ArevaEPRDCPEm Resource

From: BRYAN Martin (EXT) [Martin.Bryan.ext@areva.com]
Sent: Tuesday, May 25, 2010 5:03 PM
To: Tesfaye, Getachew
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6, Supplement 3, Part 2 of 4
Attachments: RAI 340 Supplement 3 Response US EPR DC part 2 of 4 .pdf

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 5 questions of RAI No. 340 on March 1, 2010. RAI No. 340, Supplement 1 was submitted on April 7, 2010 and provided responses to 2 of the 4 remaining questions. In addition, on April 7, 2010, the schedule for responding to Question 06.02.01-57 was revised to July 15, 2010. On May 12, 2010, the schedule for responding to Question 06.02.01-53 was revised to May 26, 2010.

Because of the file size, AREVA NP is providing the response to Question 06.02.01-53 in four parts. The four files are designated as "RAI 340 Supplement 3 Response US EPR DC Part X of 4.pdf," where "X" is one of the four parts. The files provide a technically correct and complete response to 1 of the 2 remaining questions.

Attached is file, "RAI 340 Supplement 3 Response US EPR DC Part 2 of 4.pdf."

The following table indicates the respective pages in the response document, "RAI 340 Supplement 3 Response US EPR DC Part 2 of 4.pdf," that contain AREVA NP's responses to the subject questions.

Question #	Start Page	End Page
RAI 340 — 06.02.01-53	54	106

The schedule for a technically correct and complete response to Question 06.02.01-57 is unchanged and provided below.

Question #	Response Date
RAI 340 — 06.02.01-57	July 15, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Tuesday, May 25, 2010 4:55 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC);

GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6, Supplement 3, Part 1 of 4

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 5 questions of RAI No. 340 on March 1, 2010. RAI No. 340, Supplement 1 was submitted on April 7, 2010 and provided responses to 2 of the 4 remaining questions. In addition, on April 7, 2010, the schedule for responding to Question 06.02.01-57 was revised to July 15, 2010. On May 12, 2010, the schedule for responding to Question 06.02.01-53 was revised to May 26, 2010.

Because of the file size, AREVA NP is providing the response to Question 06.02.01-53 in four parts. The four files are designated as "RAI 340 Supplement 3 Response US EPR DC Part X of 4.pdf," where "X" is one of the four parts. The files provide a technically correct and complete response to 1 of the 2 remaining questions.

Attached is file, "RAI 340 Supplement 3 Response US EPR DC Part 1 of 4.pdf."

The following table indicates the respective pages in the response document, "RAI 340 Supplement 3 Response US EPR DC Part 1 of 4.pdf," that contain AREVA NP's responses to the subject questions.

Question #	Start Page	End Page
RAI 340 — 06.02.01-53	2	53

The schedule for a technically correct and complete response to Question 06.02.01-57 is unchanged and provided below.

Question #	Response Date
RAI 340 — 06.02.01-57	July 15, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Wednesday, May 12, 2010 4:42 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6, Supplement 2

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 5 questions of RAI No. 340 on March 1, 2010. RAI No. 340, Supplement 1 was submitted on April 7, 2010 and provided responses to 2 of the 4 remaining questions. In addition, on April 7, 2010, the schedule for responding to Question 06.02.01-57 was revised to July 15, 2010.

Because the response to Question 06.02.01-53 is anticipated to include over 200 figures, an additional two weeks is needed to provide a complete and accurate response. As agreed with the NRC staff, the schedule for responding to Question 06.02.01-53 is changed to May 26, 2010. The schedule for responding to Question 06.02.01-57 is unchanged.

The schedule for a technically correct and complete response to the remaining RAI No. 340 questions is provided below.

Question #	Response Date
RAI 340 — 06.02.01-53	May 26, 2010
RAI 340 — 06.02.01-57	July 15, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Wednesday, April 07, 2010 2:55 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6, Supplement 1

Getachew,

The proprietary/SUNSI and public versions of the response to RAI No. 340, Supplement 1 are submitted via AREVA NP Inc. letter, "Response to U.S. EPR Design Certification Application RAI No. 340 Supplement 1 " NRC:10:032, dated April 7, 2010. The enclosure to that letter provides a schedule to provide technically correct and complete response to 2 of the 4 remaining questions in RAI No. 340. The RAI response also contains security-related sensitive information that should be withheld from public disclosure in accordance with 10 CFR 2.390. In addition, an affidavit to support withholding of information that AREVA considers proprietary from public disclosure, per 10CFR2.390(b), is provided as an enclosure to that letter.

A public version with the proprietary and security-related sensitive information redacted is also provided as an enclosure to that letter.

The following table indicates the respective pages in the response document that contain AREVA NP's response to the subject questions:

Question #	Start Page	End Page
RAI 340 — 06.02.01-54	2	10
RAI 340 — 06.02.01-56	11	11

The schedule for a technically correct and complete response to Question 06.02.01-53 is unchanged and provided below. The response to Questions 06.02.01-57 is dependent upon the results of ongoing GSI-191 head loss testing and evaluations which will demonstrate sump strainer performance. Because of the ongoing activities, AREVA NP is not providing a response at this time. The schedule for a technically correct and complete response to Question 06.02.01-57 has been revised and is provided below.

Question #	Response Date
RAI 340 — 06.02.01-53	May 12, 2010
RAI 340 — 06.02.01-57	**July 15, 2010**

Sincerely,

Martin (Marty) C. Bryan
Licensing Advisory Engineer
AREVA NP Inc.
Tel: (434) 832-3016
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Monday, March 01, 2010 3:23 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); ROMINE Judy (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 340 Response US EPR DC.pdf" provides a technically correct and complete response to 1 of the 5 questions.

The following table indicates the respective pages in the response document, "RAI 340 Response US EPR DC.pdf," that contains AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 340 — 06.02.01-53	2	2
RAI 340 — 06.02.01-54	3	3
RAI 340 — 06.02.01-55	4	11
RAI 340 — 06.02.01-56	12	12
RAI 340 — 06.02.01-57	13	13

A complete answer is not provided for 4 of the 5 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 340 — 06.02.01-53	May 12, 2010
RAI 340 — 06.02.01-54	April 7, 2010
RAI 340 — 06.02.01-56	April 7, 2010
RAI 340 — 06.02.01-57	April 7, 2010

Sincerely,

Martin (Marty) C. Bryan
Licensing Advisory Engineer
AREVA NP Inc.
Tel: (434) 832-3016
Martin.Bryan@areva.com

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Friday, January 29, 2010 10:23 AM
To: ZZ-DL-A-USEPR-DL
Cc: Jensen, Walton; Jackson, Christopher; Snodderly, Michael; Carneal, Jason; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 340 (4094), FSARCh. 6

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 6, 2009, and discussed with your staff on January 20, 2010. Drat RAI Questions 06.02.01-53 was modified 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: 1455

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB710641DD4D)

Subject: Response to U.S. EPR Design Certification Application RAI No. 340, FSARCh. 6, Supplement 3, Part 2 of 4
Sent Date: 5/25/2010 5:02:56 PM
Received Date: 5/25/2010 5:04:18 PM
From: BRYAN Martin (EXT)

Created By: Martin.Bryan.ext@areva.com

Recipients:
"DELANO Karen V (AREVA NP INC)" <Karen.Delano@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA NP INC)" <Judy.Romine@areva.com>
Tracking Status: None
"BENNETT Kathy A (OFR) (AREVA NP INC)" <Kathy.Bennett@areva.com>
Tracking Status: None
"GUCWA Len T (EXT)" <Len.Gucwa.ext@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	9972	5/25/2010 5:04:18 PM
RAI 340 Supplement 3 Response US EPR DC part 2 of 4 .pdf	5685122	

