

# Development of Safeguards Information Treatment System at the facility level

150

- IAEA

(Safeguards Information Treatment System : SITS)

. SITS가

8

. SITS

2002

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## Abstract

Safeguards Information Treatment System(SITS) at the facility level was developed to implement efficiently the obligations under the Korea-IAEA Safeguards Agreement, bilateral agreements with other countries and domestic law, and to manage effectively the information related to safeguards work. To cover various kinds of accounting procedures and methods applied at the facility level under IAEA safeguards agreement, nuclear facilities in Korea are categorized into 8 types based on its accounting characteristics in SITS. The SITS can manage the amount and inventory change of nuclear material per origin using the IAEA accounting reports. As a result of the SITS's development, facility operators can perform efficiently and effectively the safeguards related works at the facility level. The SITS was distributed to the various facilities such as nuclear power plants, fuel fabrication facilities, research facilities and other facilities in Korea at the end of March 2002.

1.

- IAEA

IAEA

가

가

IAEA

1988 MS DOS

PC tool dBASE III CA Clipper window (ICR, PIL, MBR Concise note)

(Safeguards Information

Treatment System : SITS) . SITS 가 SITS가 8

Server/Client . SITS Web Intranet system GUI

DBMS MS SQL sever 7.0, MS IIS (Internet Information Server) , InterDev 7.0 ASP(Active Server Page) . SITS SITS 2002

3 , 가 ,

SITS , SITS , User Interface

**2. SITS**

SITS - IAEA

SITS

96 - 30

, IAEA

SITS

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SITS SITS

- IAEA

SITS

IAEA

(Inventory Change Report : ICR),

(Physical Inventory List : PIL),

(Material Balance

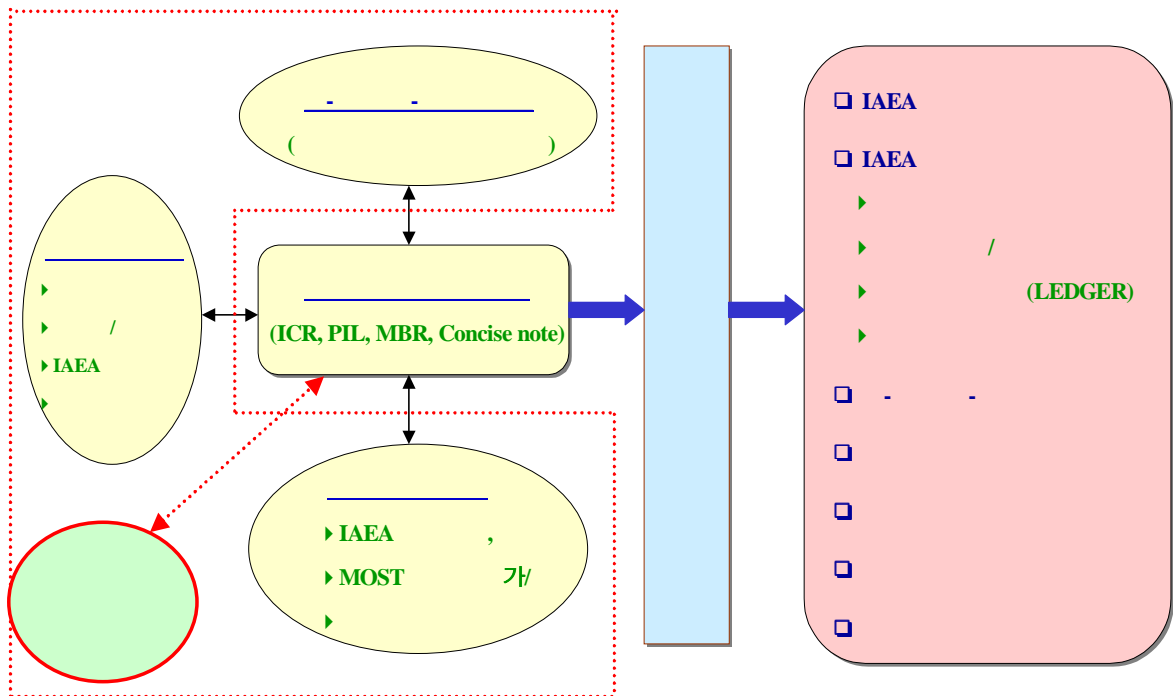
Report : MBR),

Concise note

IAEA

IAEA

### 1. SITS



, -  
 , IAEA  
 IAEA  
 가 1 effective kg  
 SITS  
 (Nuclear Loss & Production),  
 IAEA  
 SITS  
 SITS IAEA IAEA  
 , IAEA , - - ,  
 SITS IAEA General Ledger, KMP  
 , Fuel assembly history, Nuclear Loss & Production ,  
 IAEA , General Ledger , KNFC

