ArevaEPRDCPEm Resource

From: WELLS Russell (AREVA) [Russell.Wells@areva.com]
Sent: Friday, July 29, 2011 5:28 PM
To: Tesfaye, Getachew
Cc: ROMINE Judy (AREVA); KOWALSKI David (AREVA); WILLIFORD Dennis (AREVA); BENNETT Kathy (AREVA); DELANO Karen (AREVA); RYAN Tom (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 482 (5611), FSAR Ch. 9, Supplement 1
Attachments: RAI 482 Supplement 1 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the four questions in RAI No. 482 on May 27, 2011.

The attached file, "RAI 482 Supplement 1 Response US EPR DC.pdf" provides technically correct and complete final responses to two of the four questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which supports the responses to RAI 482 Questions 09.05.01-82 and 09.05.01-83.

The following table indicates the respective pages in the response document, "RAI 482 Supplement 1 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 482 — 09.05.01-82	2	2
RAI 482 — 09.05.01-83	3	3

The schedule for technically correct and complete responses to the remaining two questions has been changed and is provided below:

Question #	Response Date
RAI 482 — 09.05.01-84	August 31, 2011
RAI 482 — 09.05.01-85	August 31, 2011

Sincerely,

Russ Wells for
Dennis Williford, P.E.
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
7207 IBM Drive, Mail Code CLT 2B
Charlotte, NC 28262
Phone: 704-805-2223
Email: Dennis.Williford@areva.com

From: WILLIFORD Dennis (RS/NB)
Sent: Friday, May 27, 2011 11:39 AM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); KOWALSKI David

(RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 482 (5611), FSAR Ch. 9

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 482 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the 4 questions is not provided.

The following table indicates the respective pages in the response document, "RAI 482 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 482 — 09.05.01-82	2	2
RAI 482 — 09.05.01-83	3	3
RAI 482 — 09.05.01-84	4	4
RAI 482 — 09.05.01-85	5	5

A complete answer is not provided for the 4 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 482 — 09.05.01-82	July 29, 2011
RAI 482 — 09.05.01-83	July 29, 2011
RAI 482 — 09.05.01-84	July 29, 2011
RAI 482 — 09.05.01-85	July 29, 2011

Sincerely,

Dennis Williford, P.E.
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
7207 IBM Drive, Mail Code CLT 2B
Charlotte, NC 28262
Phone: 704-805-2223
Email: Dennis.Williford@areva.com

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Wednesday, April 27, 2011 3:13 PM
To: ZZ-DL-A-USEPR-DL
Cc: McCann, Edward; Dreisbach, Jason; Hearn, Peter; Clark,Phyllis; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 482 (5611), FSARCh. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 11, 2011, and discussed with your staff on April 26, 2011. Draft RAI Question 09.05.01-81 was deleted as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,

Getachew Tesfaye
Sr. Project Manager
NRO/DNRL/NARP
(301) 415-3361

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 3294

Mail Envelope Properties (1F1CC1BBDC66B842A46CAC03D6B1CD4104ACAFA6)

Subject: Response to U.S. EPR Design Certification Application RAI No. 482 (5611), FSAR Ch. 9, Supplement 1
Sent Date: 7/29/2011 5:28:26 PM
Received Date: 7/29/2011 5:28:33 PM
From: WELLS Russell (AREVA)

Created By: Russell.Wells@areva.com

Recipients:
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"KOWALSKI David (AREVA)" <David.Kowalski@areva.com>
Tracking Status: None
"WILLIFORD Dennis (AREVA)" <Dennis.Williford@areva.com>
Tracking Status: None
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
Tracking Status: None
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>
Tracking Status: None
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
Tracking Status: None
"Tesfaye, Getachew" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	**Size**	**Date & Time**
MESSAGE	4099	7/29/2011 5:28:33 PM
RAI 482 Supplement 1 Response US EPR DC.pdf	1198184	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Response to

Request for Additional Information No. 482(5611), Supplement 1

4/27/2011

U.S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 09.05.01 - Fire Protection Program
Application Section: 9.5.1

QUESTIONS for Fire Protection Team (SFPT)

Question 09.05.01-82:

U.S. EPR FSAR Revision 2 Figure 9.5.1-1, Fire Water Distribution System, Sheets 4, 7, 8, and 13 have drawing errors. Sheet 4 shows that point "T" connects to Sheet 11 but it should connect to sheet 13. Sheet 7 shows that point "P" connects to Sheet 11 but it should connect to sheet 13 and that point "R" connects to Sheet 6 but it should connect to Sheet 8. Sheet 8 shows that point "R" connects to Sheet 5 but it should connect to Sheet 7. Sheet 13 shows that point "T" connects to Sheet 2 but it should connect to sheet 4 and that point "P" connects to Sheet 5 but it should connect to sheet 7. The applicant needs to revise Figure 9.5.1-1 as per above and review Figure 9.5.1-1 for any other discrepancies and revise as needed.

Response to Question 09.05.01-82:

U.S. EPR FSAR Tier 2, Figure 9.5.1-1–Fire Water Distribution System, Sheets 1 through 13, have been reviewed for discrepancies. Sheets 1, 3, and 4 through 13 of this figure will be revised to remove existing discrepancies from fire water distribution system drawings.

FSAR Impact:

U.S. EPR FSAR Tier 2, Figure 9.5.1-1 will be revised as described in the response and indicated on the enclosed markup.

Question 09.05.01-83:

U.S. EPR FSAR Revision 2 Section 9.5.1.2.1 Subsection Manual Fire Suppression Systems states that "In the inner Reactor Containment Building the inboard and outboard containment isolation, motor-operated control valves are normally kept closed and are only opened during a fire emergency requiring the use of the standpipe system in the Reactor Containment Building." RG 1.189 Regulatory Position 3.5.1.3 states that the prefire plans should include fire brigade actions such as operating instructions for use of the fire suppression systems and references NFPA 1620 which states that the pre-incident plan for all standpipe systems should include location and identification of control valves. Due to fire effects inside Containment the inboard valve may not be operable and MCR indication may not be available and the fire brigade may need to manually operate this valve. Applicant needs to ensure the inboard valve can be manually operated and that the prefire plans include this fire brigade action.

Response to Question 09.05.01-83:

U.S. EPR FSAR Tier 2, Section 9.5.1.2.1 will be revised to include the following statement:

> “The inboard control valve can be manually operated. Prefire plans include this action for the fire brigade should automatic operation of the valve be rendered inoperable due to fire effects inside the Containment.”

FSAR Impact:

U.S. EPR FSAR Tier 2, Section 9.5.1.2.1 will be revised as described in the response and indicated on the enclosed markup.

