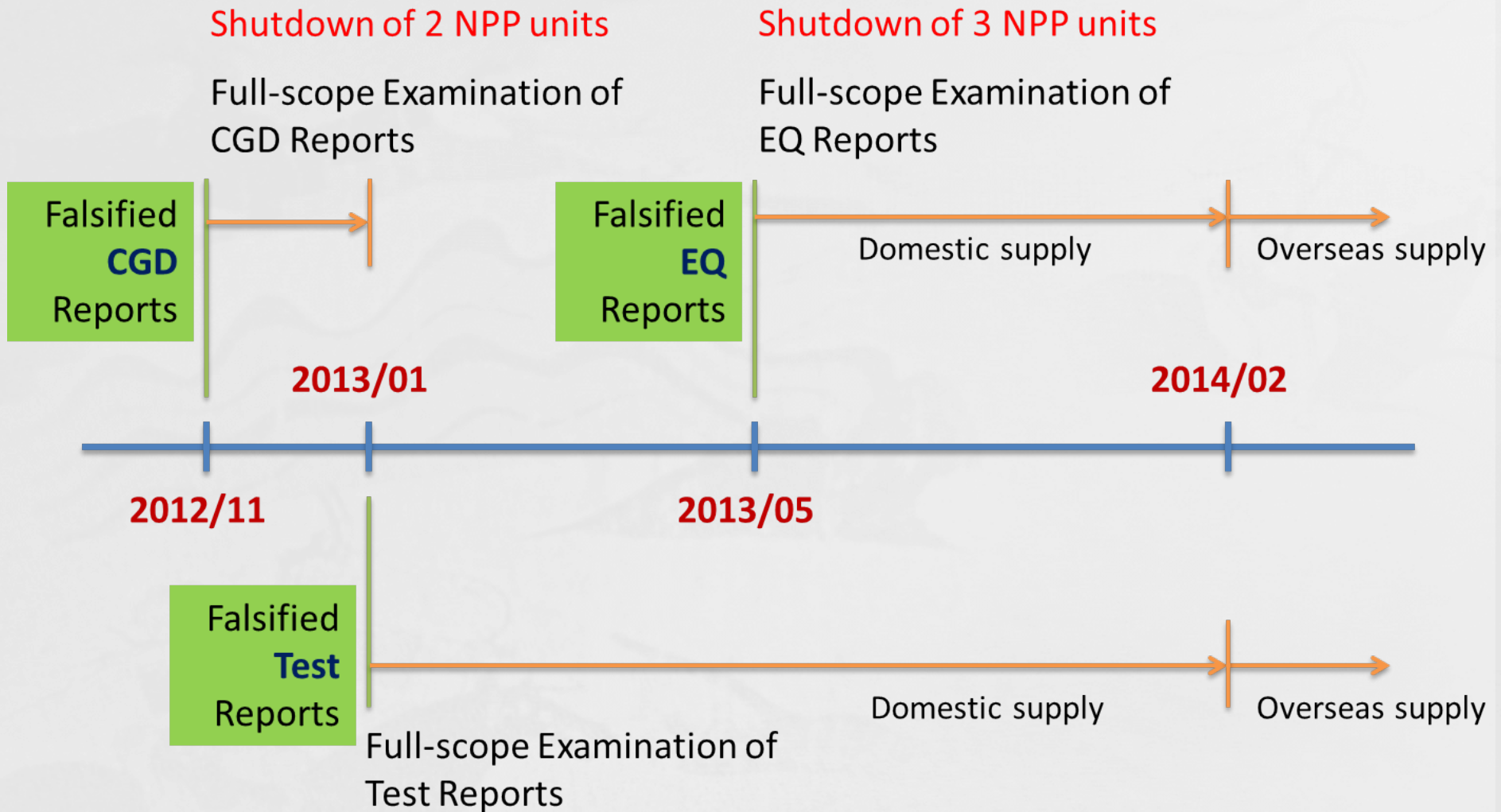
- Regulatory Consideration -

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Recent Experience on CFSIs in Korea



CFSI Experience - Regulatory Actions

- **Issuance of Regulatory Orders**
 - Actions taken after a series of anonymous reports
 - Licensees to examine all the relevant quality verification documents (QVDs) submitted by vendors/suppliers
 - For all NPPs in operation and under construction
- **Review of Licensees' Examination Results**
 - Independent verification with sampled QVDs
- **Approval of Corrective Actions**
 - For items supplied with forged/untraceable QVDs
 - Review of licensee's functionality assessment, operability determination, and corrective actions