**3.**

가 . SITS가  
 SITS 1)  
 , 2) Batch follow - up  
 , 3) (Material Unaccounted For : MUF) , 4) Pu ,  
 5) , 6) KMP(Key Measurement Point)  
 , 7) ICR KMP  
 1 8 . SITS

가 SITS , SITS  
 SITS  
 SITS가

1.

	BATCH FOLLOW UP	MUF	Pu	OPERATION STATUS / Pu REPORTING MODE	IKMP			
	Batch follow up 가	○						
		×	○	Pu report mode PWR ( )		PWR	CASE 1	
				Pu report mode Research( )			CASE 2	
			×					
		가	○					
	×					IMEF, PIEF (Rod cut)	CASE 3	
	Batch follow up 가	○						
		×	○	Pu report mode ( )			CASE 4	
				×				
	Batch follow up 가	○		가		LOF, R&D	CASE 5	
					DUPIC, CFFP( 가 )	CASE 6		
					DUF4 (가 가 )	CASE 7		
○			가		KNFC ( PWR, CANDU )	CASE 8		
	×							

4. SITS

SITS - IAEA ,

가 SITS

SITS

IAEA MOST  
/  
SITS

SITS  
IAEA MOST  
/  
SITS

SITS 가 PIL  
가 SITS

SITS가  
- IAEA CODE 10  
가 SITS CODE 10 가  
field

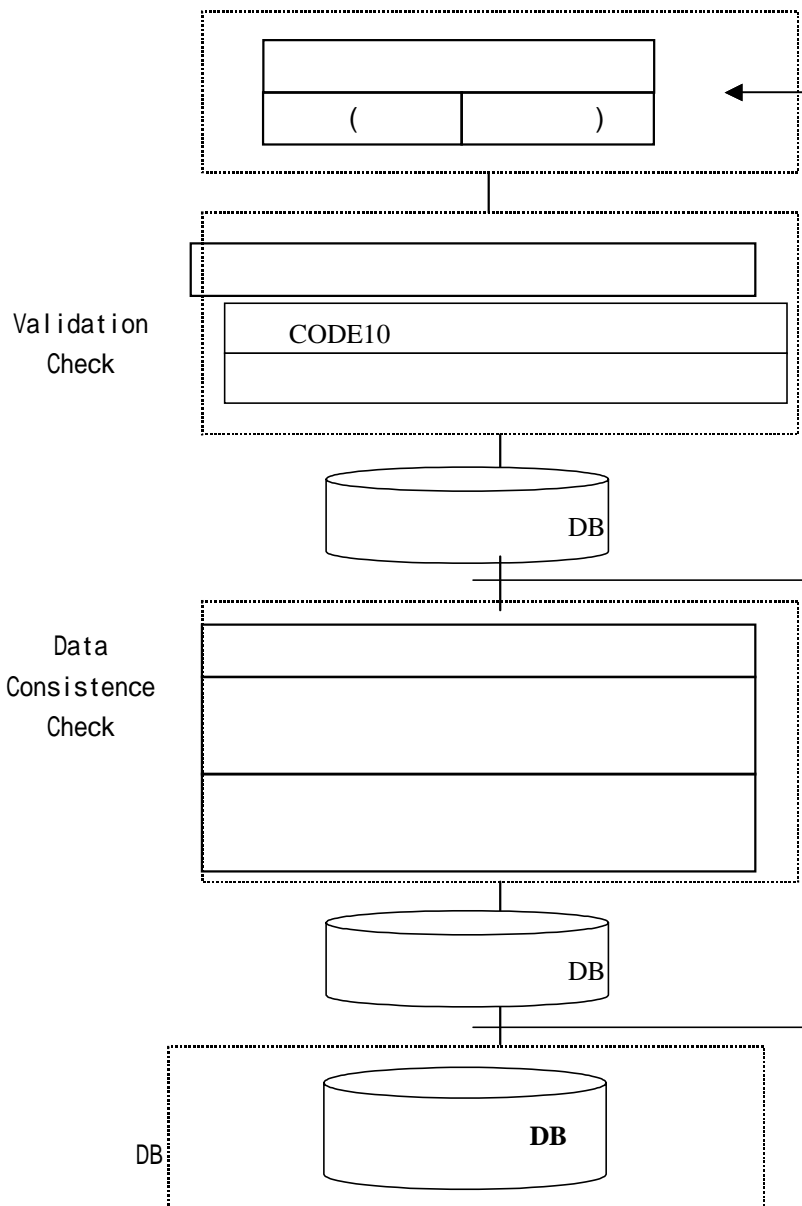
IAEA  
vantage 5 type  
assembly  
가 가 SITS