U.S. EPR Final Safety Analysis Report Markups

Supply water distribution capability is provided for reasonable assurance of an adequate water flowrate and nozzle pressure for all hose stations. Hose station pressure reducers are provided where necessary for the safety of plant fire brigade members and offsite fire department personnel.

Automatic standpipe systems are provided throughout except in the Reactor Building and including the Reactor Annulus. Automatic standpipe systems are attached to a water supply capable of supplying the system demand at all times and requiring no action other than opening a hose valve to provide water at hose connections. The Reactor Building, including the Reactor Annulus, have semiautomatic standpipe systems that are attached to a water supply capable of supplying the system demand at all times, but requiring activation of motor-operated control valves to provide full water supply to hose connections. In the inner Reactor Containment Building the inboard and outboard containment isolation, motor-operated control valves are normally kept closed and are only opened during a fire emergency requiring the use of the standpipe system in the Reactor Containment Building. The inboard control valve can be manually operated. Prefire plans include this action for the fire brigade should automatic operation of the valve be rendered inoperable due to fire effects inside containment. In the Reactor Annulus there are two supply connections to the annulus standpipe system with a motor-operated control valve in each connection. These are normally kept closed and only opened during a fire emergency requiring the use of the standpipe system in the Reactor Annulus. In addition, each of the control valves for the Reactor Annulus standpipe system has a 1 inch by-pass line which will keep the standpipe filled and pressurized.

RAI 482, Q 09.05.01-83

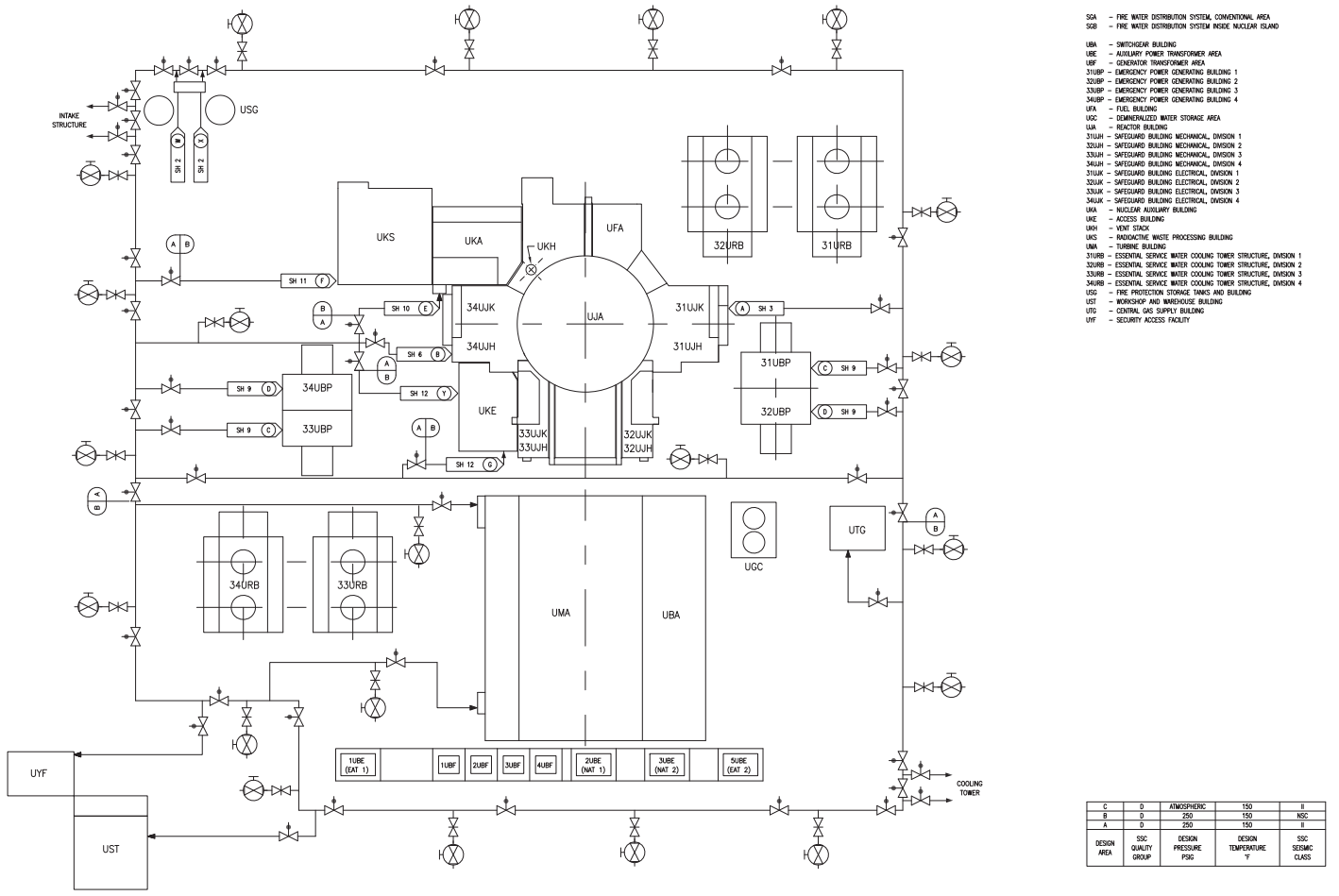
The proper type of hose nozzle provided for each hose station is based on the fire hazards in the area. Combination spray or straight-stream nozzles are not used in plant areas where a straight stream could cause unacceptable damage or present an electrical hazard to firefighting personnel. UL listed electrically safe fixed fog nozzles are provided in areas where high-voltage shock hazards exist. All nozzles have full shutoff capability.

Fire hose meets the applicable criteria of NFPA 1961 (Reference 26) and is hydrostatically tested in accordance with the applicable guidance of NFPA 1962 (Reference 27).

Standpipe and hose systems in areas containing equipment required for safe plant shutdown following an SSE are designed to be functional following an SSE and capable of providing flow to at least two hose stations (approximately 75 gpm per hose stream). The standpipe and hose stations in these areas, the water supply and distribution piping, and the supports and valves, as a minimum, satisfy ASME B31.1 (Reference 32). This is accomplished by manually realigning valves to isolate non-seismically qualified portions of the FPS from the seismic portions of the system and manually starting the diesel fire pumps.