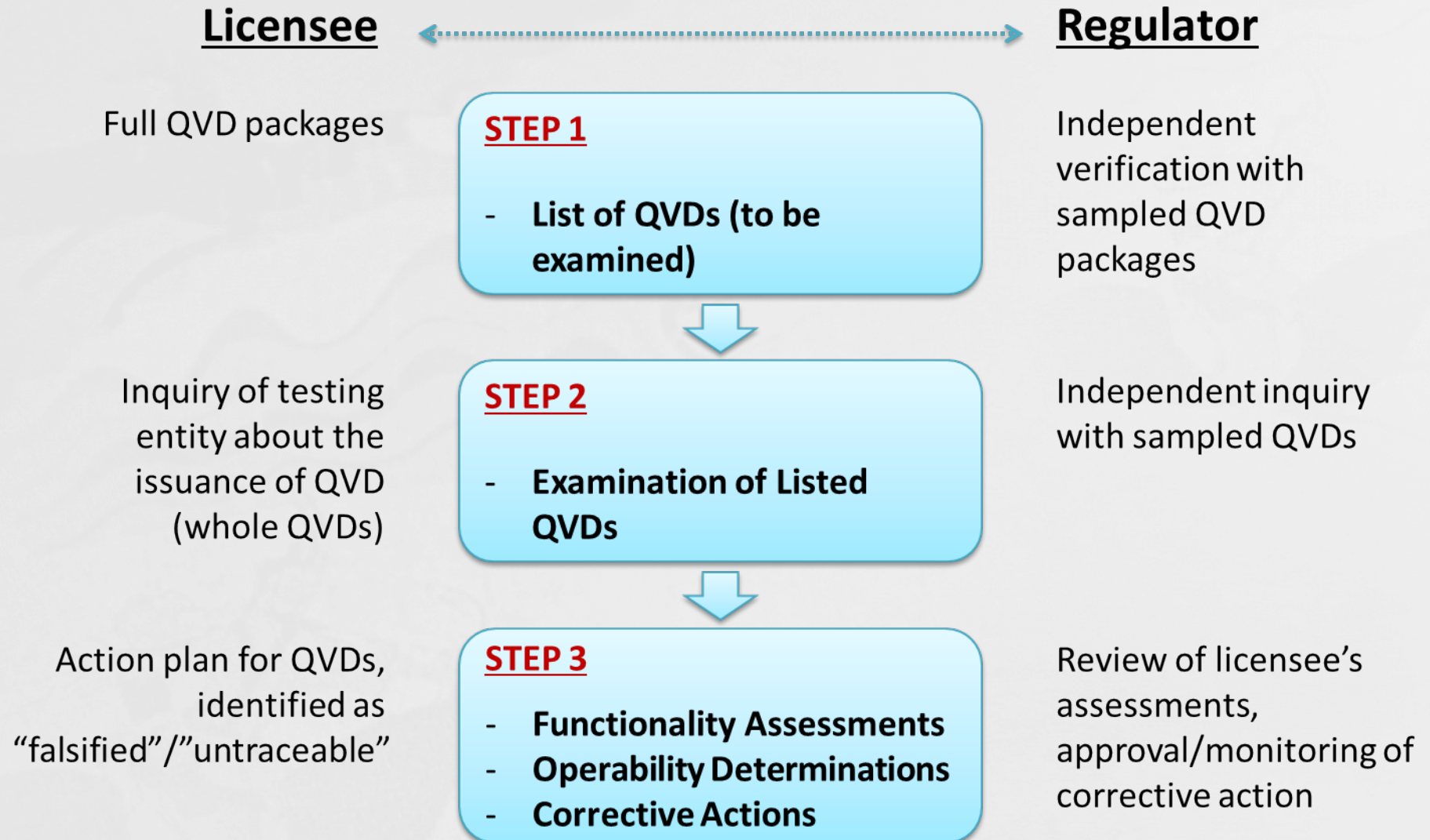
Procedure for QVD Examination

- **Inter-organizational agreement on examination**
 - National Board of Audit & Inspection
 - Regulatory bodies (NSSC, KINS)
 - Licensee (KHNP)
- **Procedure development based on the agreement**
- **Contents of the procedure**
 - Examination scope and methods
 - Proceeding of examination : 3 steps
 - Interaction between licensee and regulator

Scope/Methods of Examination

		Test reports	EQ reports
Target Period	Operating Units	- Recent 10 years (2003-2012)	- Since domestic EQ test started (1996-2012)
	New Builds	- Whole construction period	- Whole construction period
Priorities		<ul style="list-style-type: none"> - Issued by domestic testing entities (priority #1) - Issued by foreign testing entities and submitted by domestic suppliers (#2) - Issued by foreign testing entities and submitted by foreign suppliers (#3) 	<ul style="list-style-type: none"> - Issued by domestic EQ entities (priority #1) - Issued by foreign EQ entities and supplied by domestic suppliers (#2) - Issued by foreign EQ entities and submitted by foreign suppliers (#2)
Methods	Domestic Testing Entity	- Visit testing entities	- Compare with raw test data or other test evidence
	Overseas Testing Entity	- Letters, E-mails, or Visit entities	<ul style="list-style-type: none"> - Inquiry of EQ entities by letters, E-mails, or - Compare with original reports sent by EQ entities