nuclear loss & production assembly  
assembly가

SITS  
-2 \_  
SITS PIL MBR PIL MBR  
ICR  
PIL assembly  
continuation field "

code , nuclear loss & production KMP  
 (material description code), , measurement basis  
 code가 가 PIL  
 PIL .

2.



가 MBA nuclear loss & production

SITS , , .

SITS .

SITS 가 word processor

data file , SITS가 excel , MBA

excel file , MBA

가

data file, excel file

- IAEA CODE 10

IAEA (Facility Attachment : FA)

CODE 10

, FA

SITS CODE 10 FA

가

CODE 10 FA

FA

(Flow KMP : FKMP) (Inventory KMP : IKMP) ,

KMP 가 (Inventory Change code) (Material

Description code)

IAEA

IAEA SITS IAEA

General Ledger, ,

, General Ledger ,

KNFC

가 , IAEA

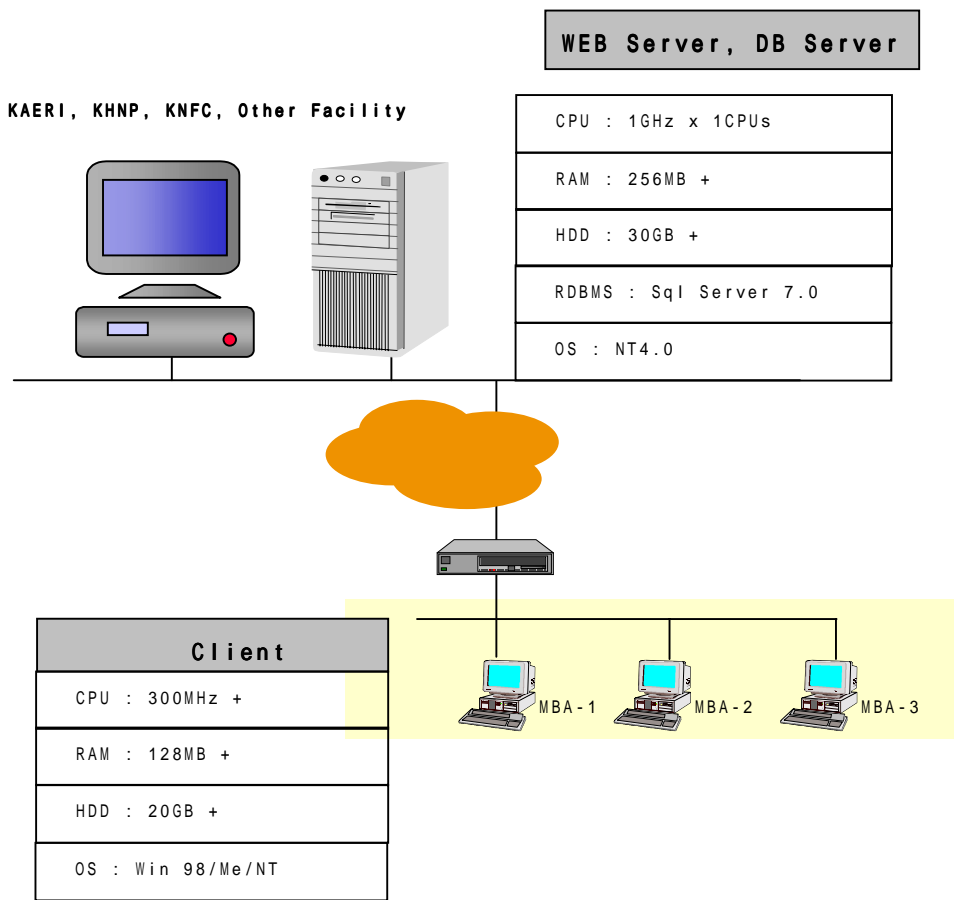
가 , IAEA



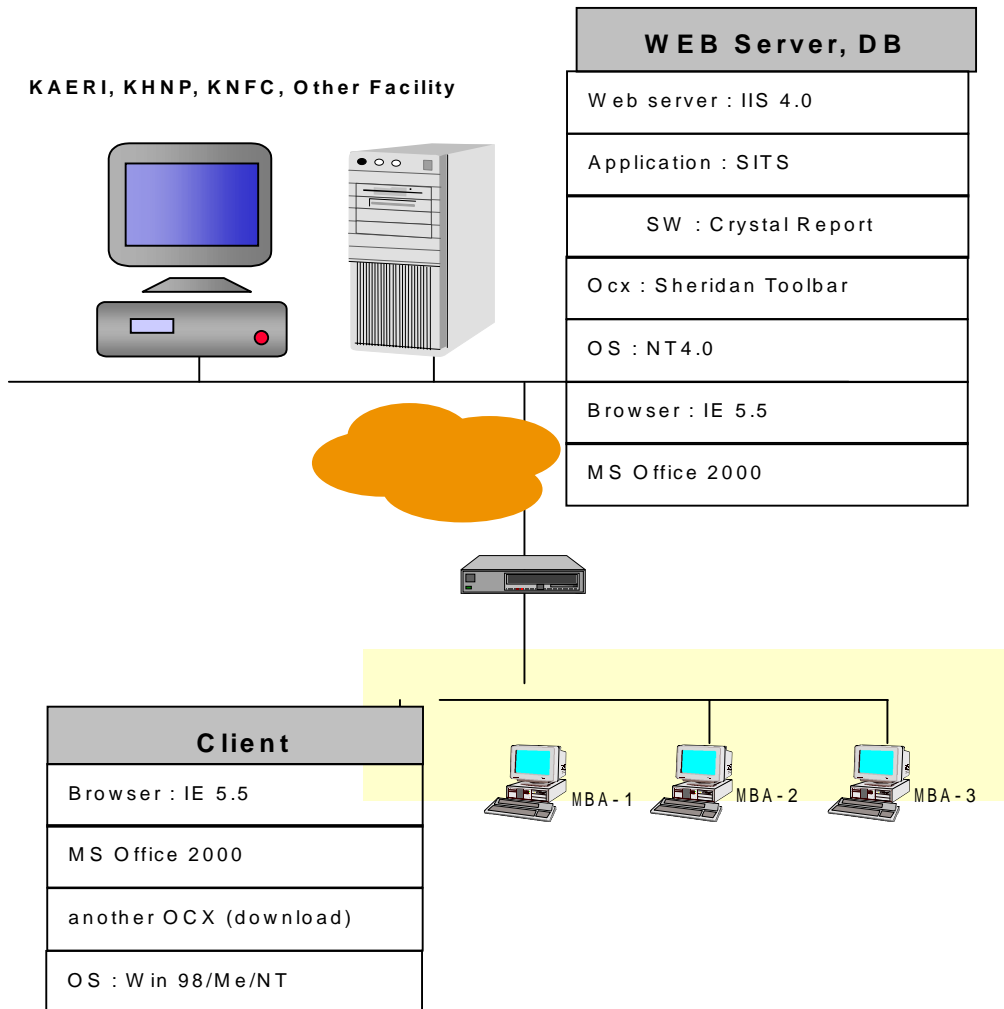
### 5. SITS

SITS Window NT 가  
 3 4 ,  
 DBMS(DataBase Management System) MS SQL sever 7.0 , MS  
 IIS(Internet Information Server) . SITS Network ,  
 , KNFC ,  
 - ,  
 Stand alone  
 . KAERI network Server  
 KAERI 10 client가 ,  
 SITS Server ( )  
 server client .

### 3. SITS



#### 4. SITS S/W



#### 6.

SITS

. SITS가

IAEA

, IAEA MOST / , - - ,

SITS가

. SITS가

8

, (Nuclear Loss & Production),

, IAEA

SITS 2002

2002 3 30

, SITS가

가

, nuclear loss & production,

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