Figure 9.5.1-1—Fire Water Distribution System
Sheet 1 of 13

RAI 482
Q. 09.05.01-82



RAI 482
Q. 09.05.01-82

Figure 9.5.1-1—Fire Water Distribution System
Sheet 3 of 13

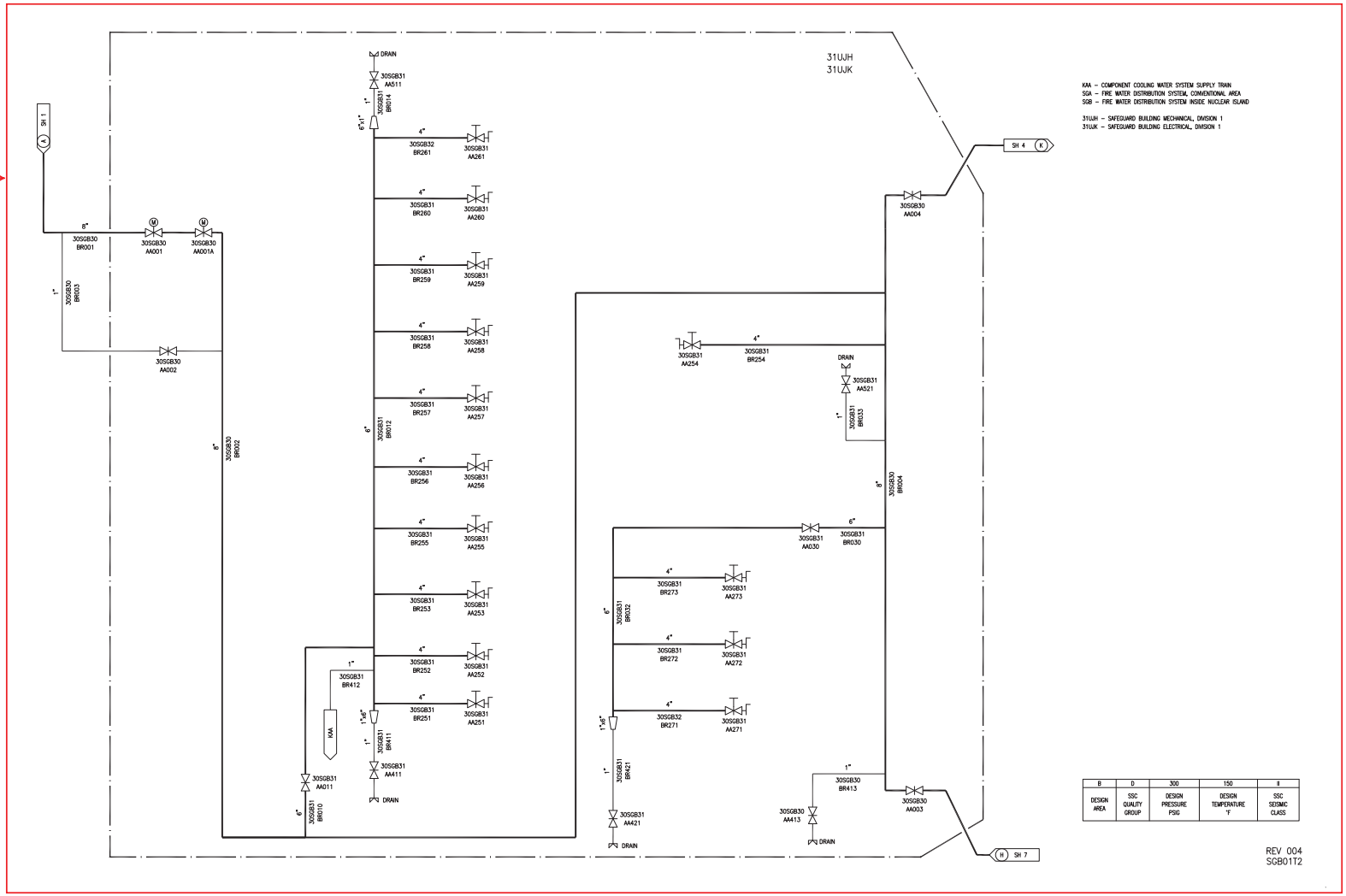