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

Figure 06.02.01-53–50—Temperature in the Lower Annulus Rooms

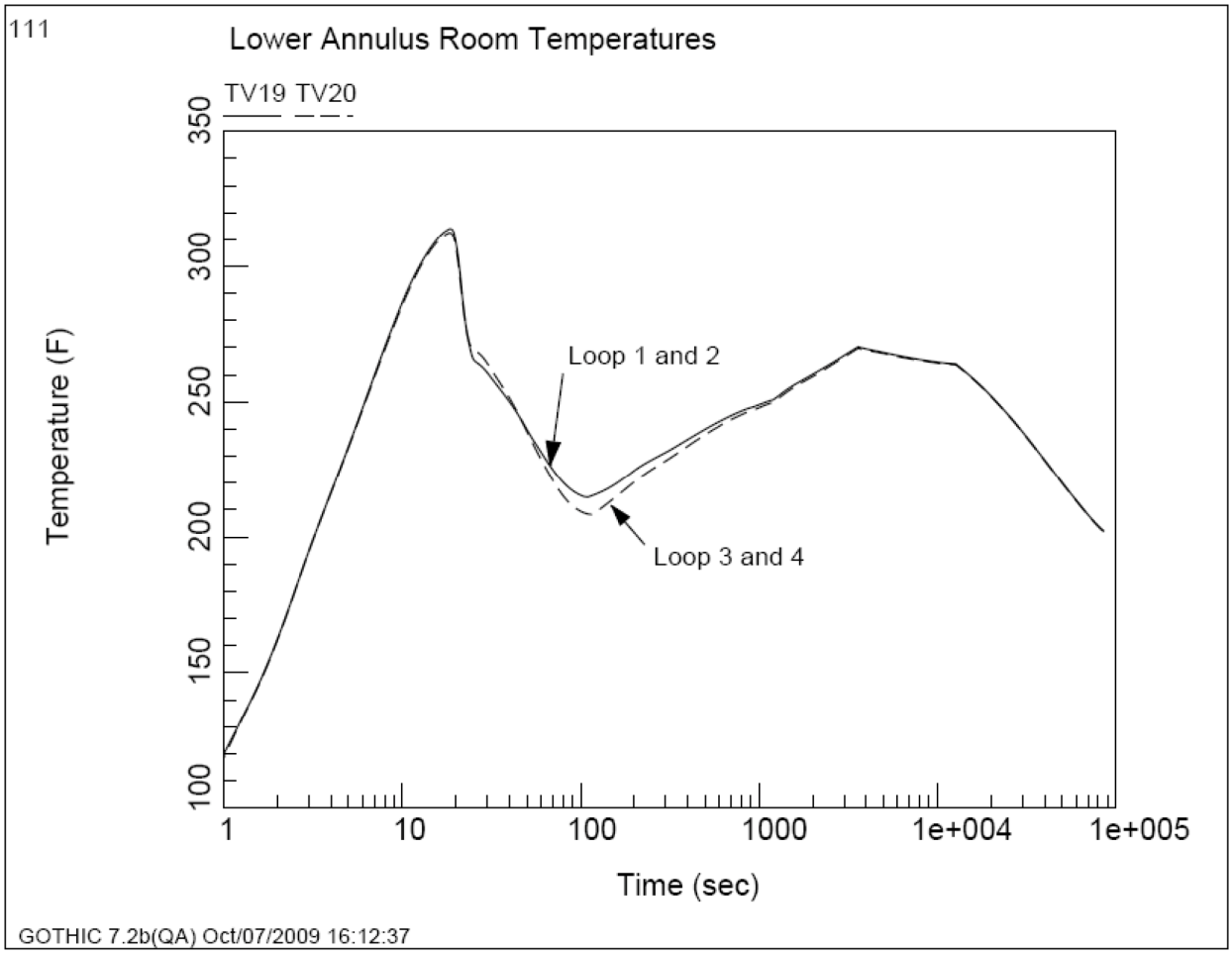

Figure 06.02.01-53-51—Temperature in the Middle Annulus Rooms

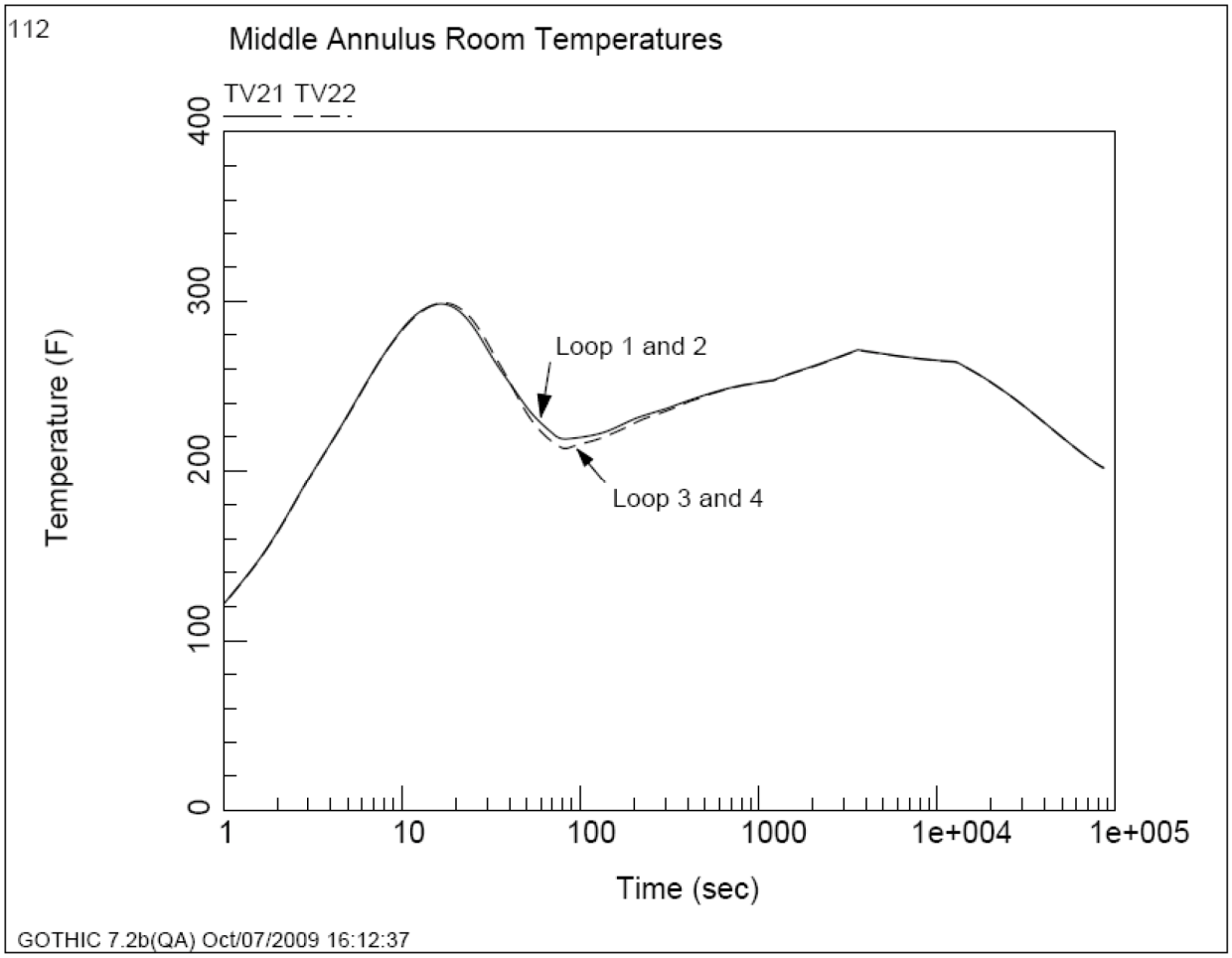

Figure 06.02.01-53-52—Temperature in the Upper Annulus Rooms

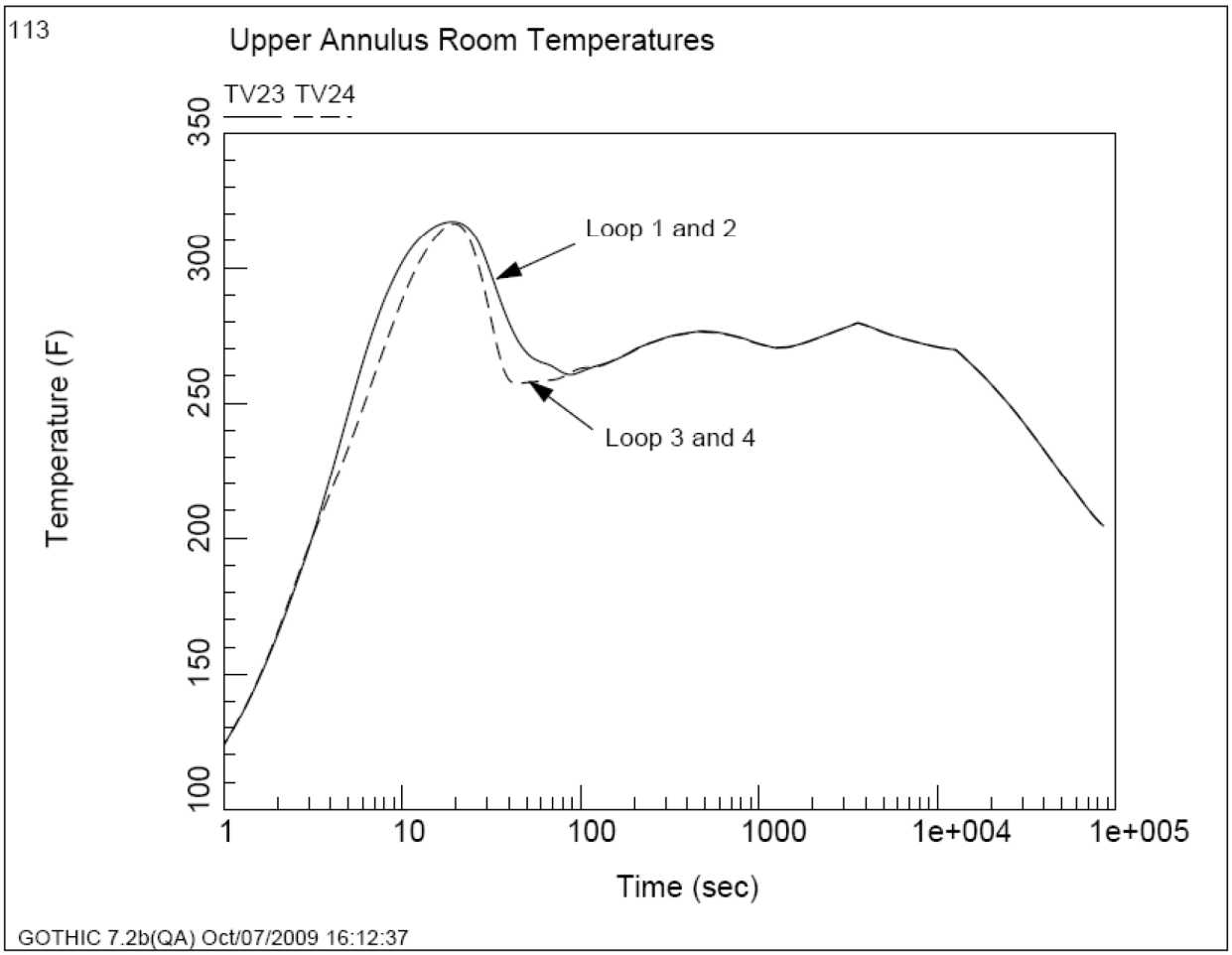

Figure 06.02.01-53–53—Temperature in the Access and Hot Piping Penetration Rooms

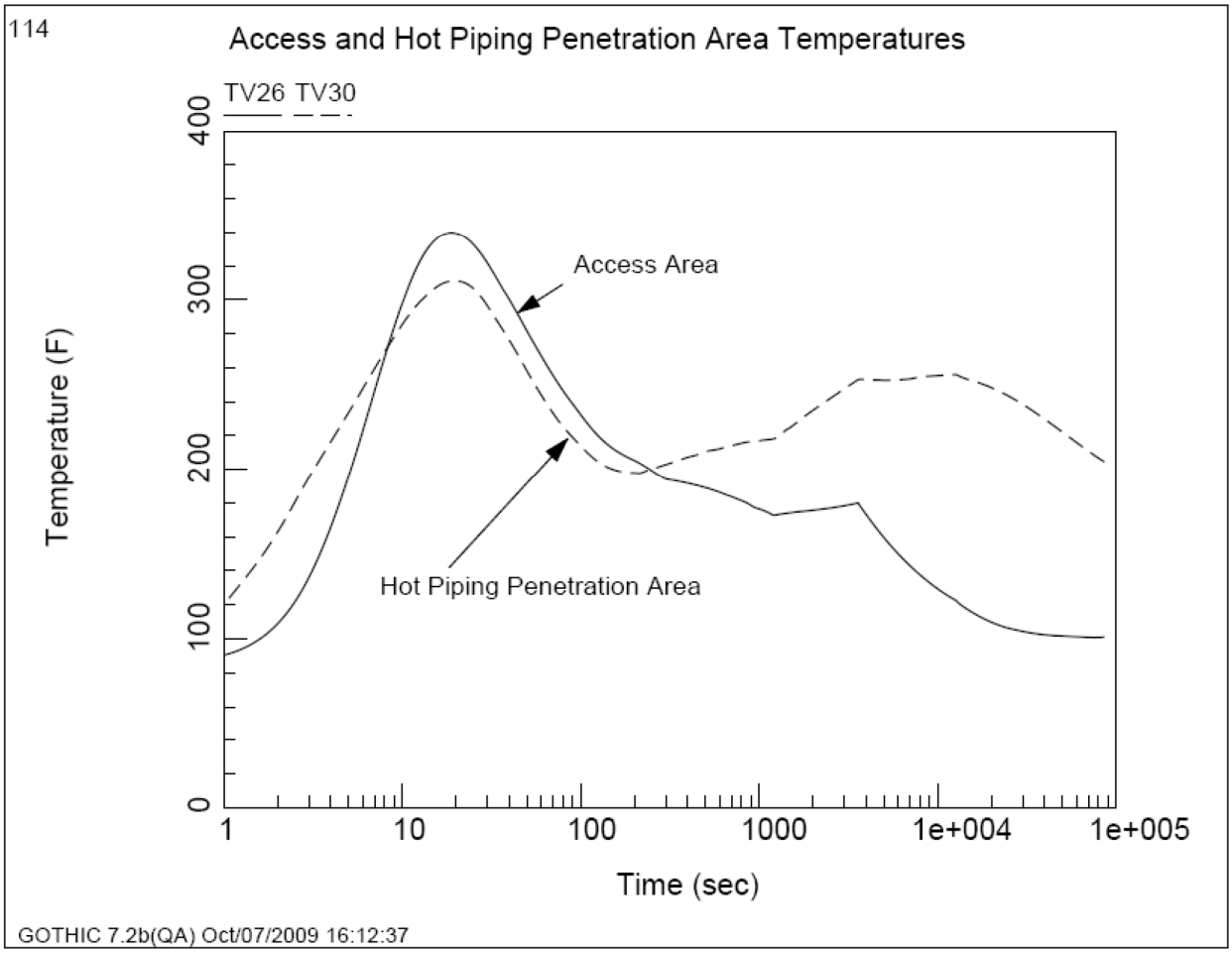

Figure 06.02.01-53–54—Temperature in the North and South Staircases and the Elevator

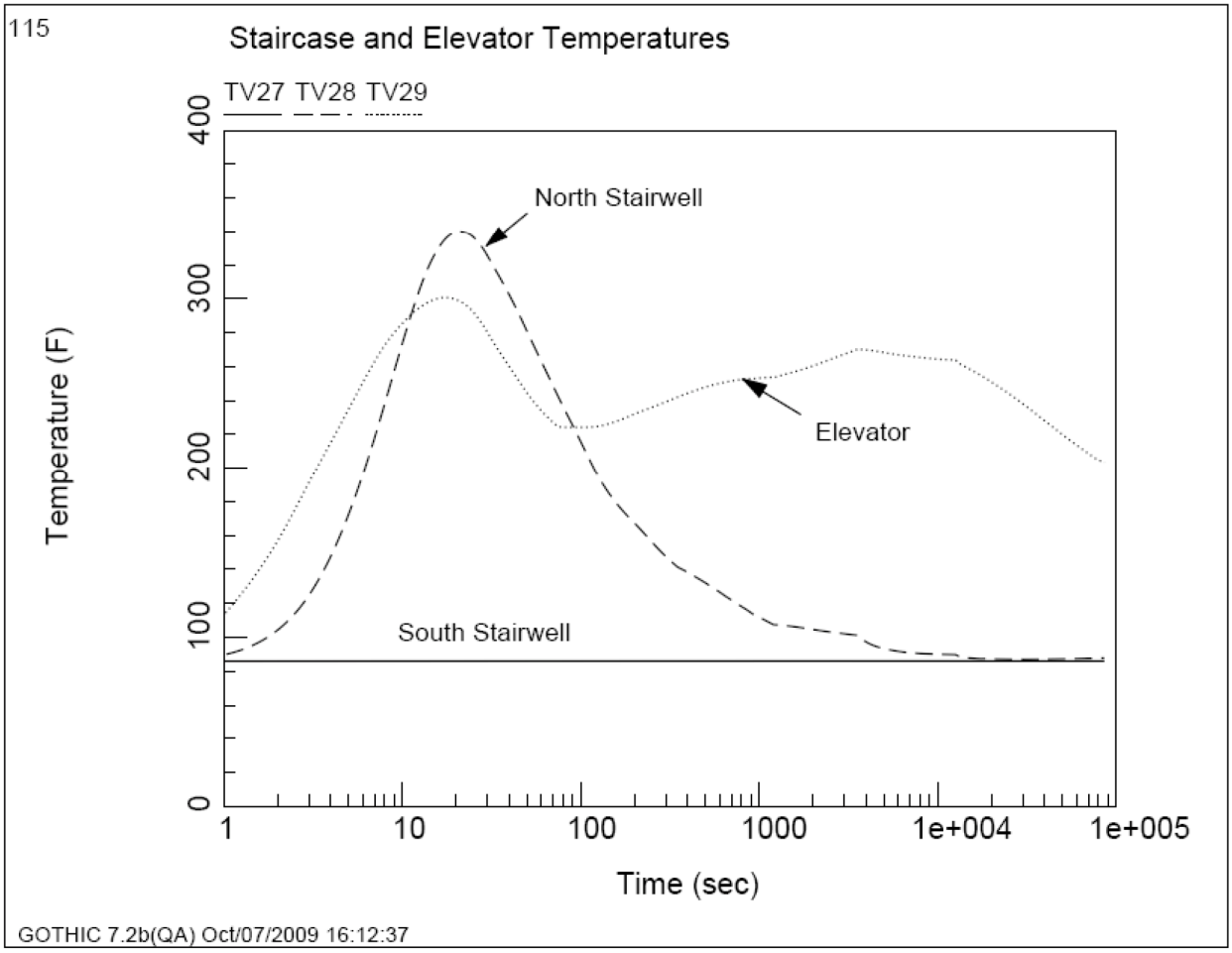

Figure 06.02.01-53–55—Temperature in the Containment Dome between the 63.98 ft and 71.53 ft Elevations

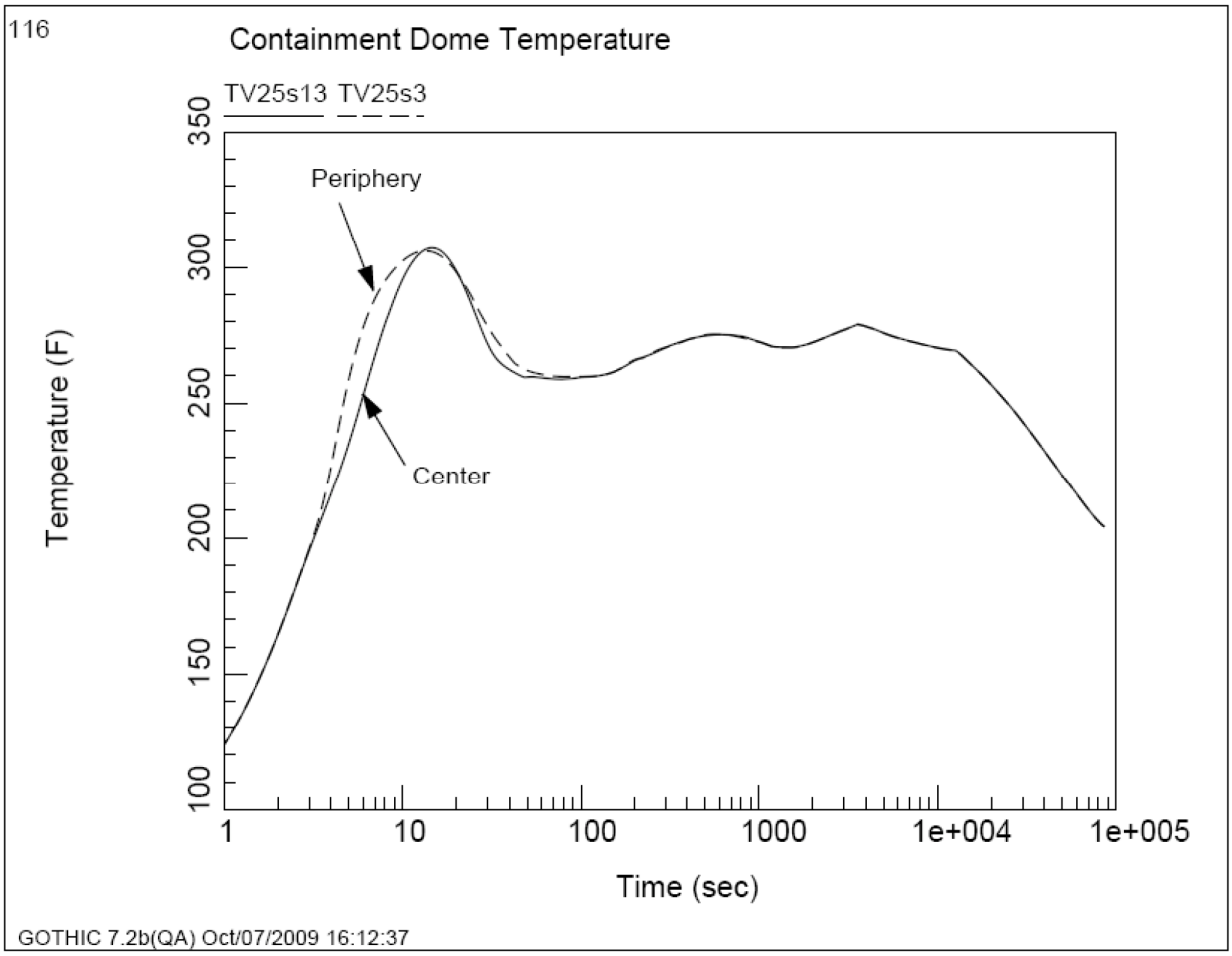

Figure 06.02.01-53–56—Temperature in the Containment Dome between the 79.07 ft and 86.29 ft Elevations