3 Steps / Licensee-Regulator Interaction



Examination Results

■ Domestic supply

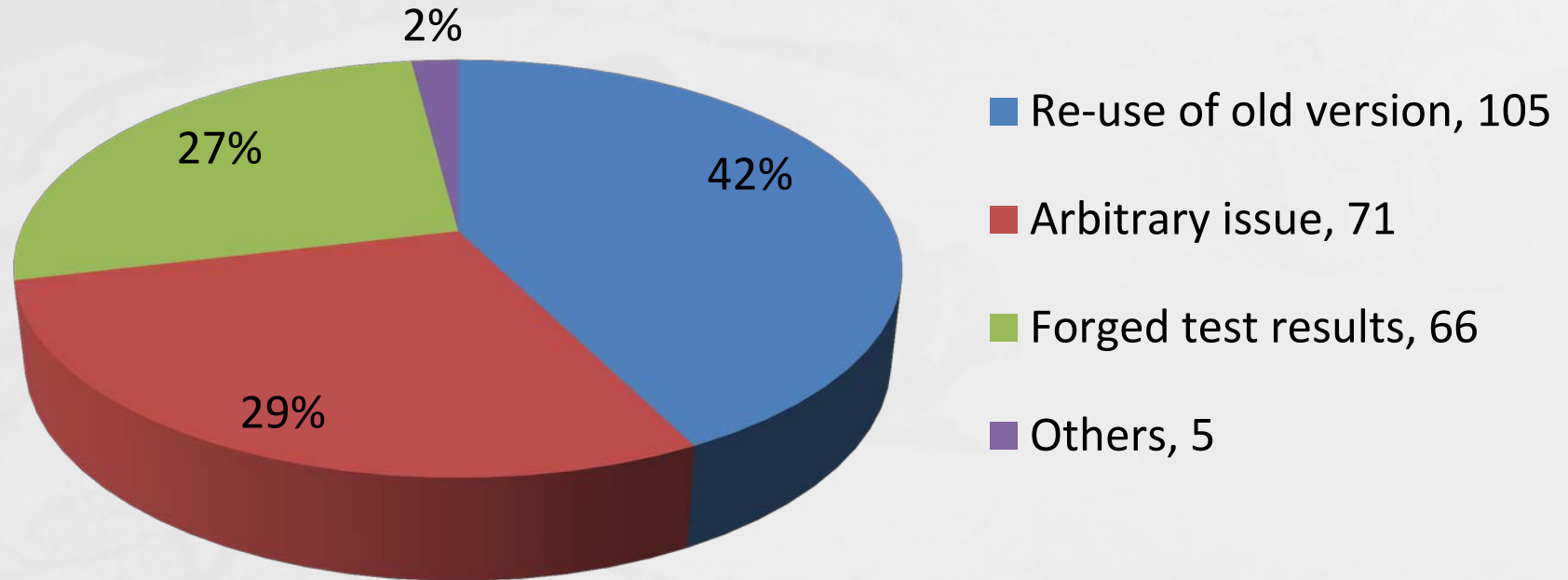
		Total reports examined	Identified as “falsified”	Identified as “untraceable”
Test reports	Operating Units	21,681 (100%)	247 (1.1%)	408 (1.9%)
	New Builds	268,302 (100%)	1,867 (0.7%)	3,000 (1.1%)
EQ reports	Operating Units	1,031 (100%)	30 (2.9%)	7 (0.7%)
	New Builds	1,668 (100%)	32 (1.9%)	46 (2.8%)

■ Overseas supply

- Under examination since Feb. 2014

Types of Falsification

- Among 247 test reports identified as “falsified”



Vulnerabilities of Regulatory Oversight

- **Lack of awareness of / preparedness for CFSI issue**
 - Little prior knowledge/experience about CFSI issue
 - Ignorance of international alert signals
- **Loose regulatory involvement for supply chain integrity**
 - Regulatory oversight focused on licensee's own activities
 - Licensee, suffering from the lack of resource, incapable of paying enough attention to supply chain oversight
- **Little attention to the safety culture**
 - Insensitive to safety culture deterioration and complacency
 - Negligence of market practices adverse to safety and quality (e.g., procurement by the lowest-price bidding system)

Measures to Enhance CFSI Control

- **Encouraging the anonymous-reporting / whistleblowing**
 - An “nuclear safety ombudsman” in the regulatory body
 - New legal provision to guarantee an incentive to whistleblower (reward / alleviation of responsibility)
- **Strengthening oversight on CFSIs and nuclear supply chain**
 - CFSI attributes into the inspection of licensees/vendors
 - Introduction of “vendor inspection” & “non-compliance reporting”
- **Promoting nuclear safety culture**
 - Safety culture attributes into the inspection of licensees/vendors
 - Development of a regulatory guide/a monitoring manual
- **Enhancing international collaboration** (MDEP-VICWG, Bilateral)