Figure 9.5.1-1—Fire Water Distribution System
Sheet 4 of 13

RAI 482
Q. 09.05.01-82

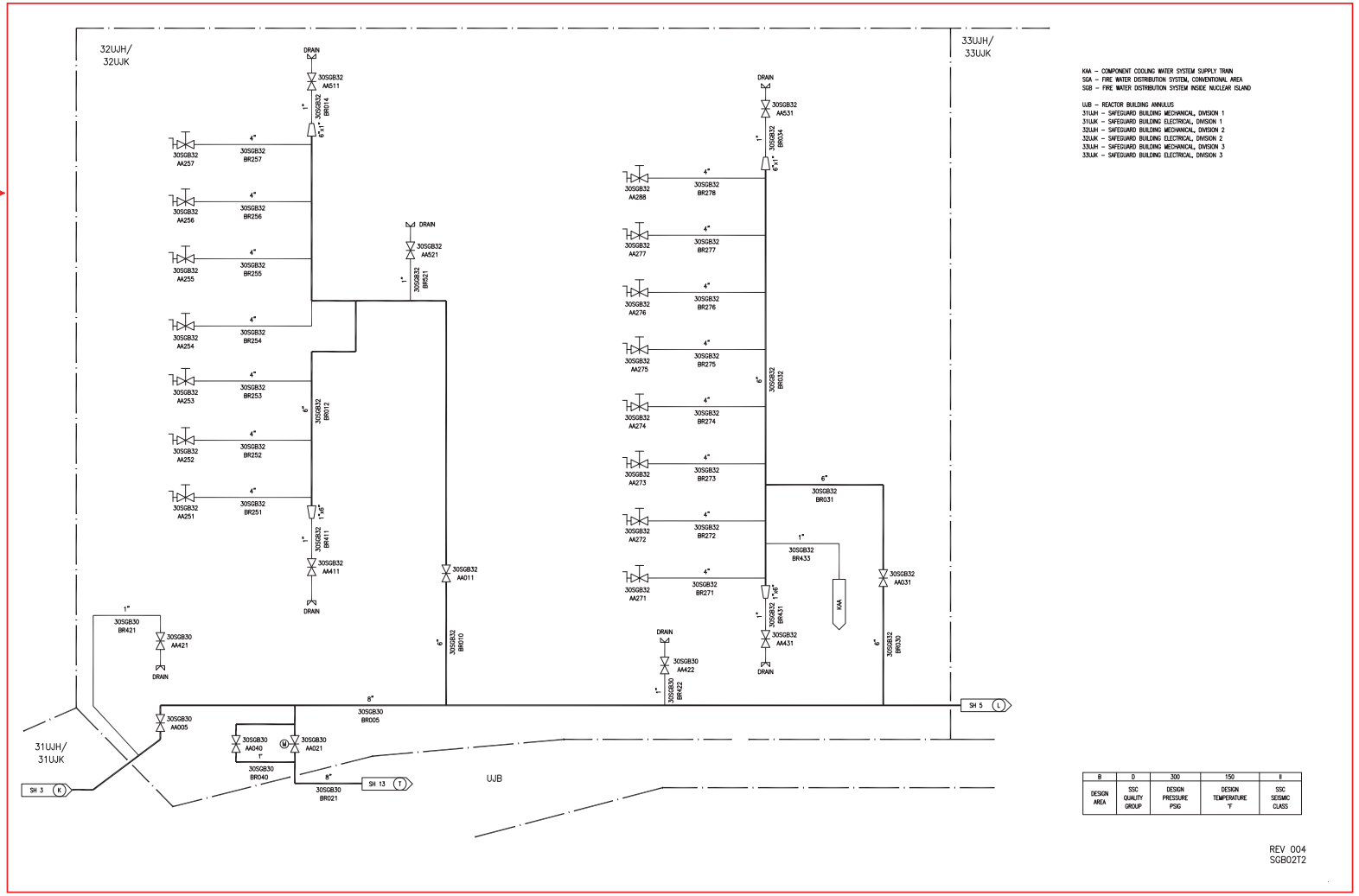


Figure 9.5.1-1—Fire Water Distribution System
Sheet 5 of 13

RAI 482