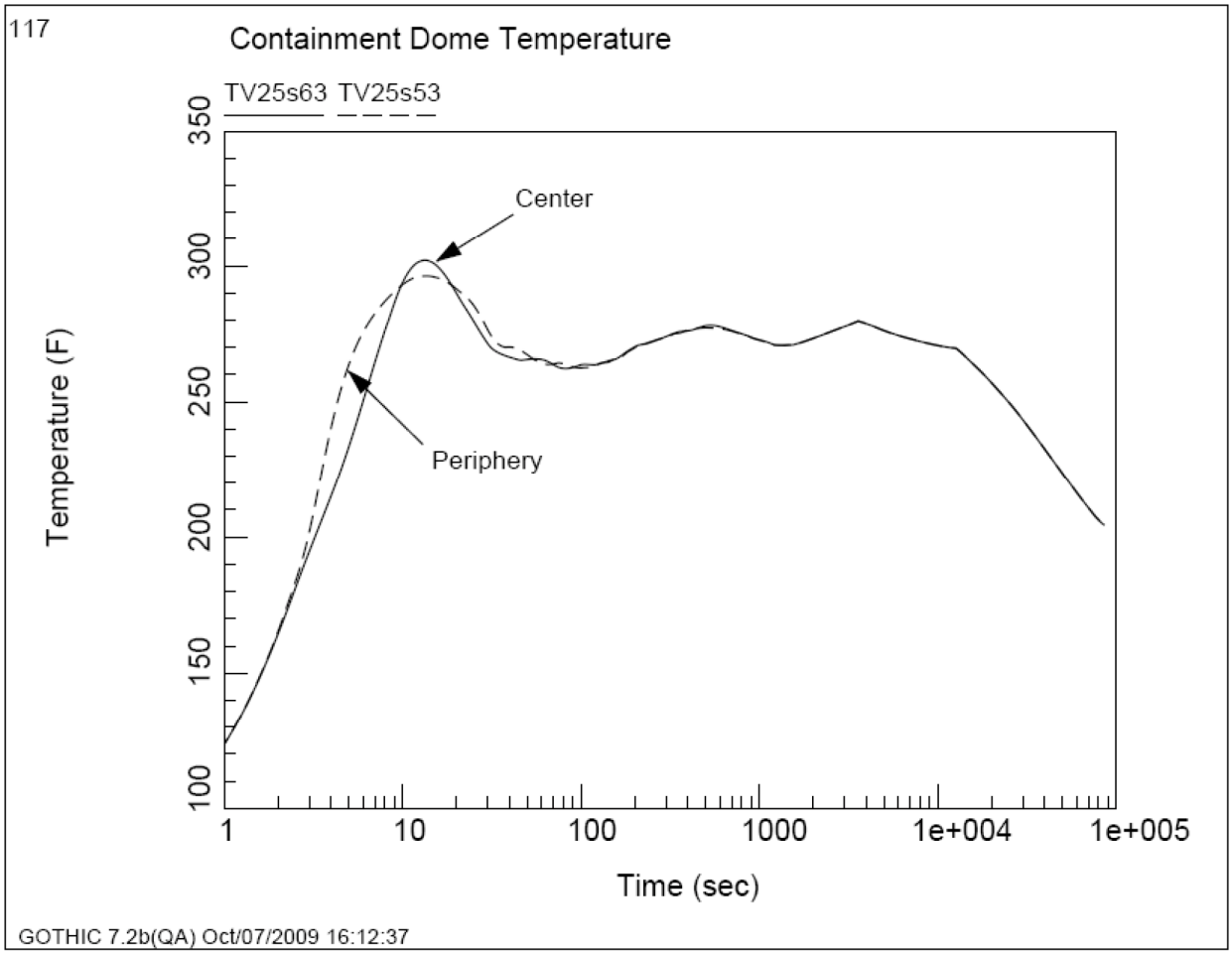

Figure 06.02.01-53–57—Temperature in the Containment Dome between 93.51 ft and 98.59 ft Elevations

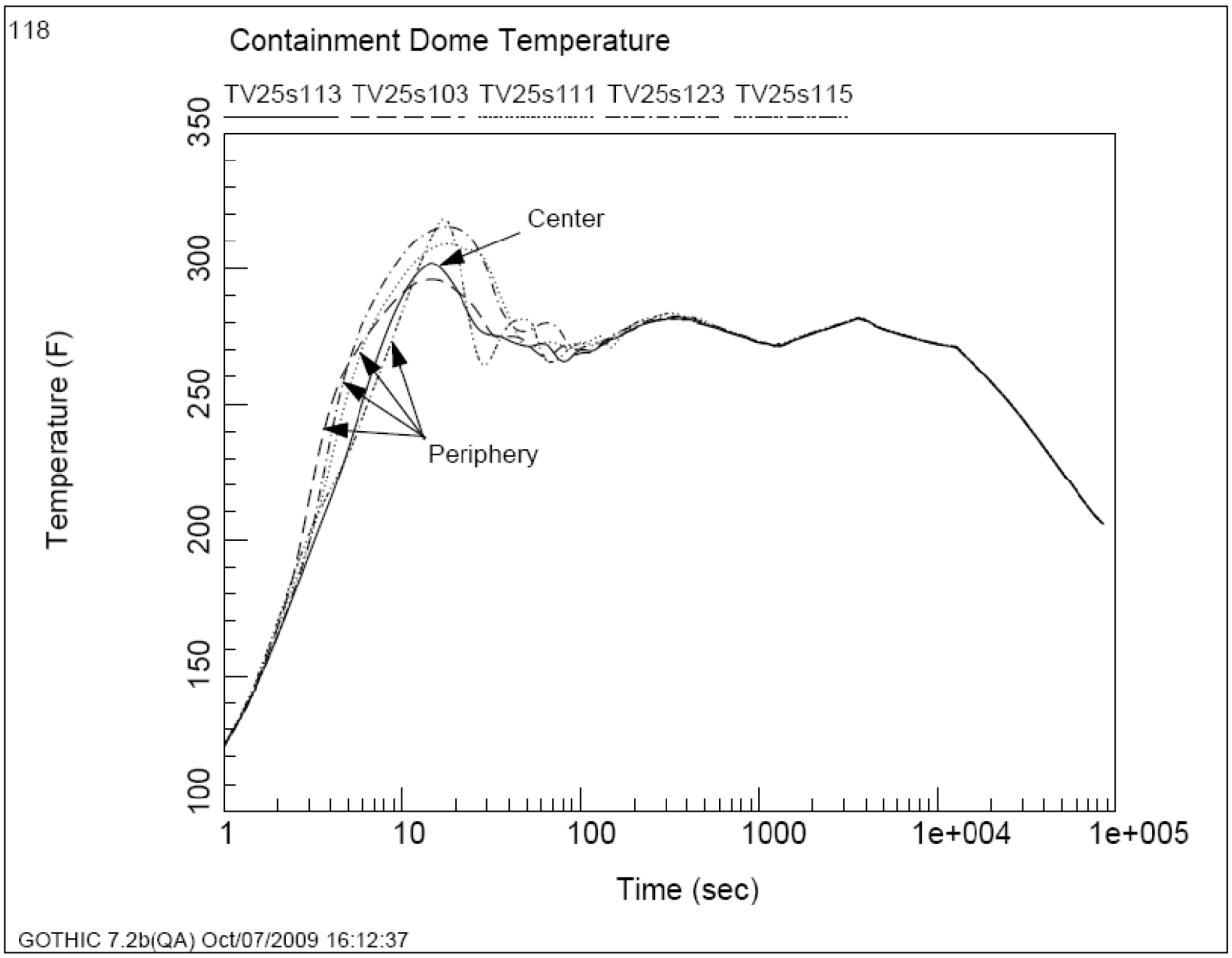

Figure 06.02.01-53–58—Temperature in the Containment Dome between the 103.68 ft and 108.76 ft Elevations

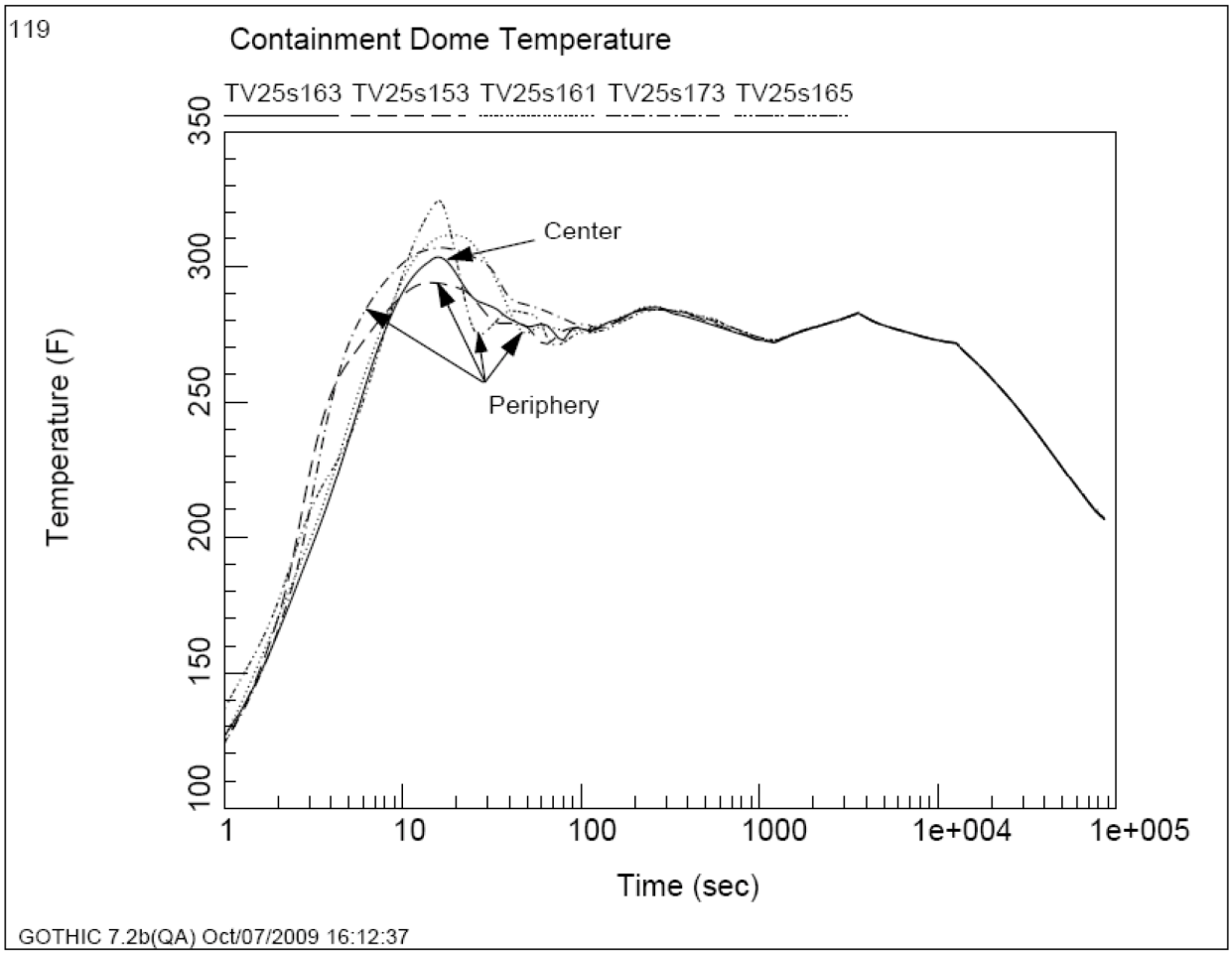

Figure 06.02.01-53–59—Temperature in the Containment Dome between the 113.85 ft and 119.90 ft Elevations

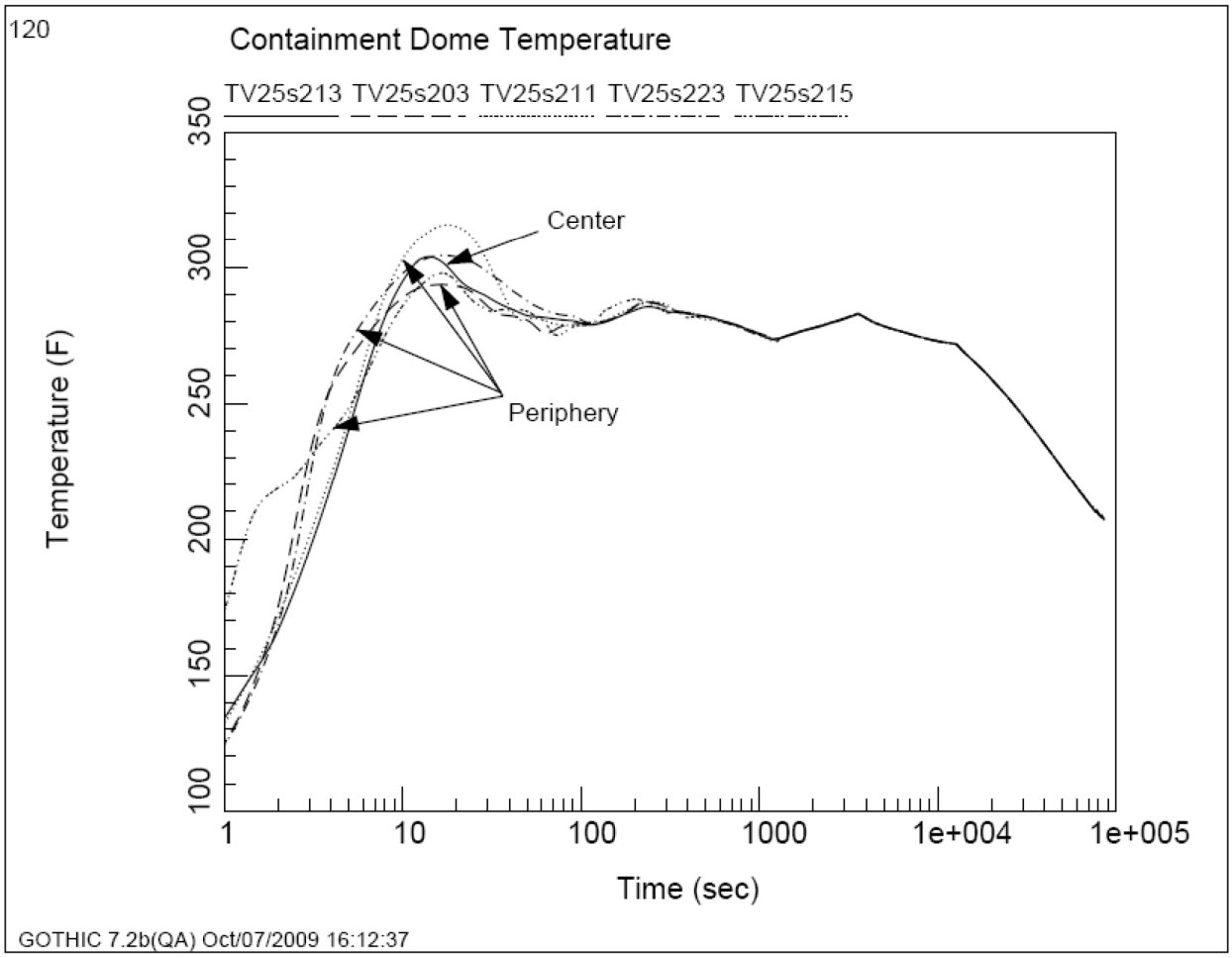

Figure 06.02.01-53–60—Temperature in the Containment Dome between the 125.95 ft and 132.00 ft Elevations