Q. 09.05.01-82

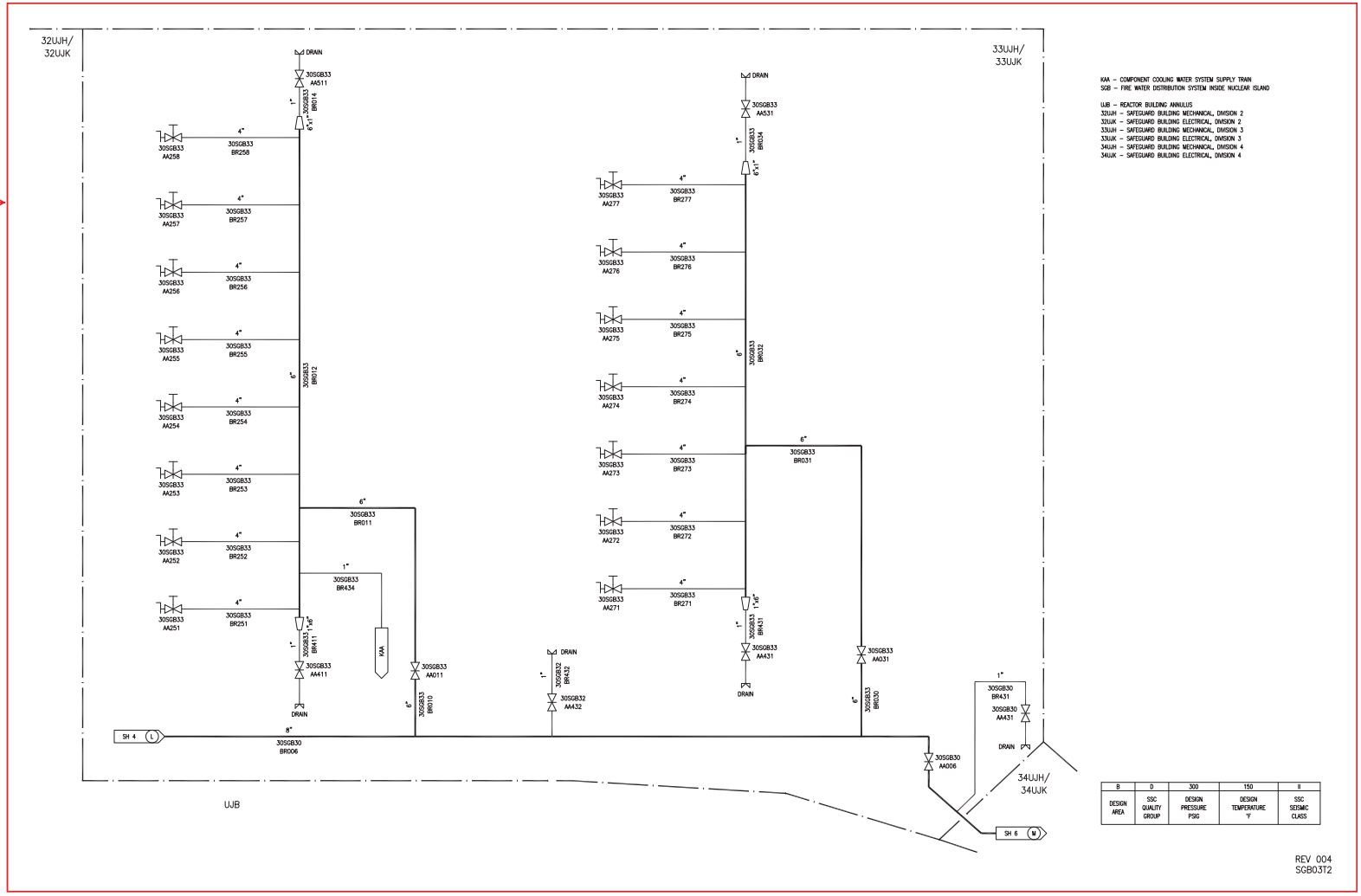


Figure 9.5.1-1—Fire Water Distribution System
Sheet 6 of 13

RAI 482
Q. 09.05.01-82

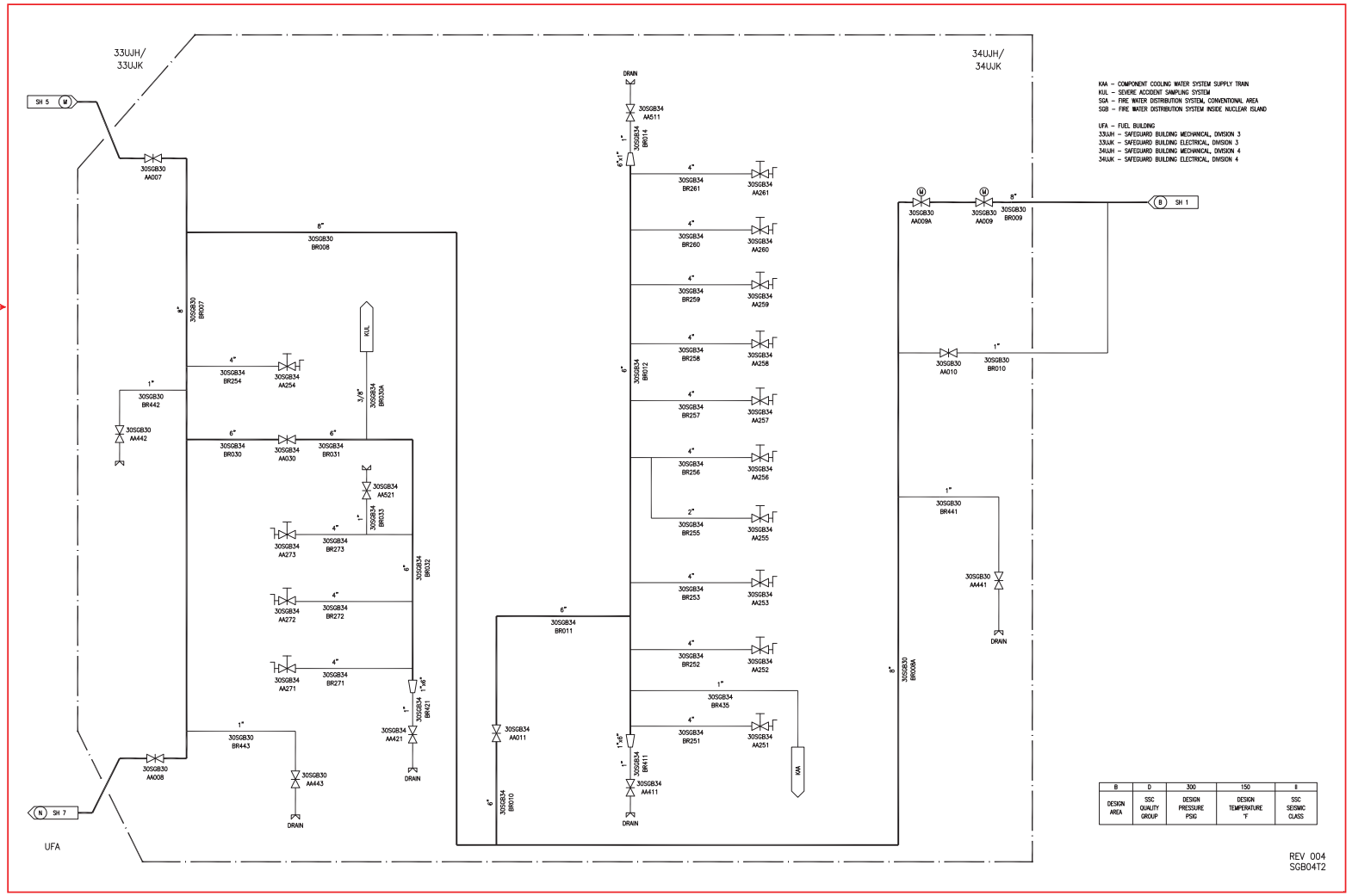