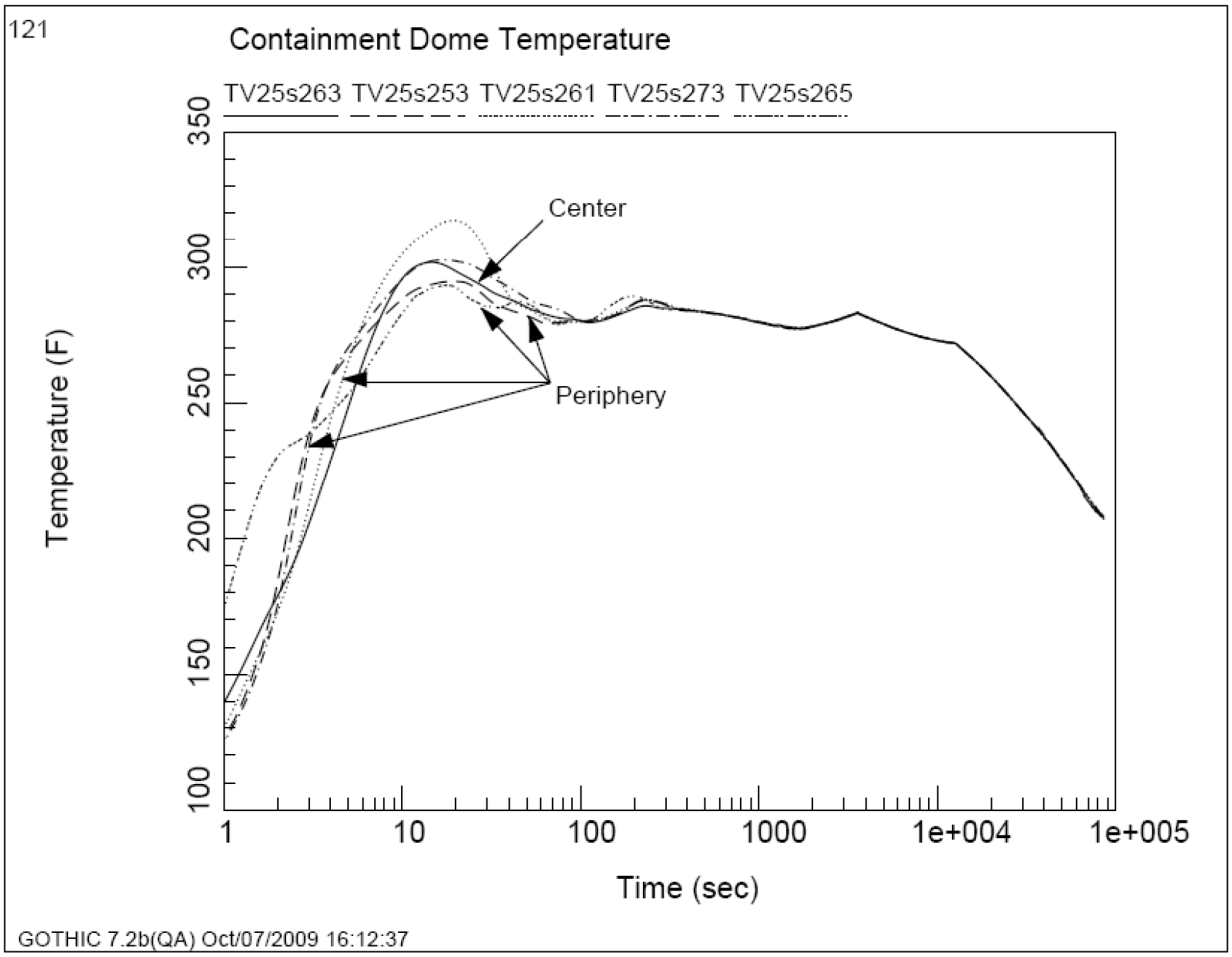

Figure 06.02.01-53–61—Temperature in the Containment Dome between the 138.05 ft and 144.10 ft Elevations

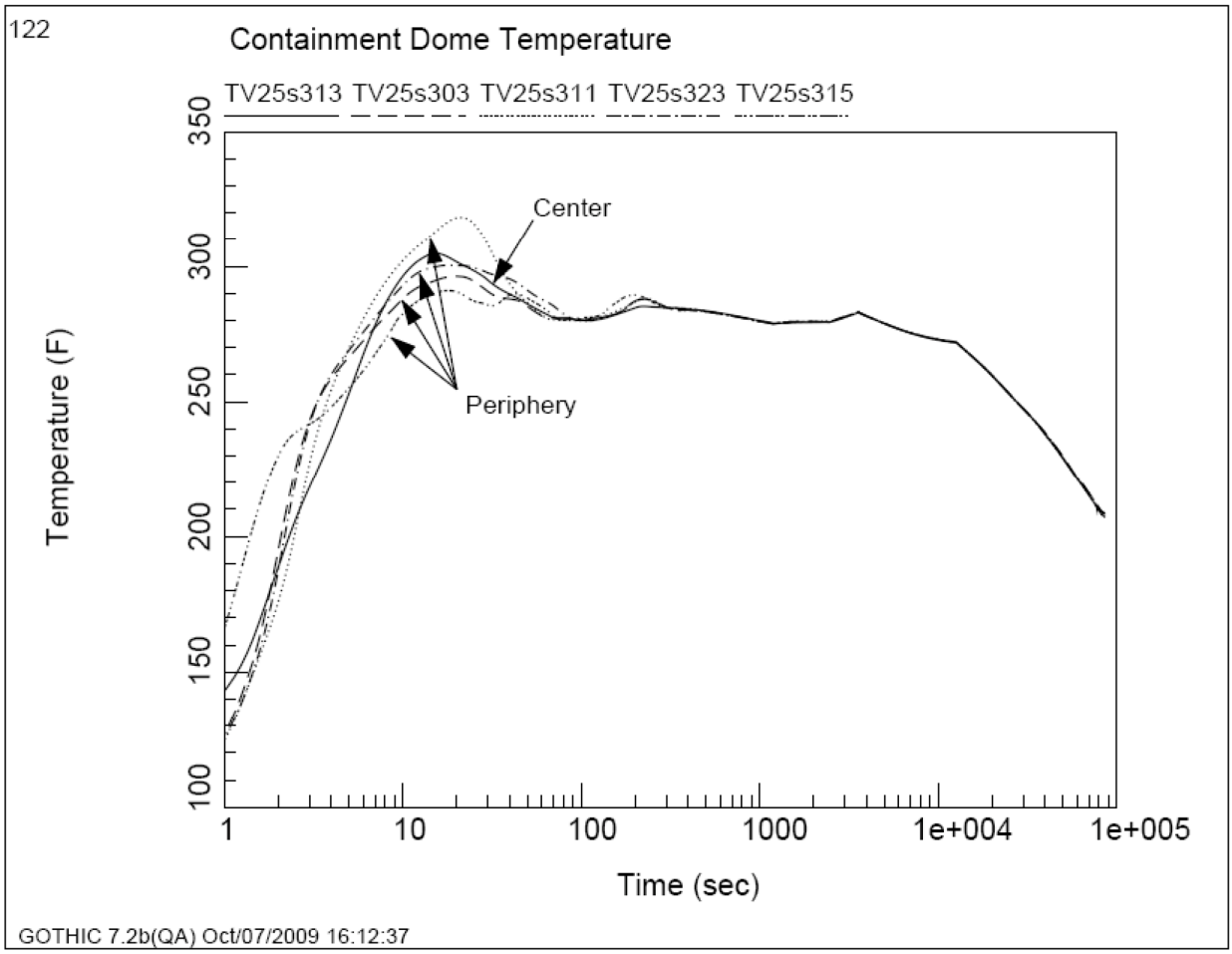

Figure 06.02.01-53–62—Temperature in the Containment Dome between the 151.12 ft and 158.14 ft Elevations

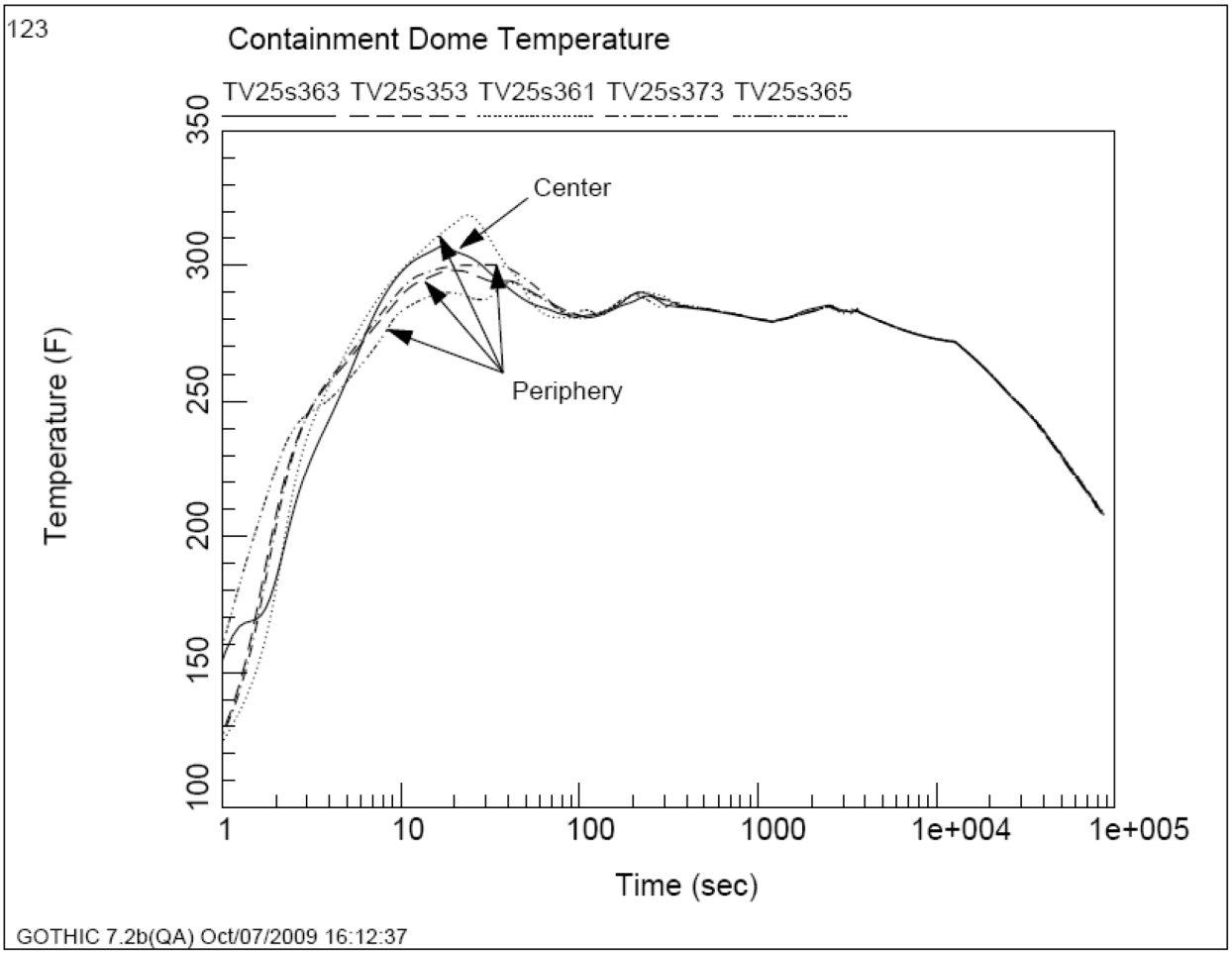

Figure 06.02.01-53–63—Temperature in the Containment Dome between the 165.16 ft and 172.99 ft Elevations

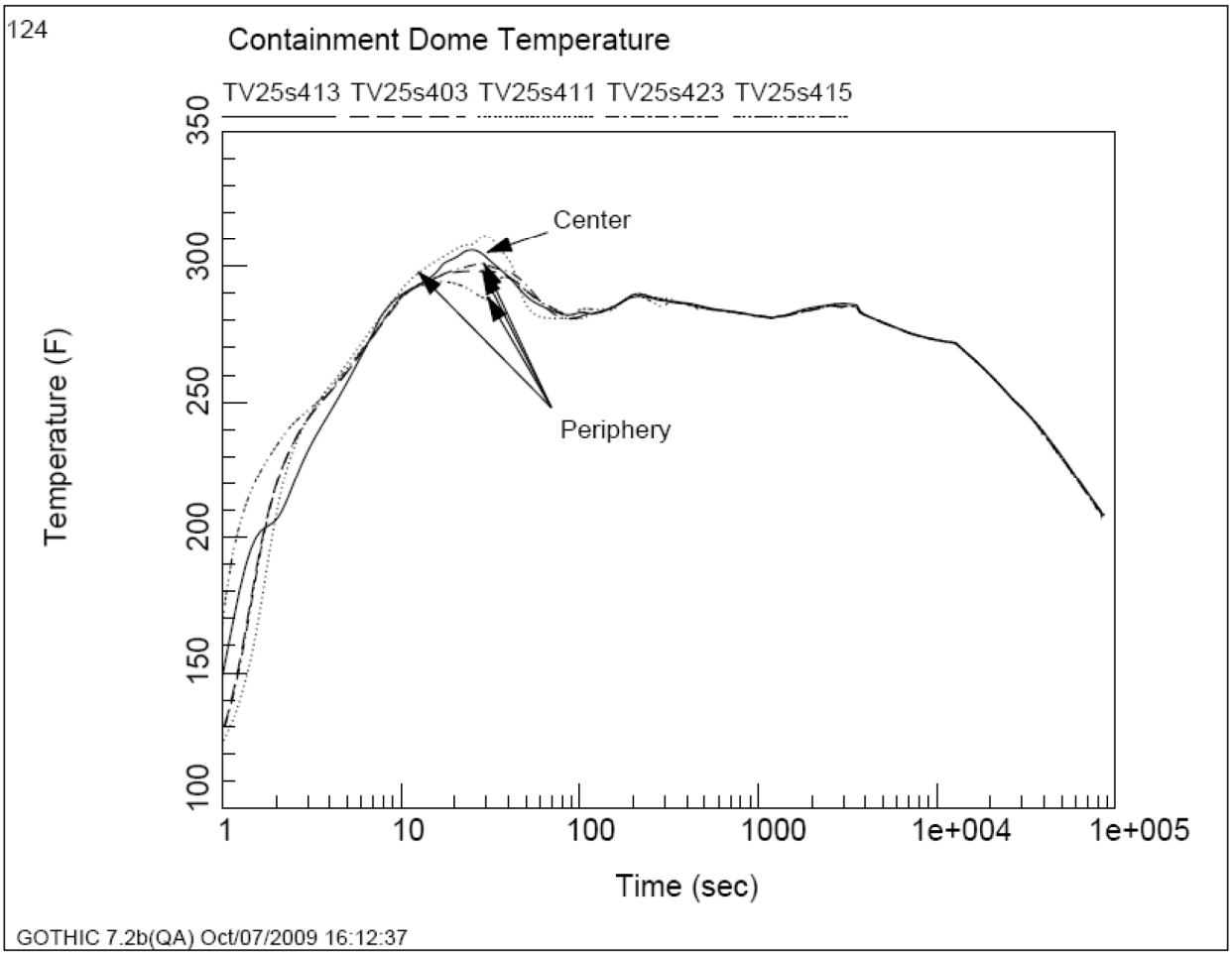

Figure 06.02.01-53–64—Temperature in the Containment Dome between the 180.82 ft and 188.65 ft Elevations

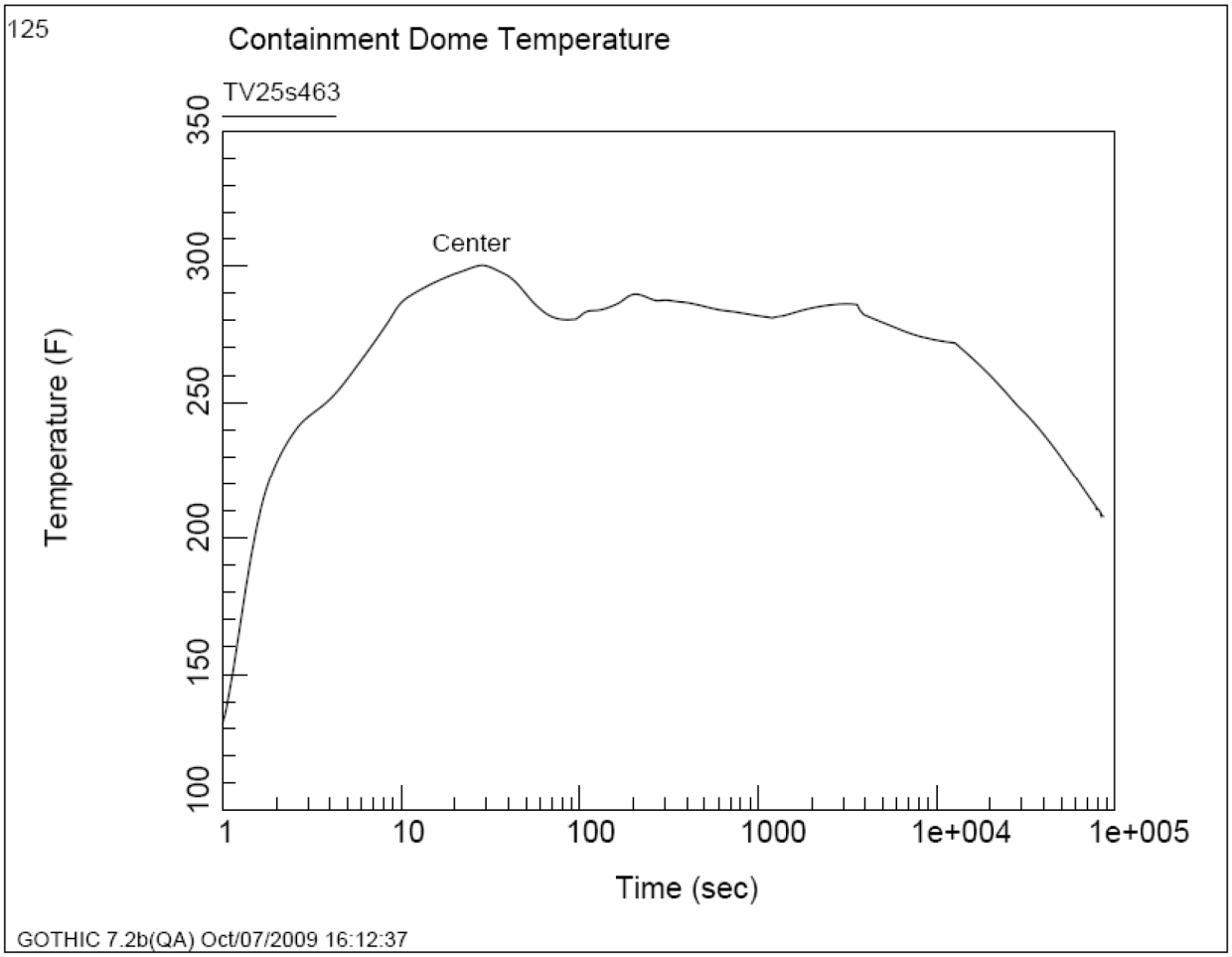

Figure 06.02.01-53–65—Temperature in the Center of the Containment Dome between the 63.98 ft and 119.90 ft Elevations

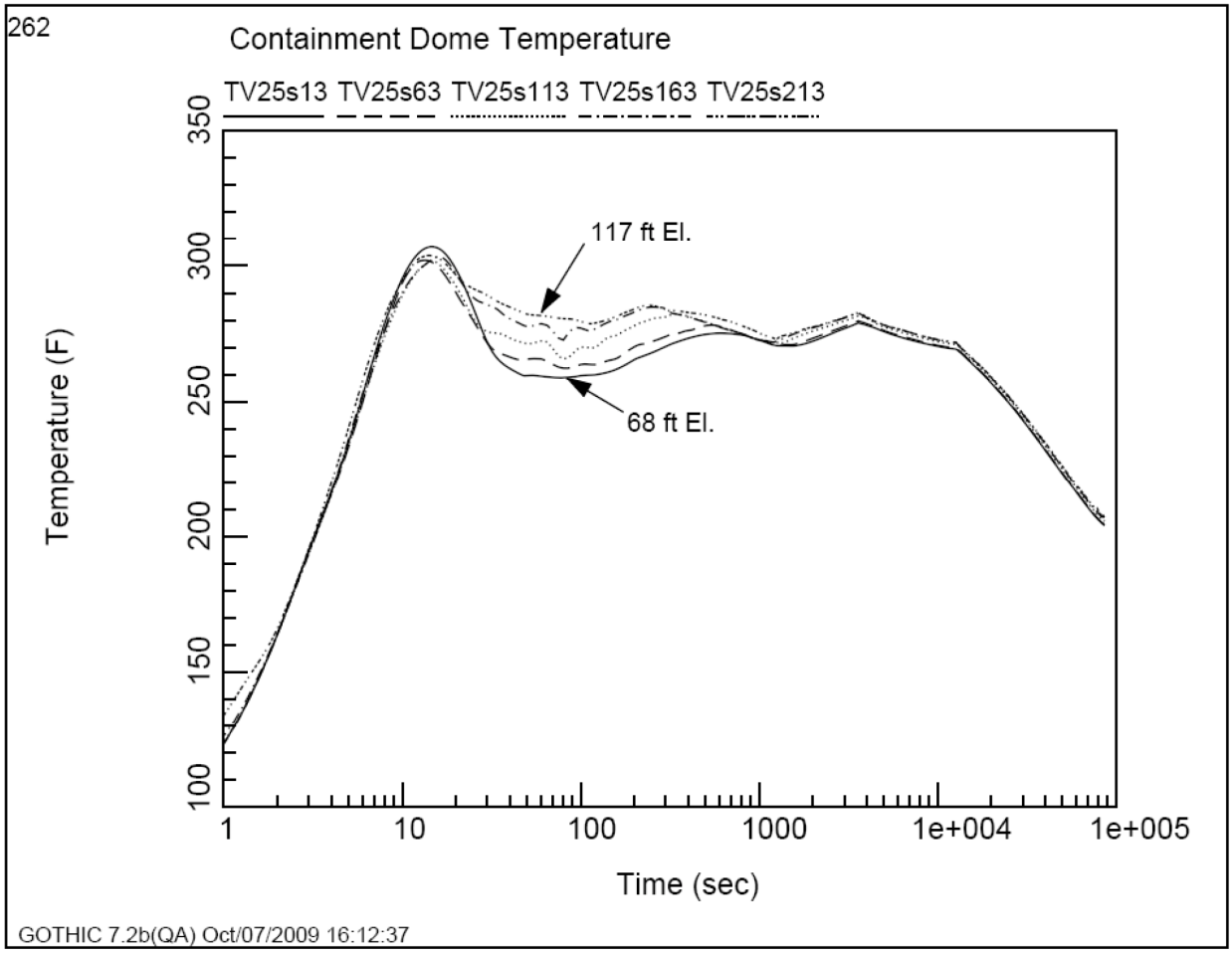

Figure 06.02.01-53–66—Temperature in the Center of the Containment Dome between the 125.95 ft and 188.65 ft Elevations