Figure 9.5.1-1—Fire Water Distribution System
Sheet 7 of 13

RAI 482
Q. 09.05.01-82

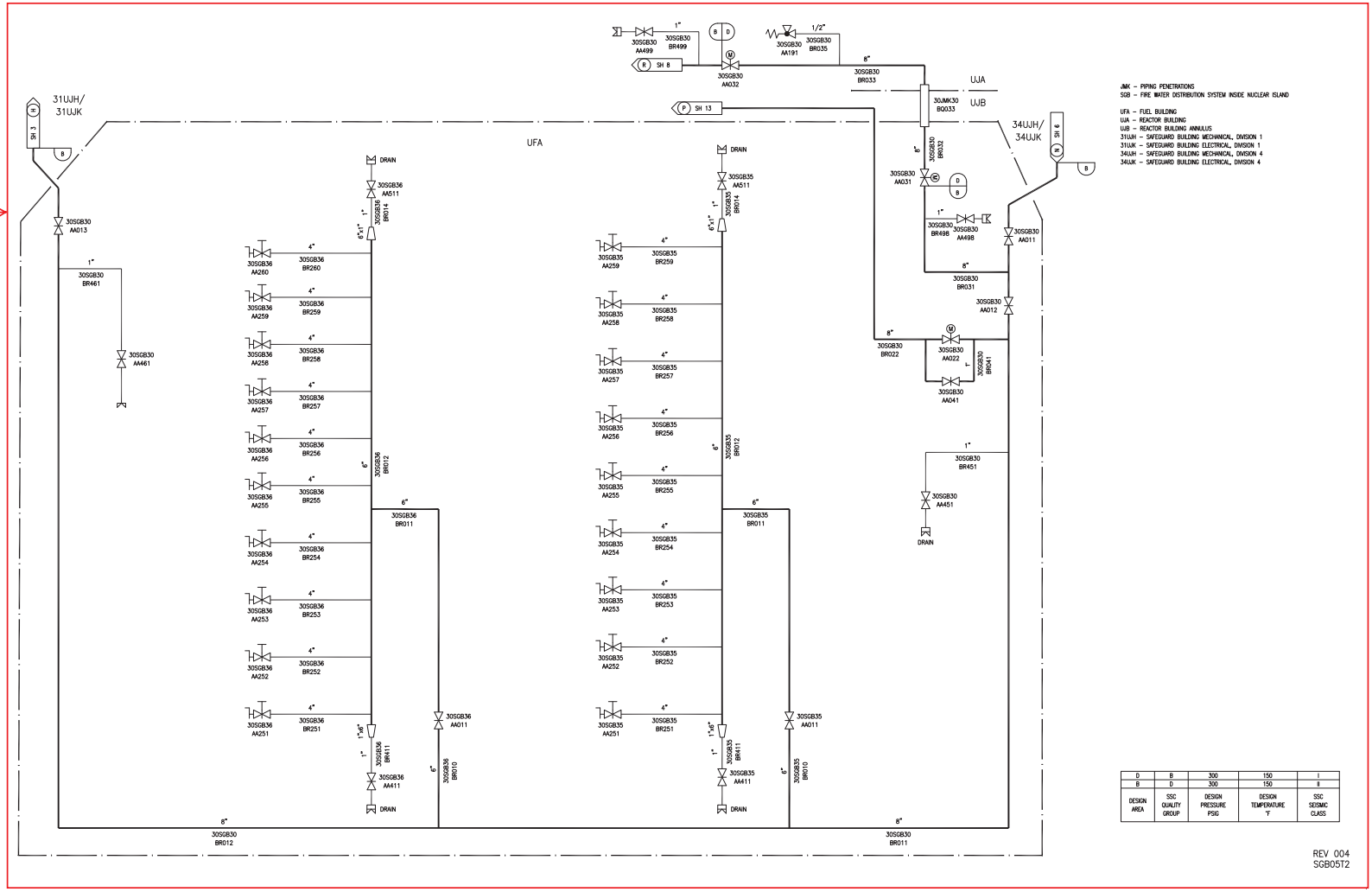


Figure 9.5.1-1—Fire Water Distribution System
Sheet 8 of 13

RAI 482
Q. 09.05.01-82