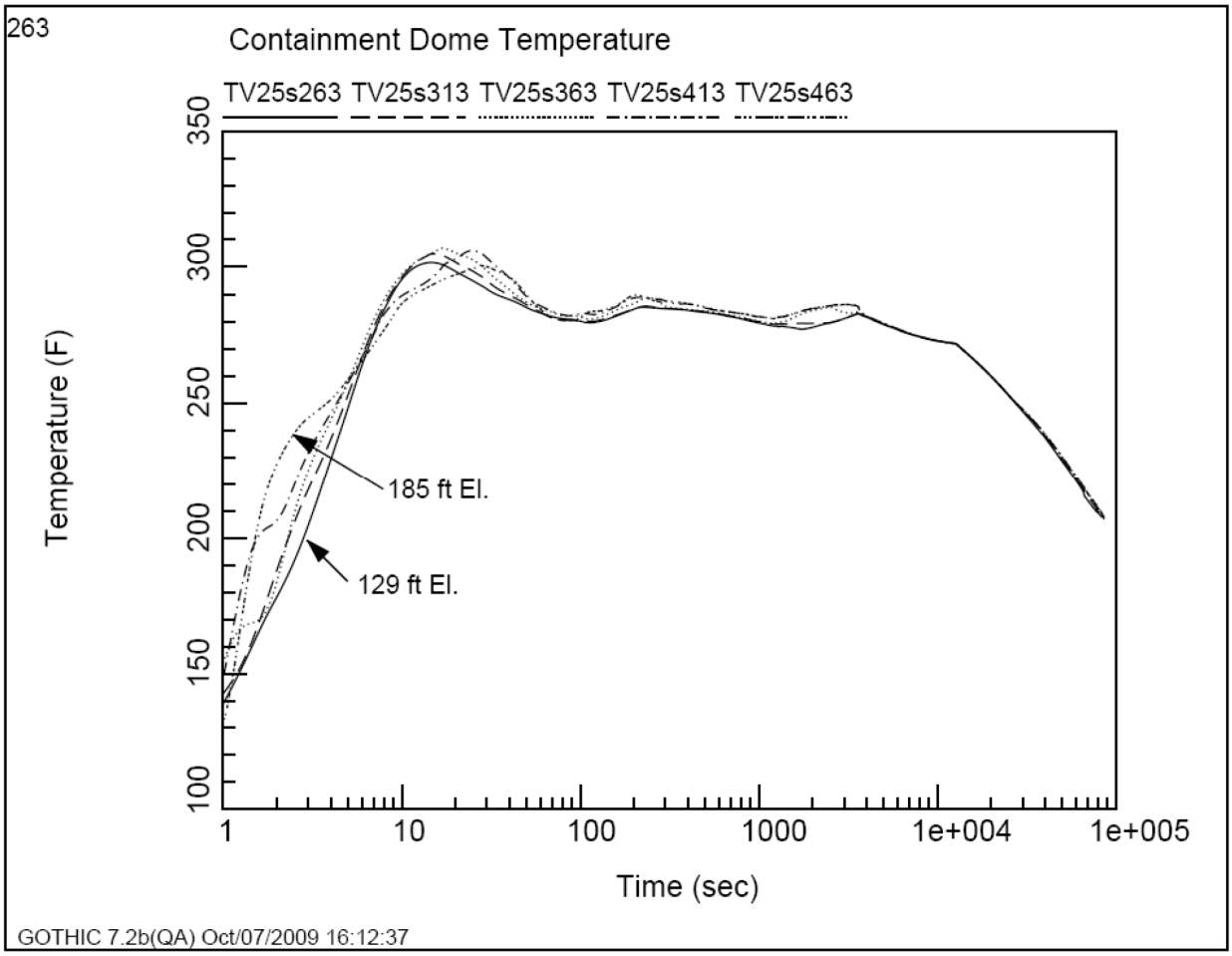

Figure 06.02.01-53–67—Pressure in the Spreading Room and IRWST

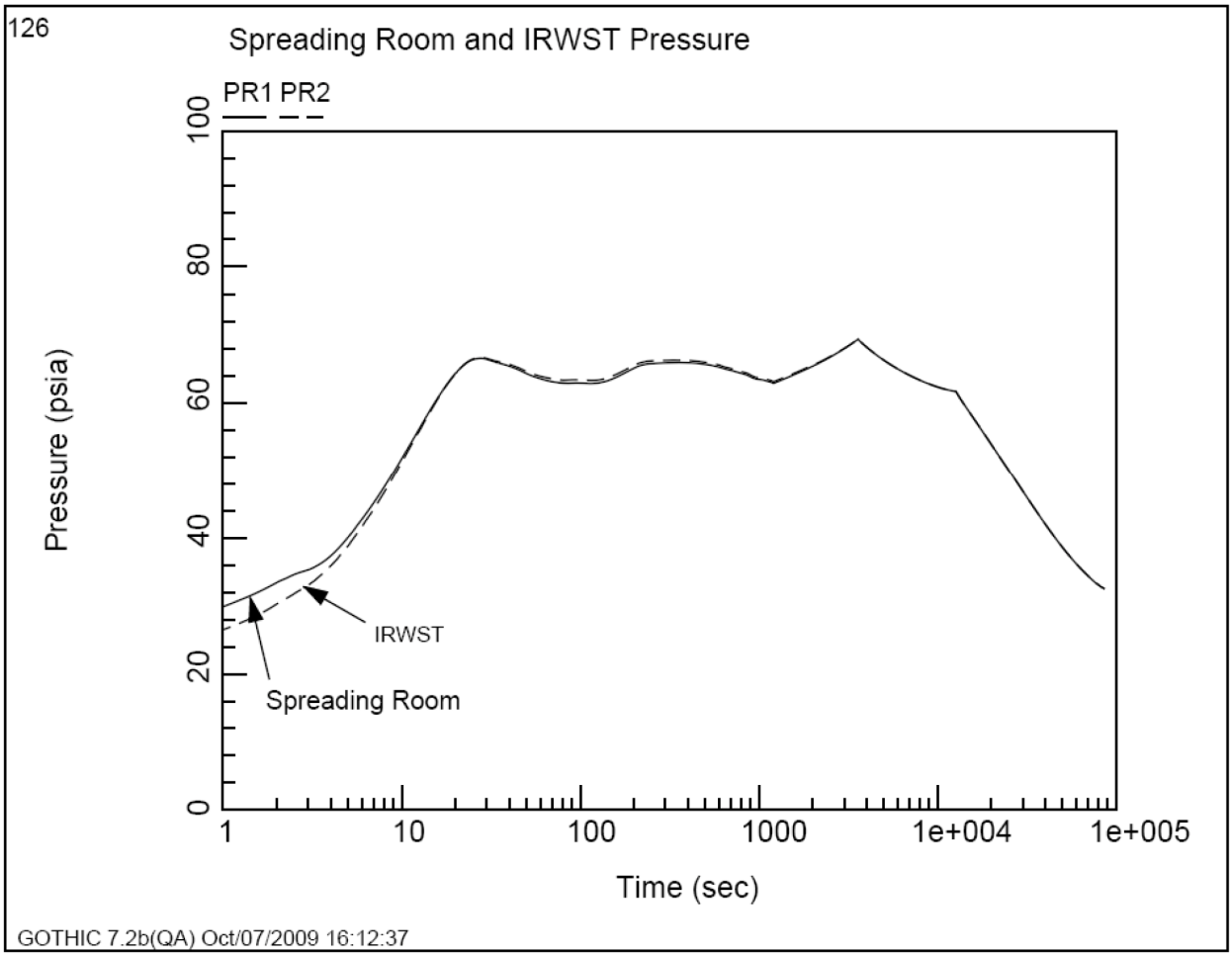

Figure 06.02.01-53–68—Pressure in the Lower Equipment Rooms

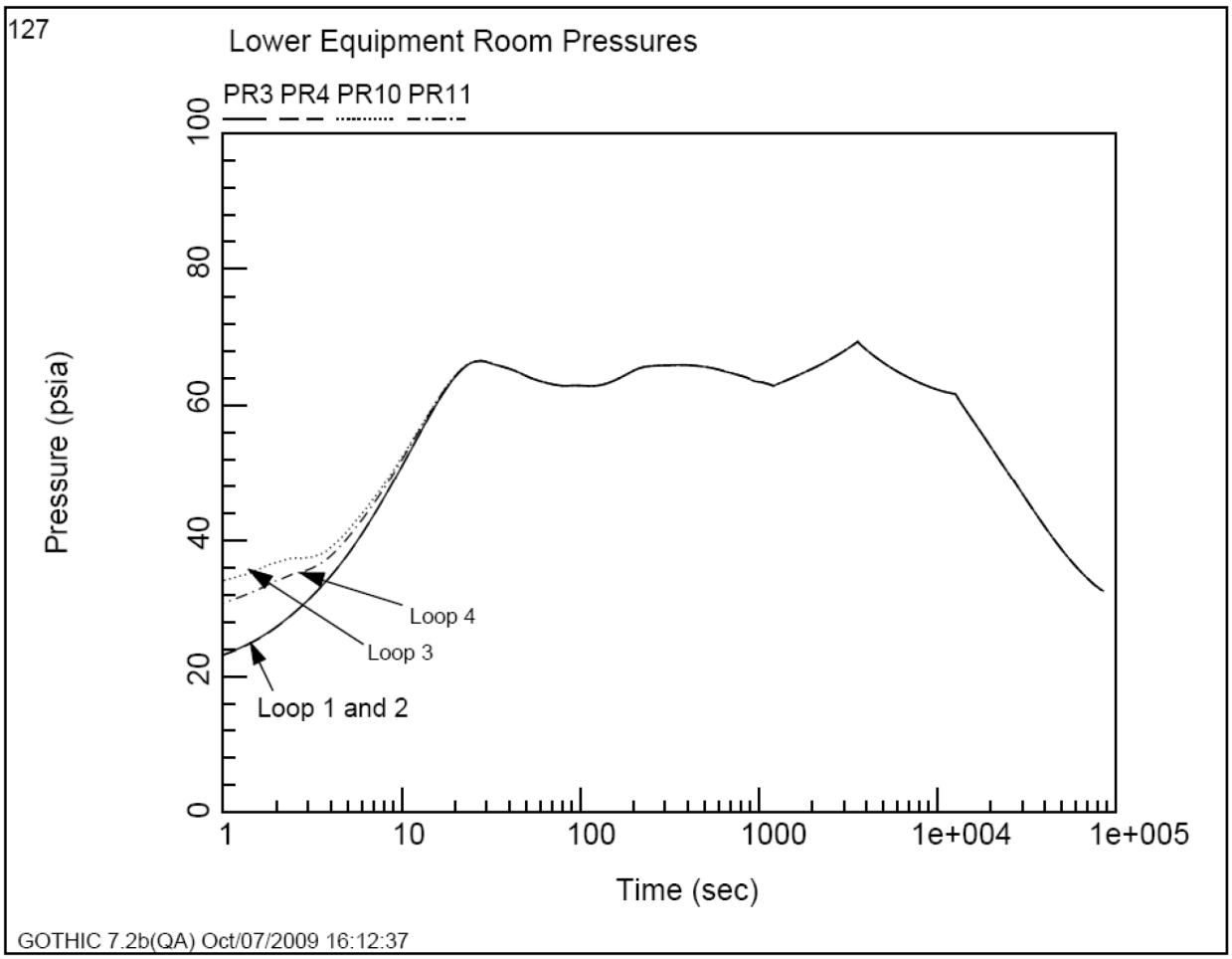

Figure 06.02.01-53–69—Pressure in the Middle Equipment Rooms

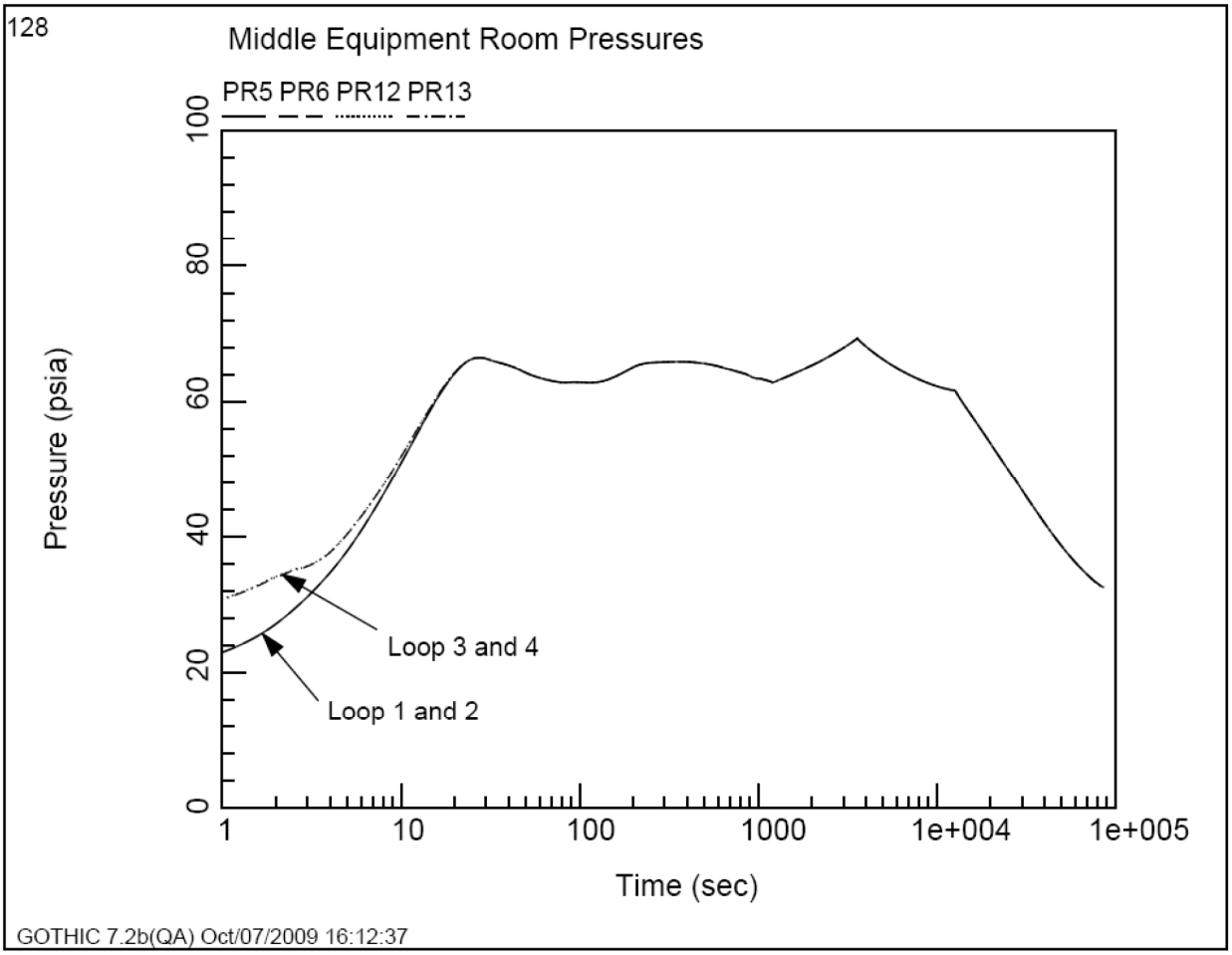

Figure 06.02.01-53–70—Pressure in the Upper Equipment Rooms

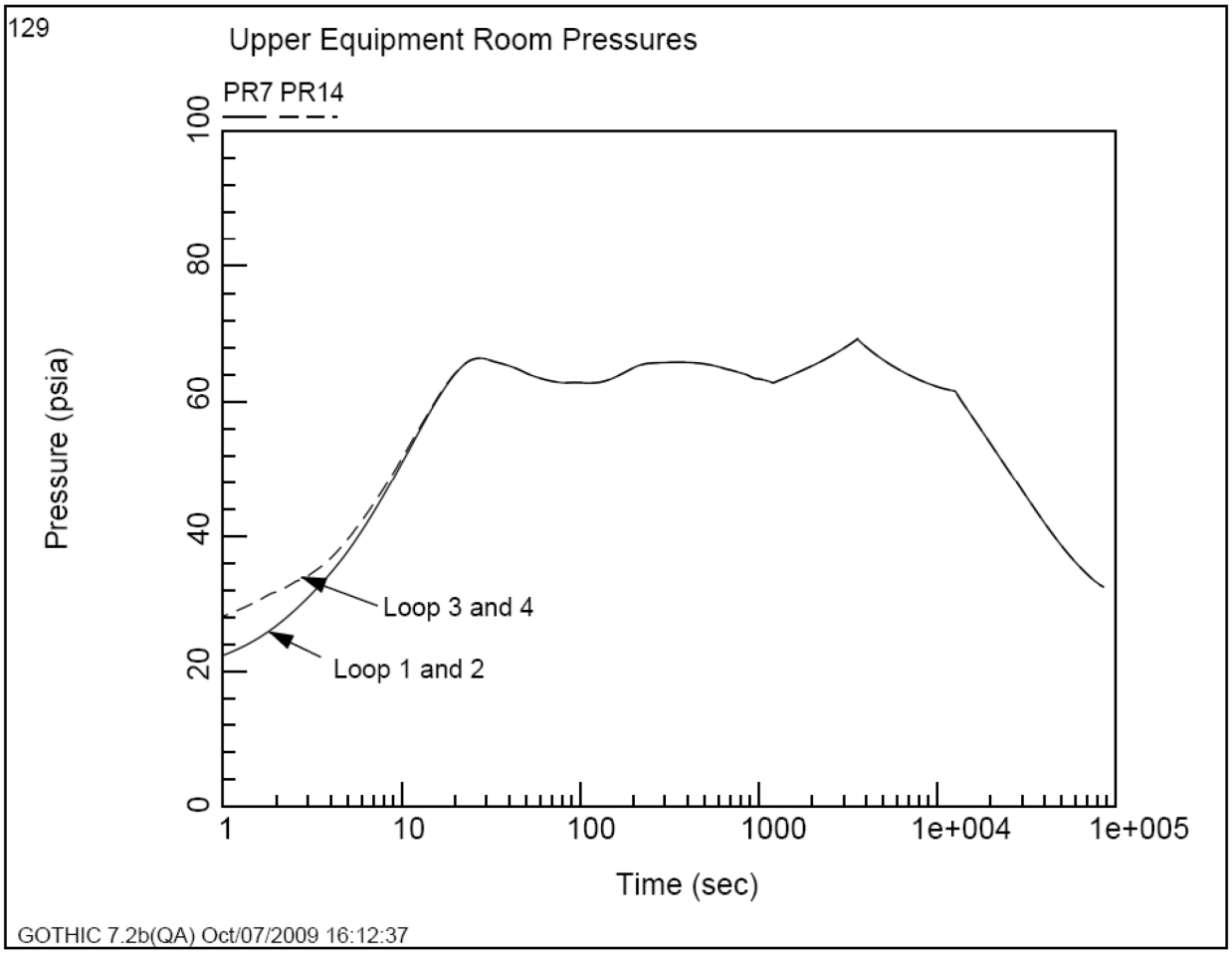

Figure 06.02.01-53–71—Pressure in the Reactor Pressure Vessel Pit and Reactor Cavity

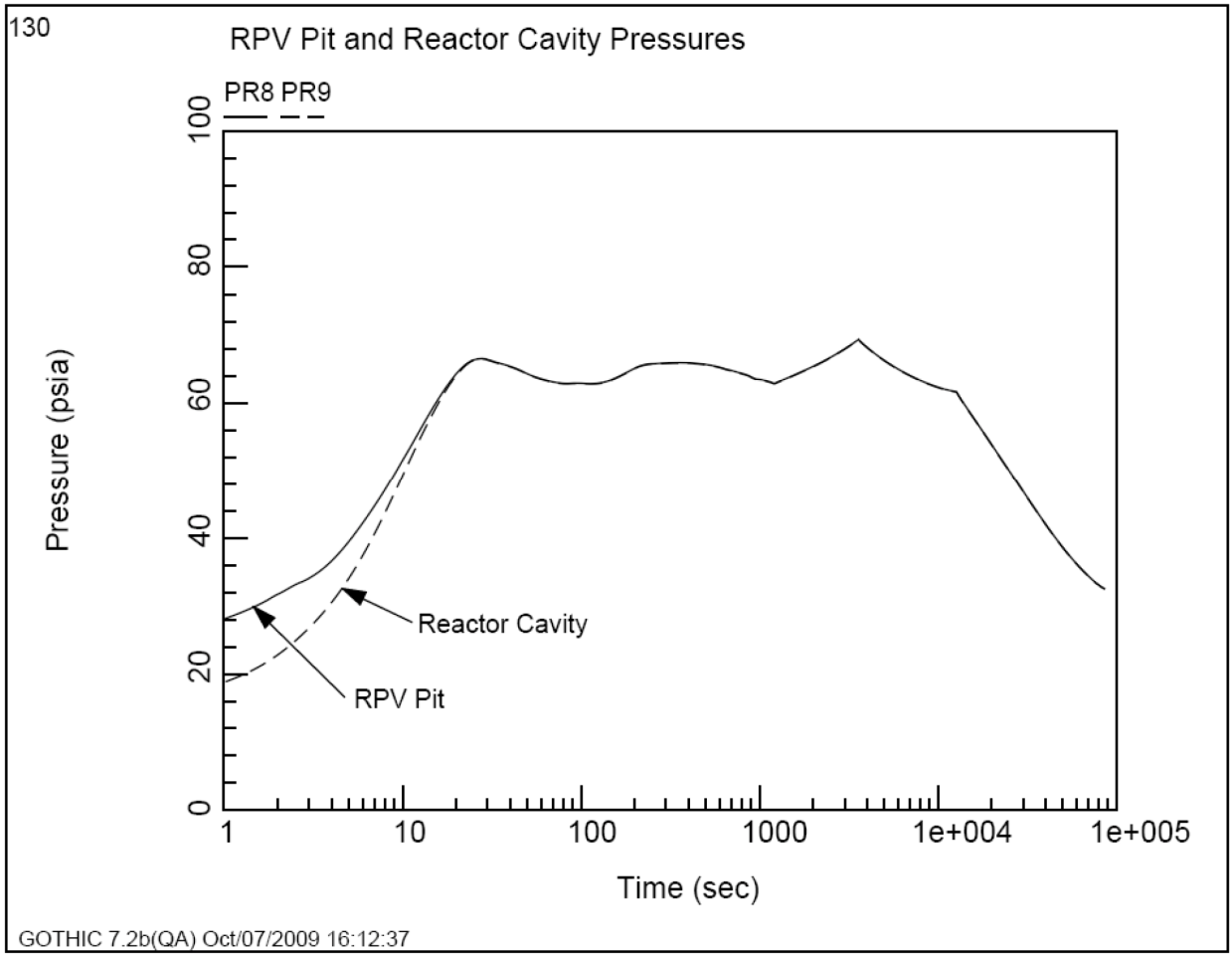

Figure 06.02.01-53–72—Pressure in the Pressurizer and Surge Line Rooms

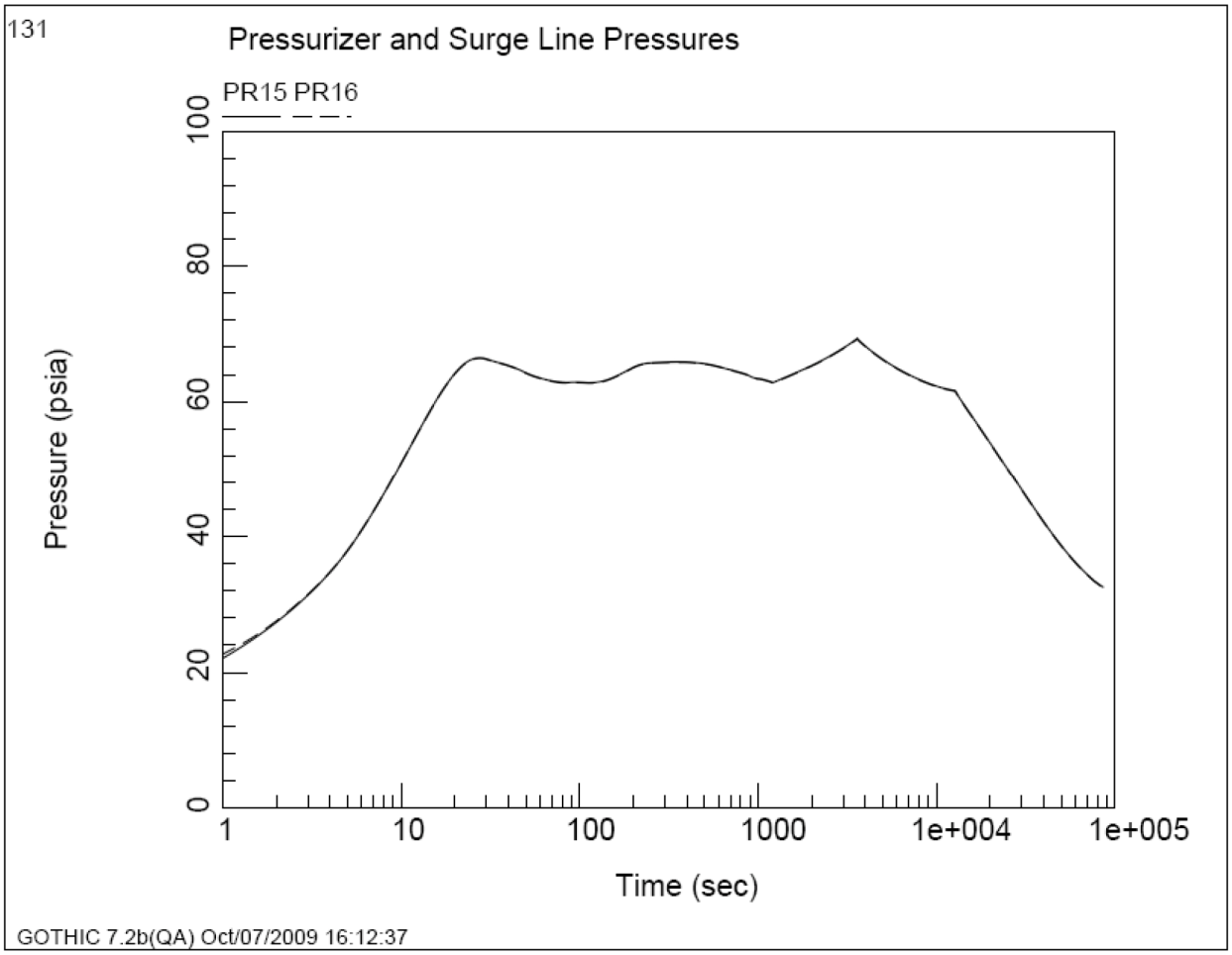

Figure 06.02.01-53–73—Pressure in the CVCS and Steam Generator Blowdown Heat Exchanger Rooms