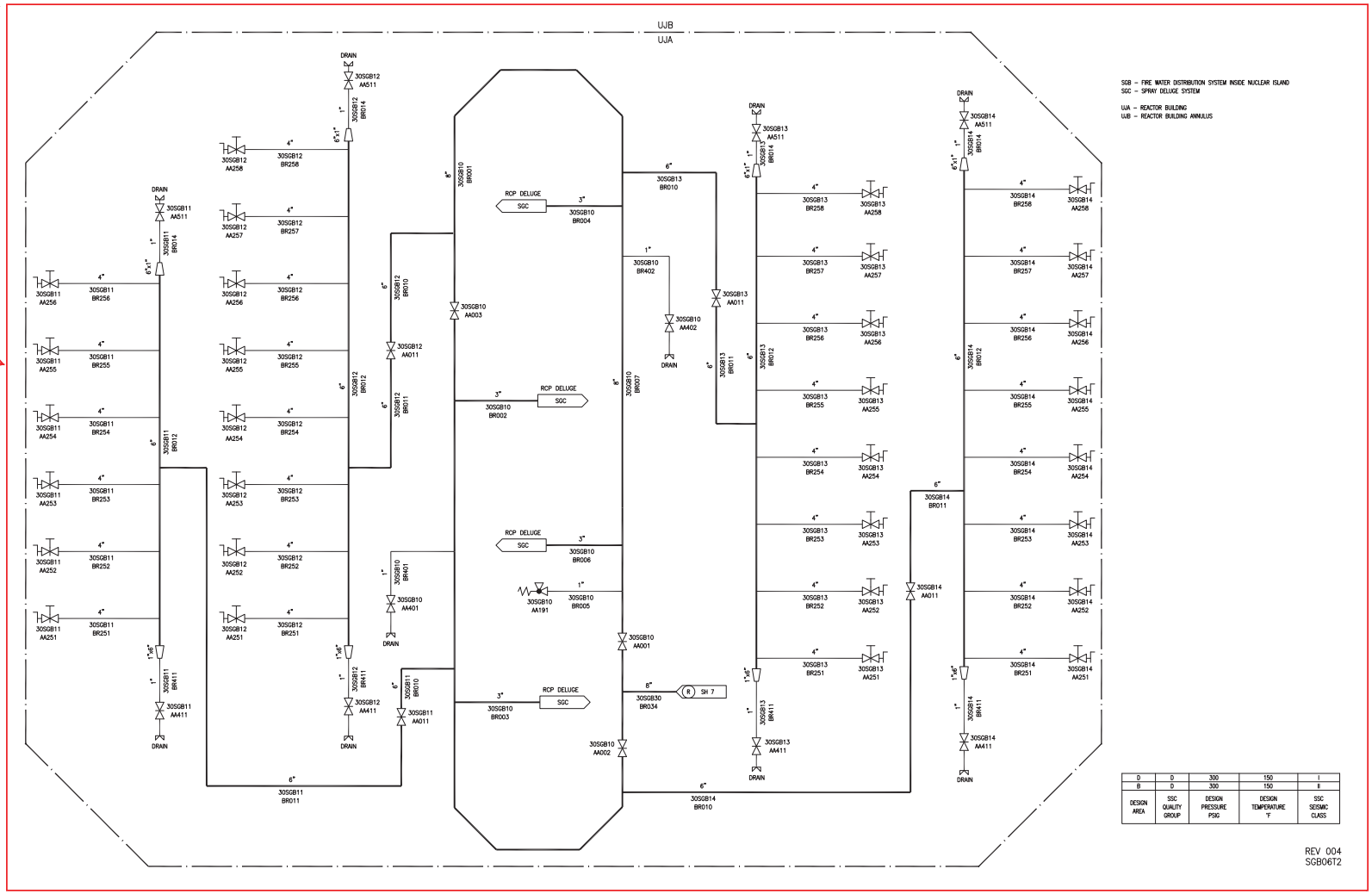


Figure 9.5.1-1—Fire Water Distribution System
Sheet 9 of 13

RAI 482
Q. 09.05.01-82

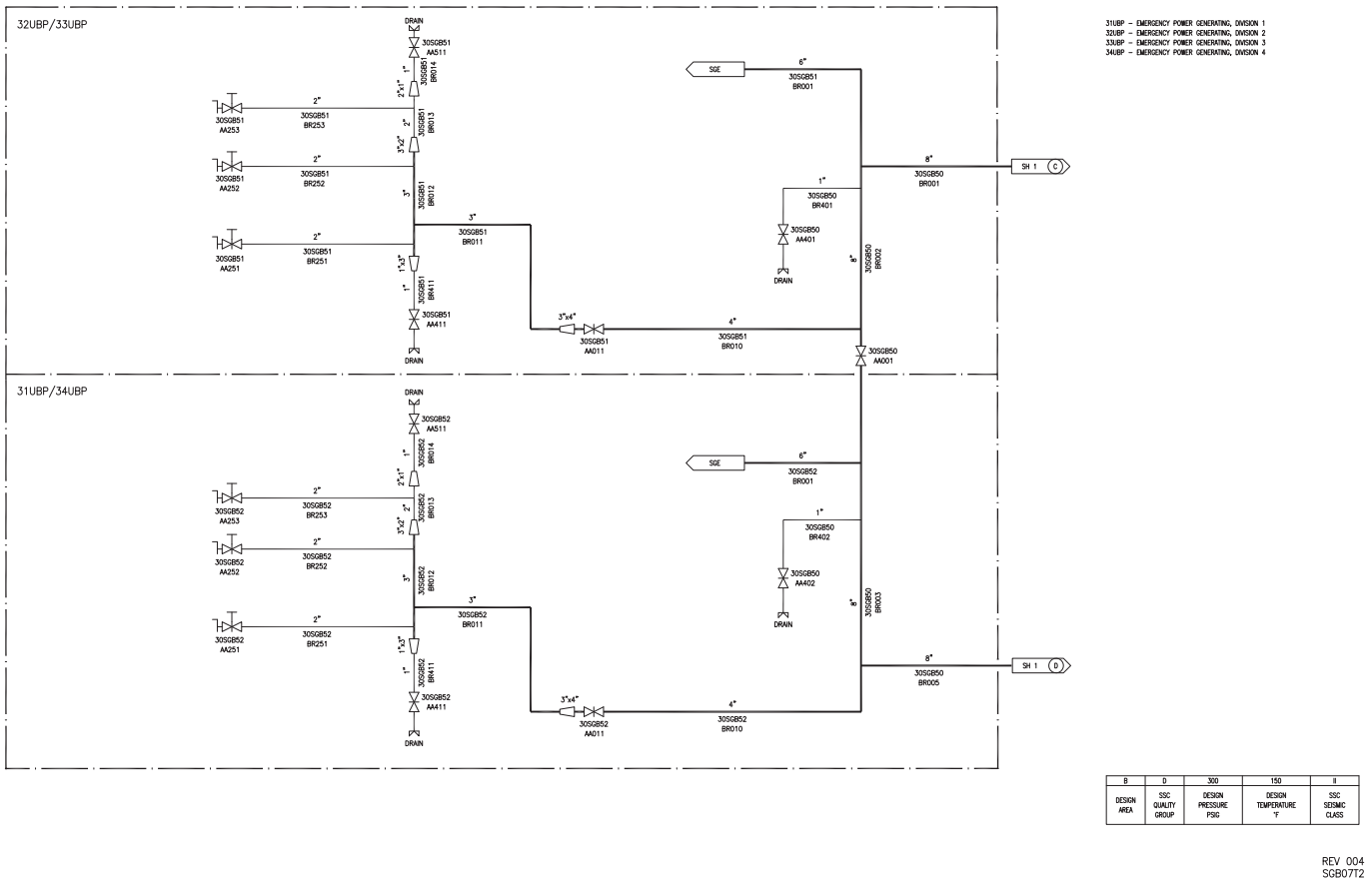
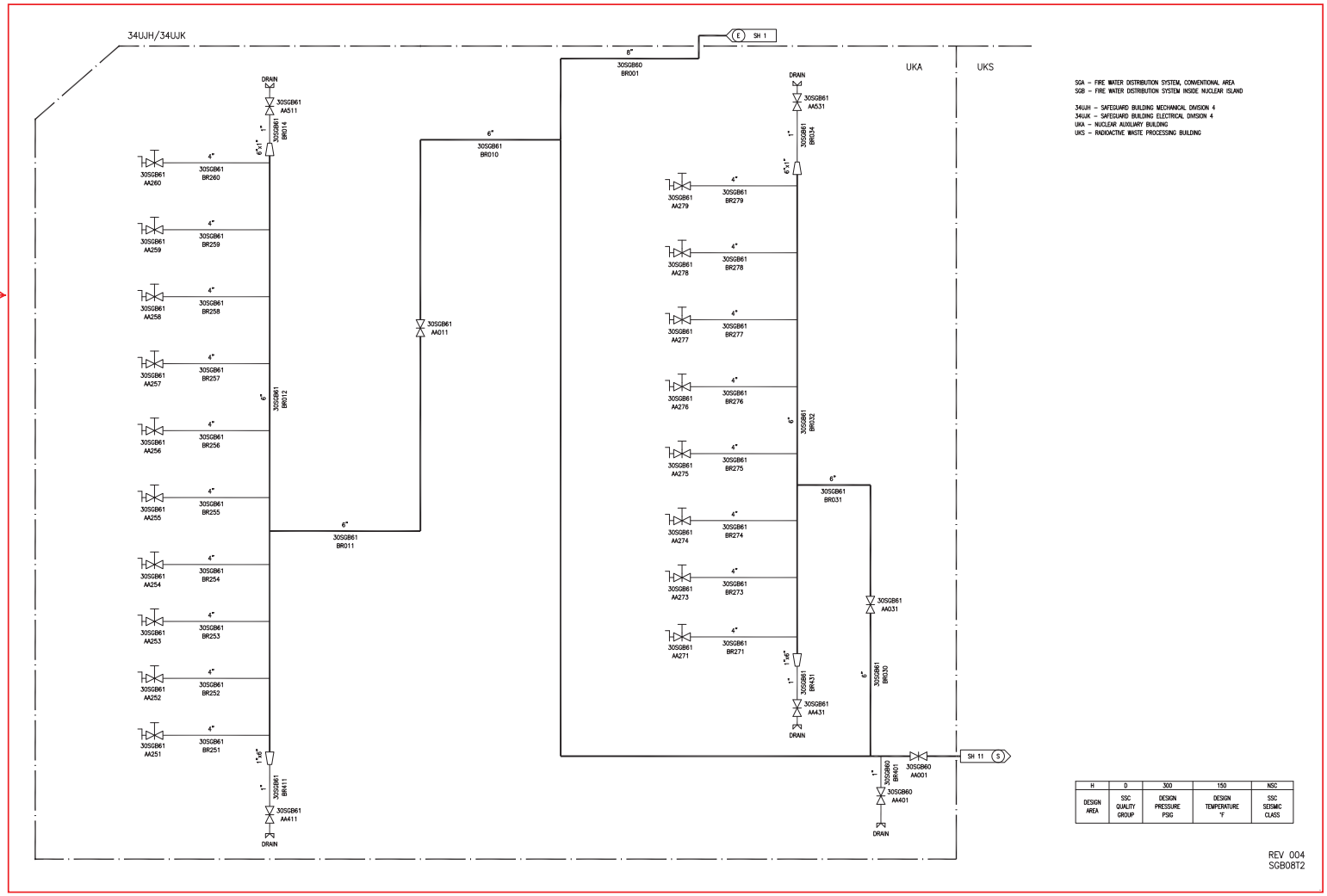


Figure 9.5.1-1—Fire Water Distribution System
Sheet 10 of 13

RAI 482
Q. 09.05.01-82



RAI 482
Q. 09.05.01-82

Figure 9.5.1-1—Fire Water Distribution System
Sheet 11 of 13

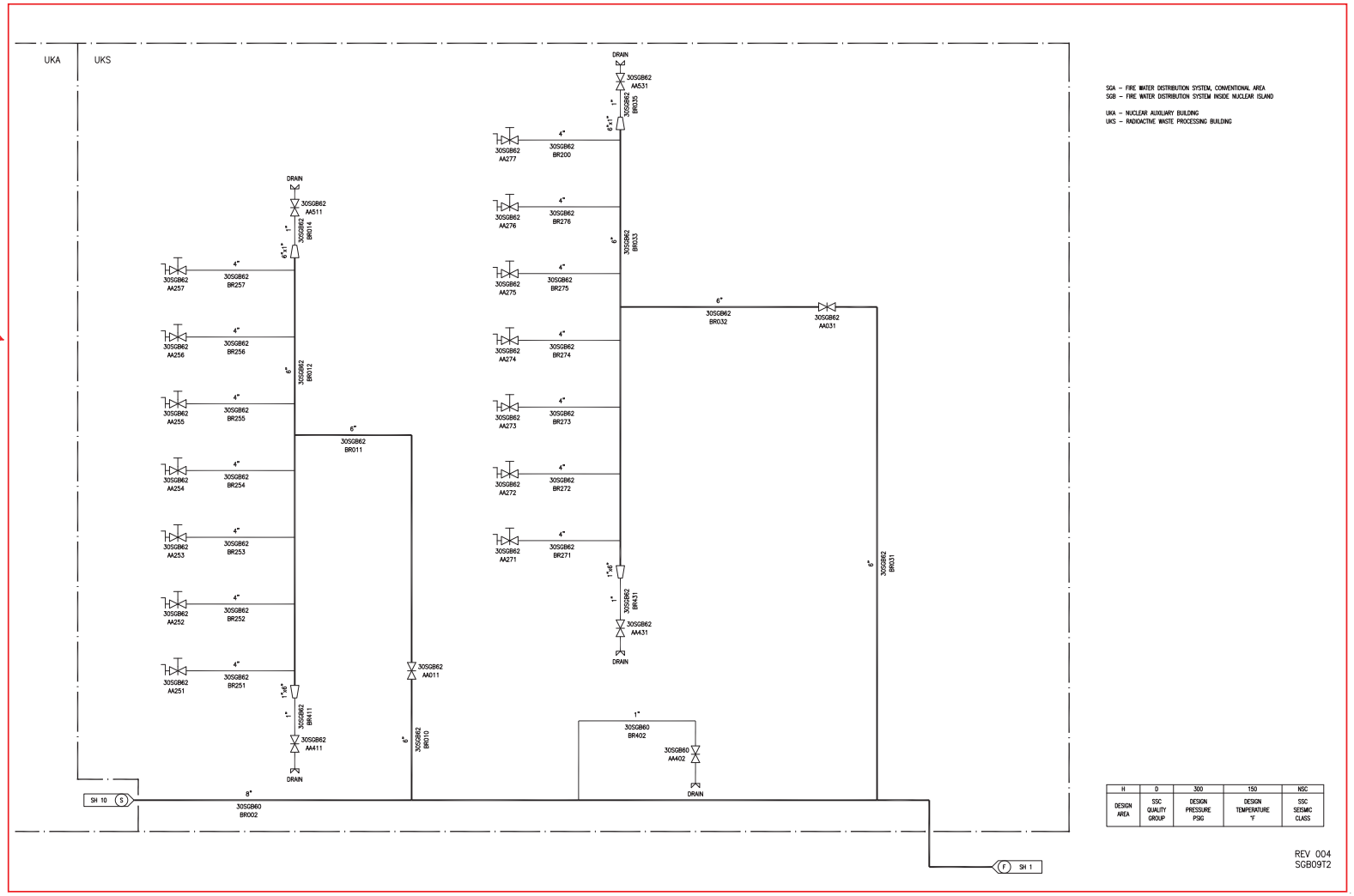


Figure 9.5.1-1—Fire Water Distribution System
Sheet 12 of 13

RAI 482
Q. 09.05.01-82

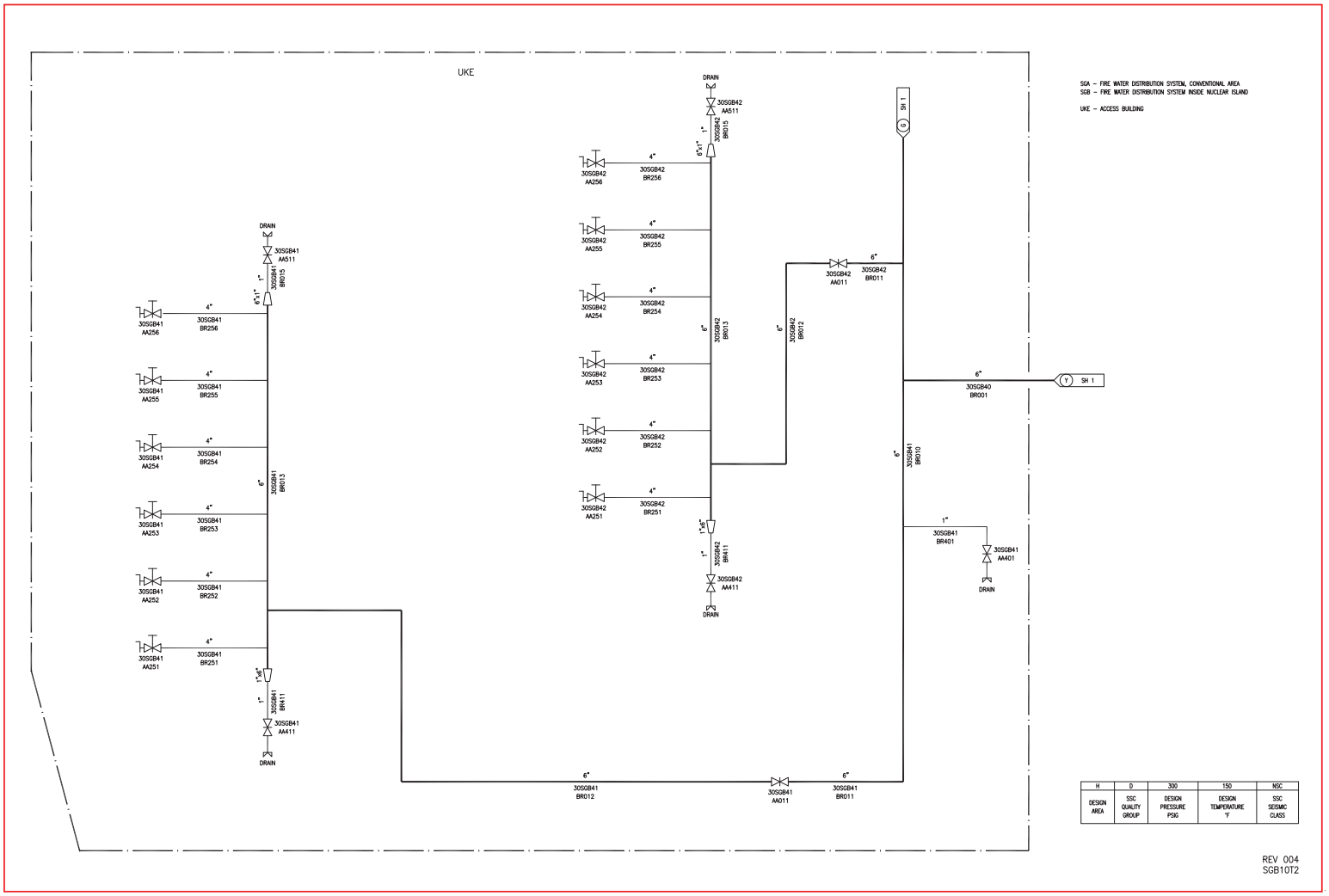


Figure 9.5.1-1—Fire Water Distribution System
Sheet 13 of 13

RAI 482
Q. 09.05.01-82