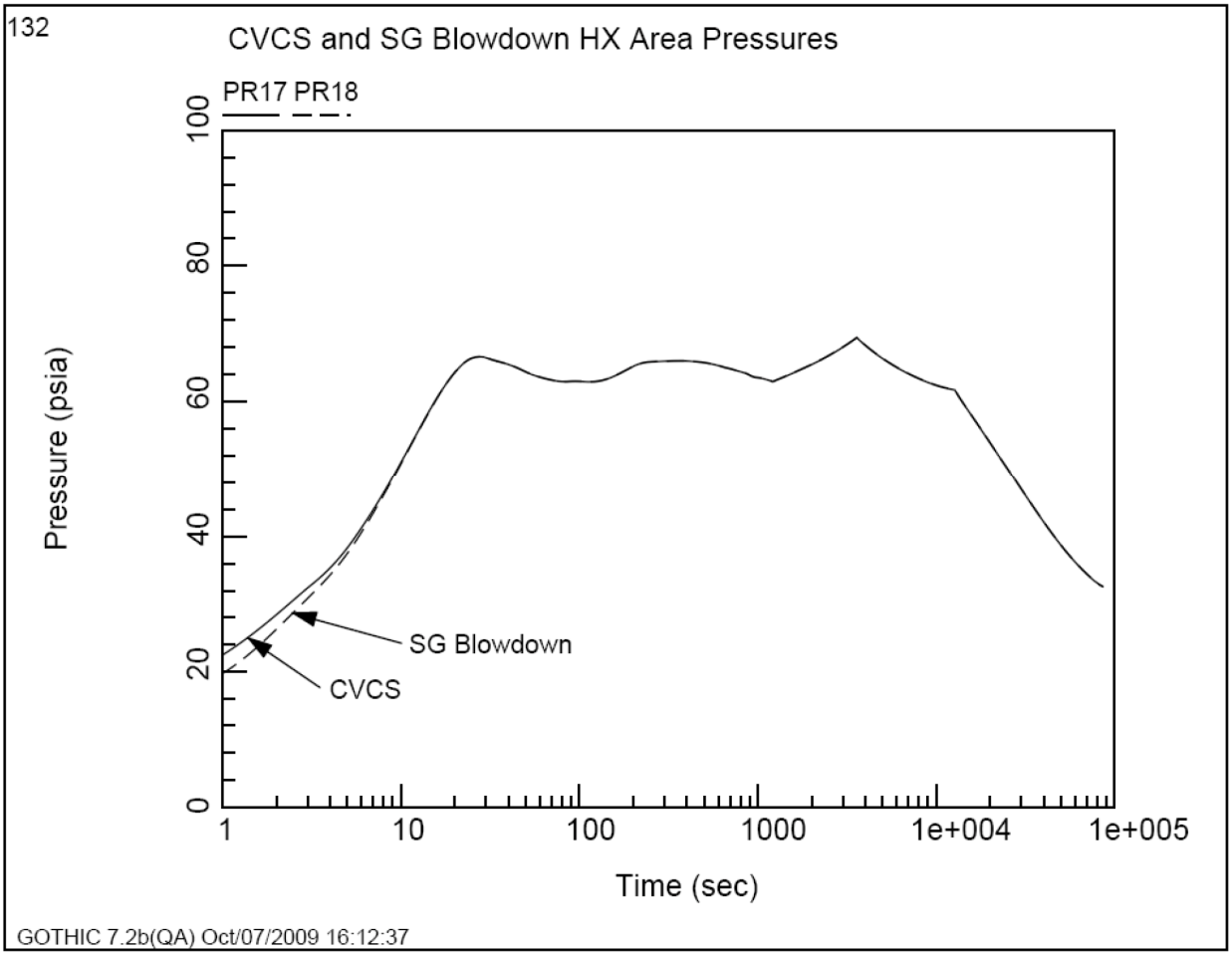

Figure 06.02.01-53–74—Pressure in the Lower Annulus Rooms

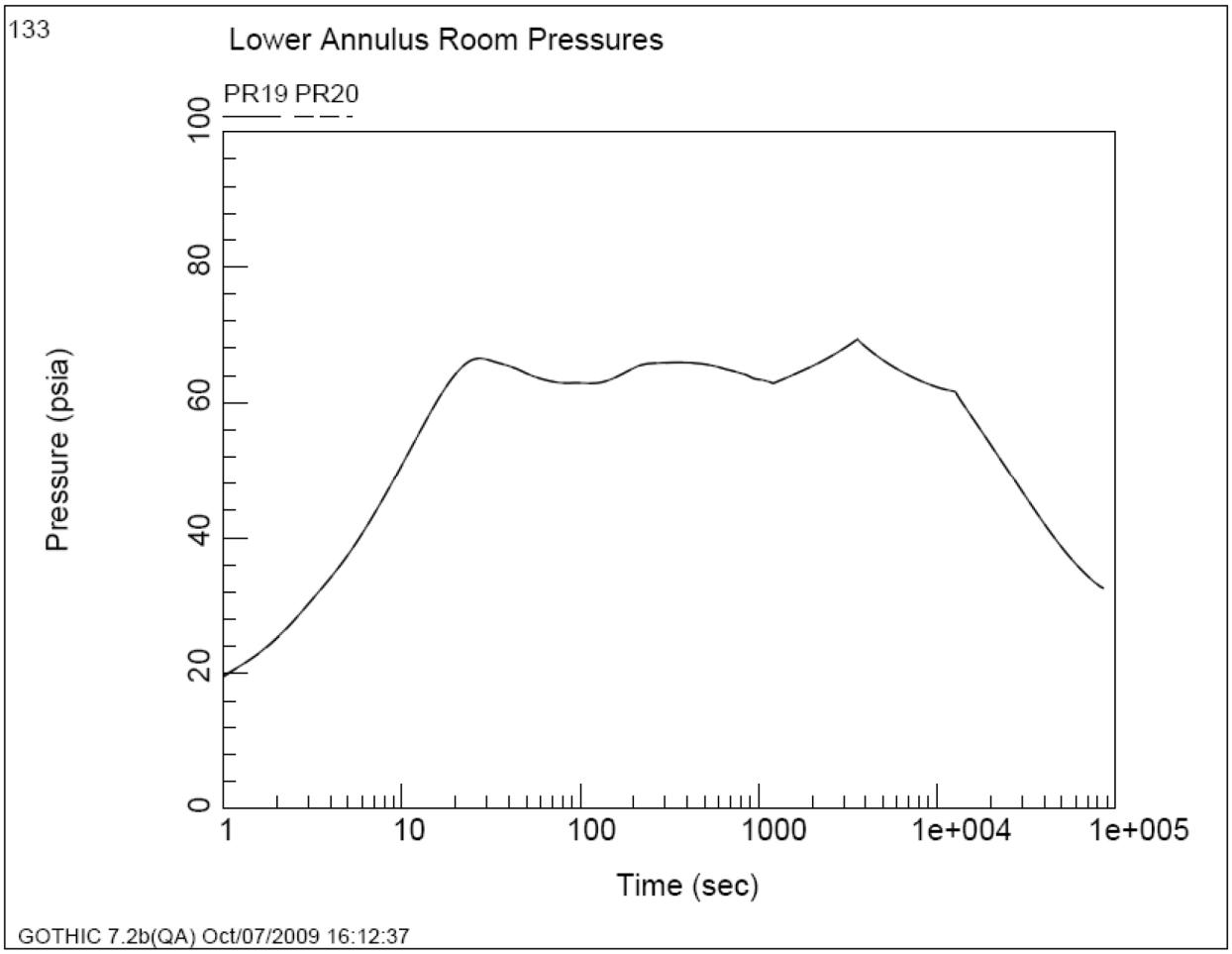

Figure 06.02.01-53–75—Pressure in the Middle Annulus Rooms

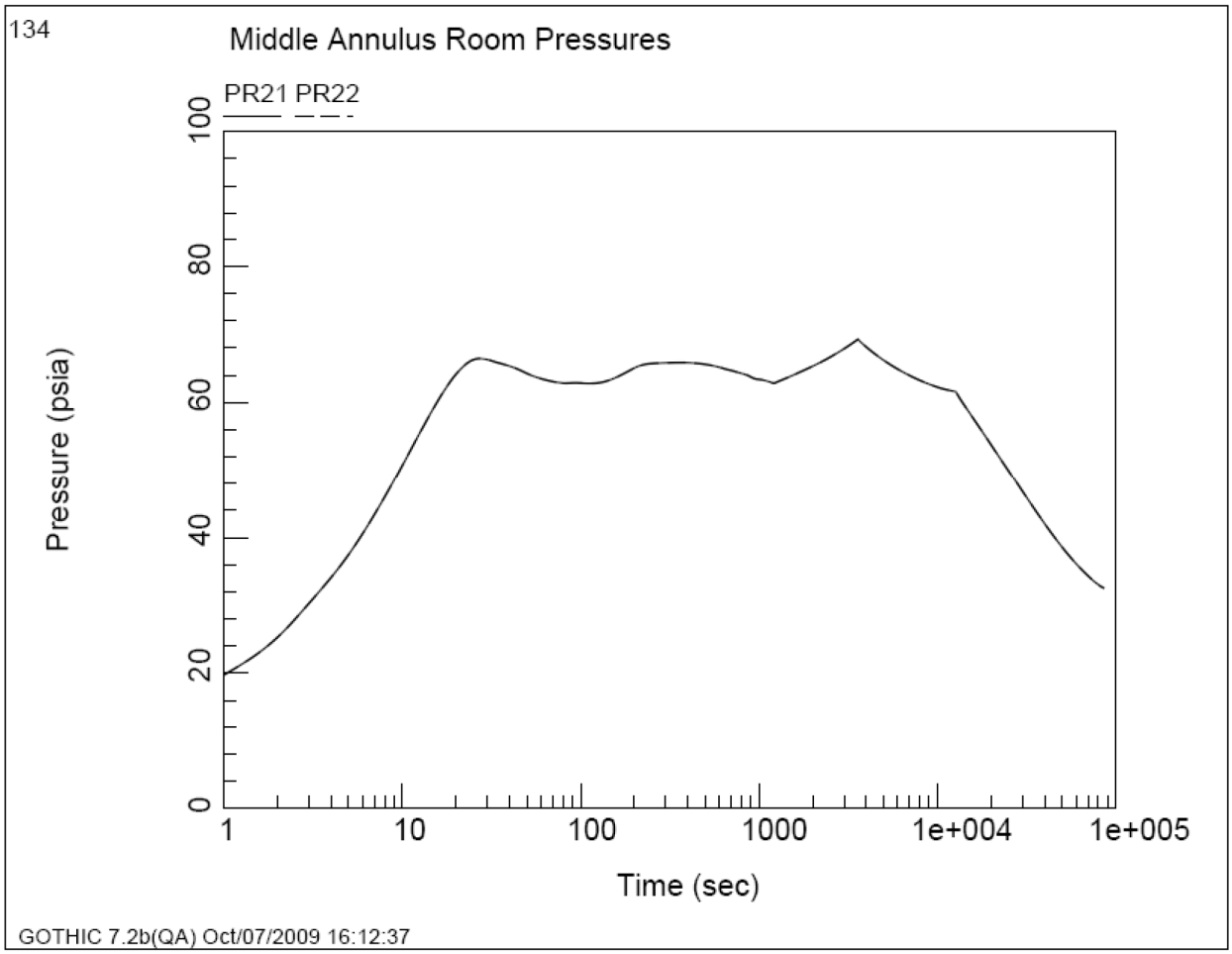

Figure 06.02.01-53–76—Pressure in the Upper Annulus Rooms

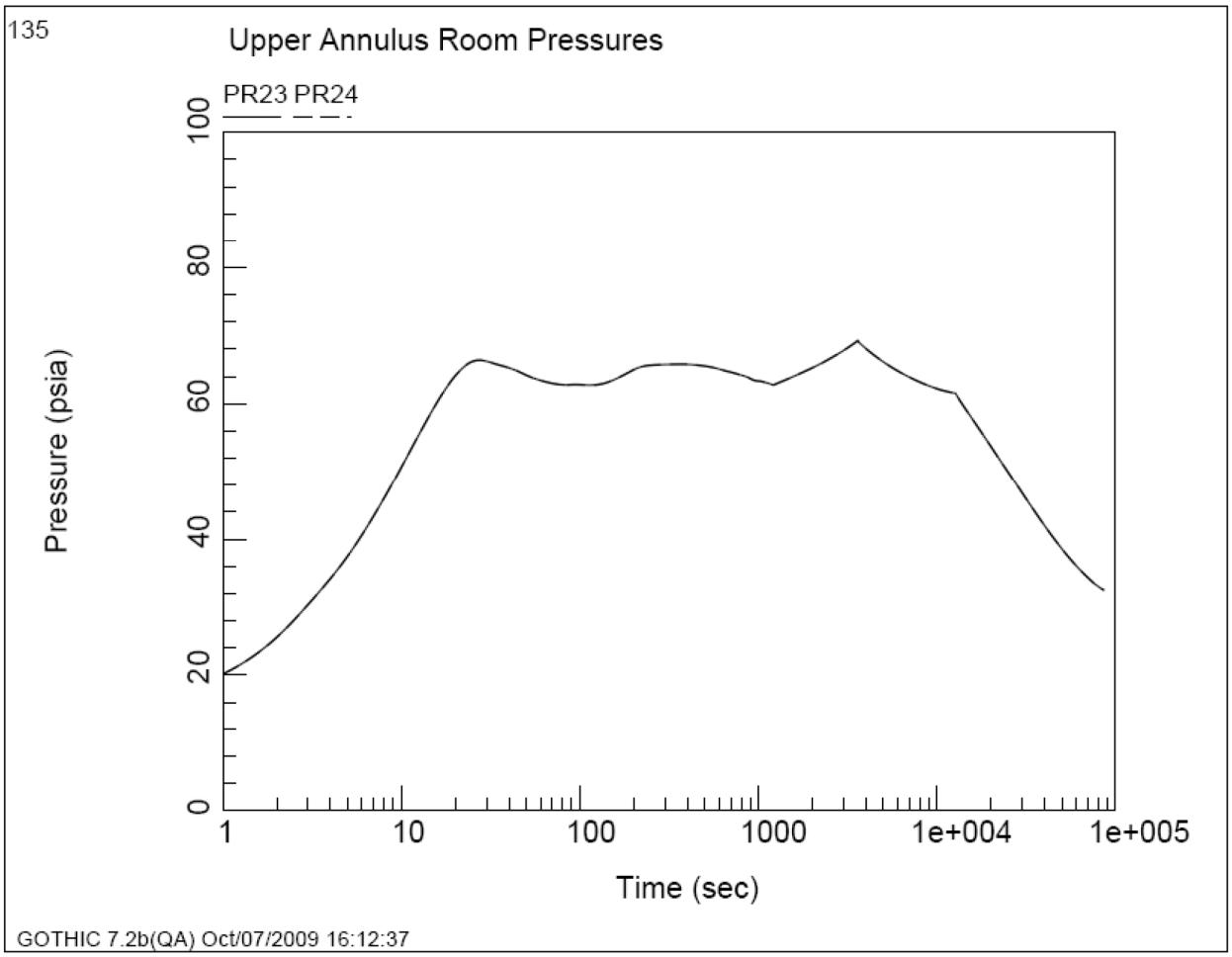

Figure 06.02.01-53–77—Pressure in the Access and Hot Piping Penetration Rooms

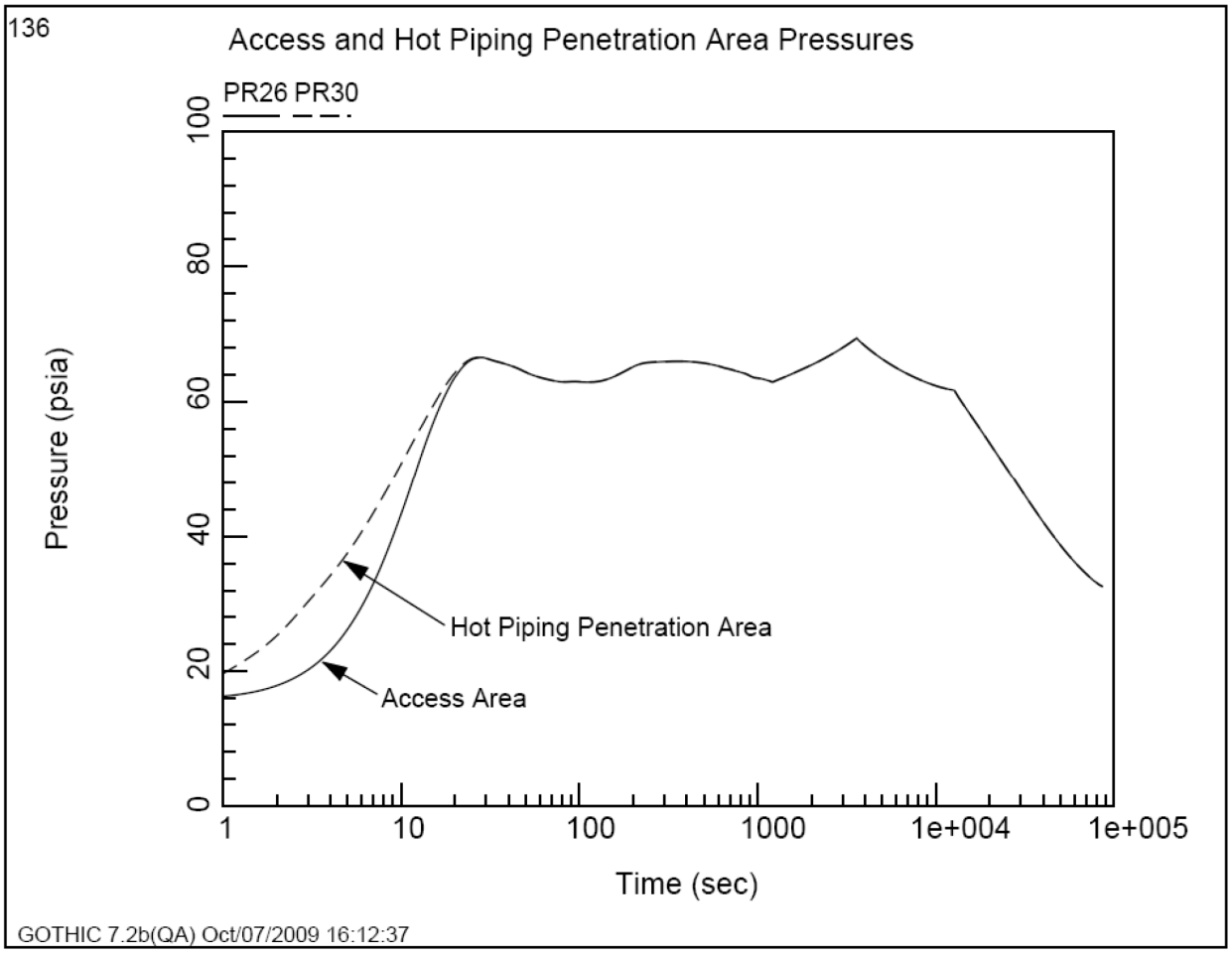

Figure 06.02.01-53–78—Pressure in the North and South Staircases and in the Elevator

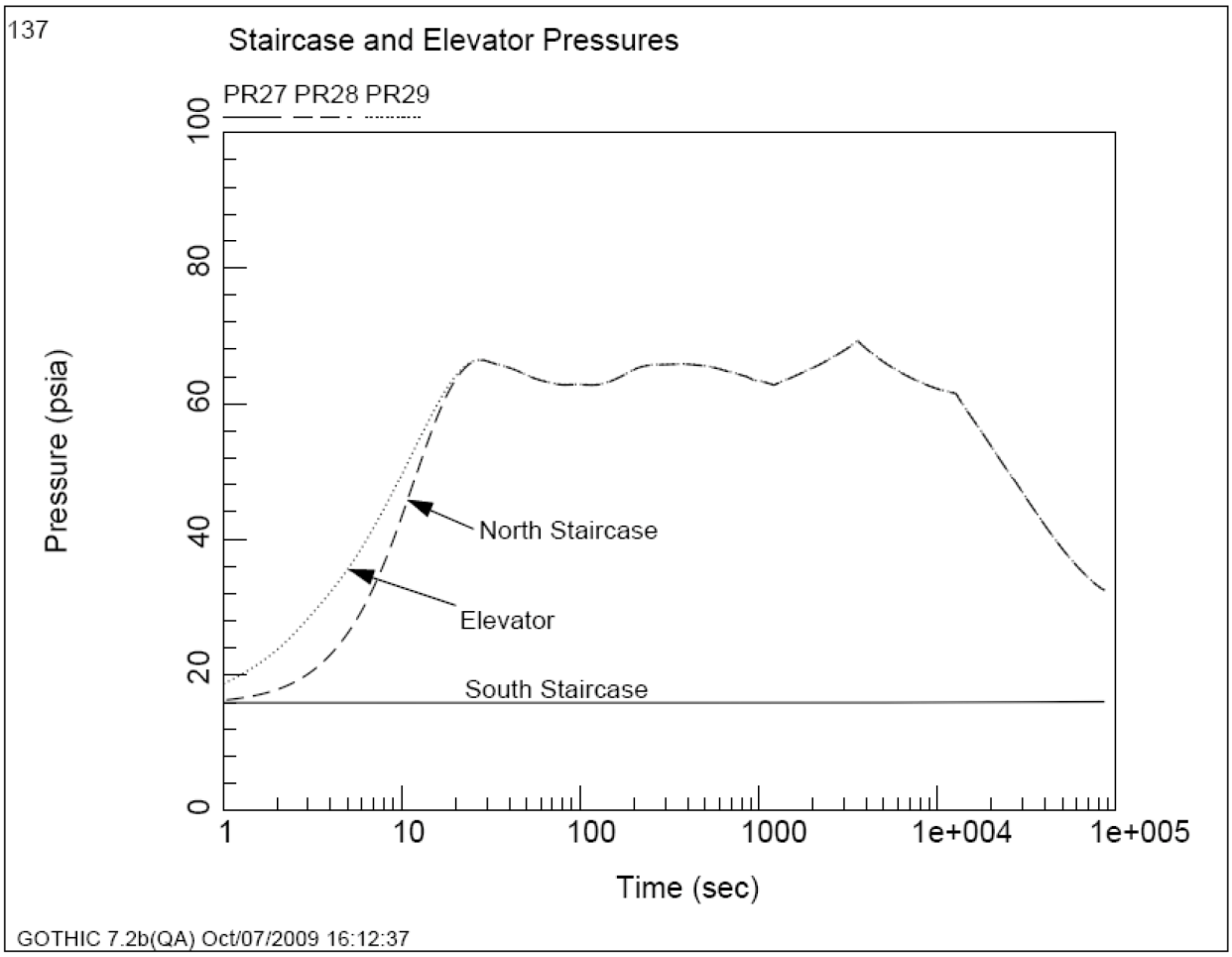

Figure 06.02.01-53–79—Liquid Volume Fraction in the Spreading Room and IRWST

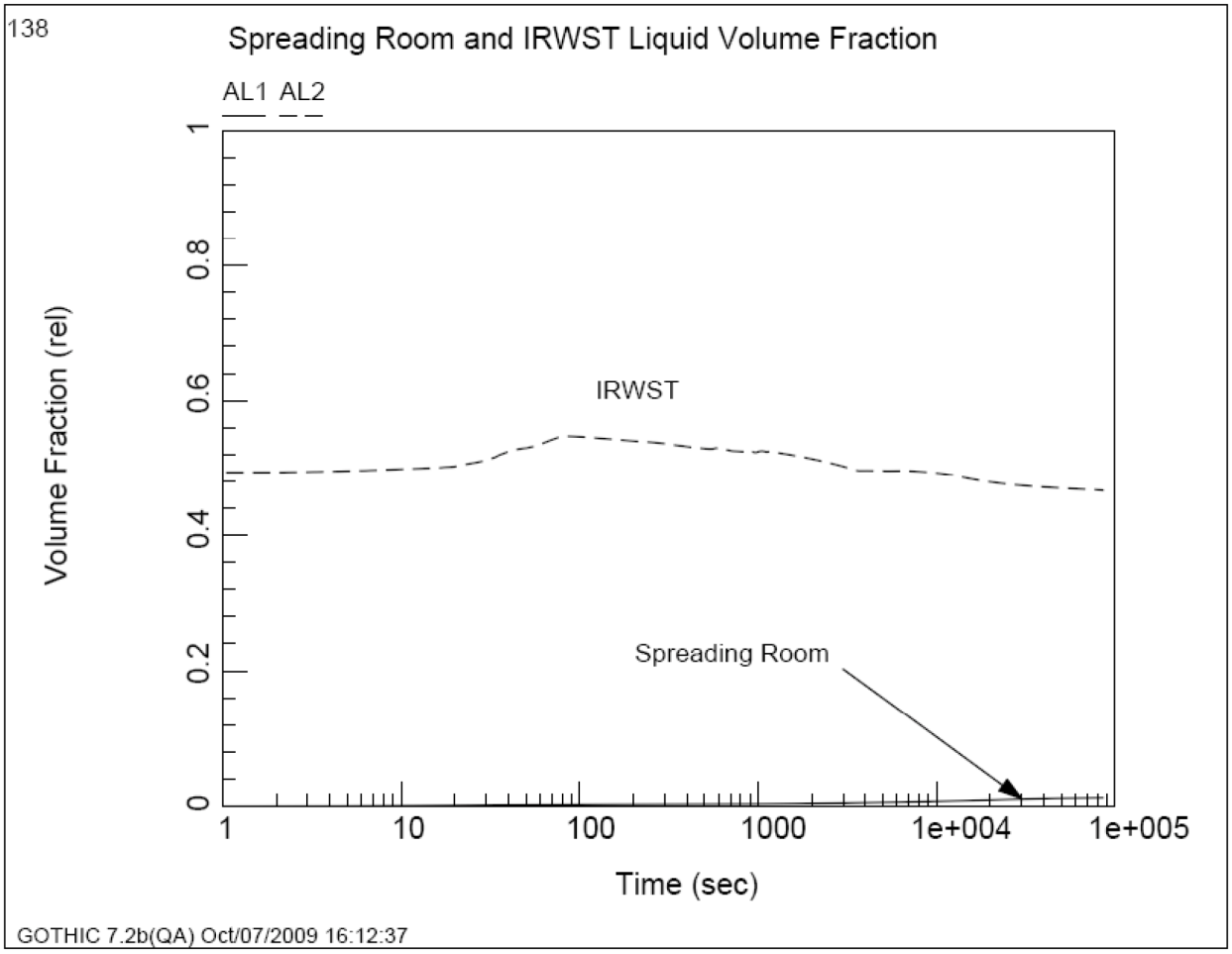

Figure 06.02.01-53–80—Liquid Volume Fraction in the Lower Equipment Rooms

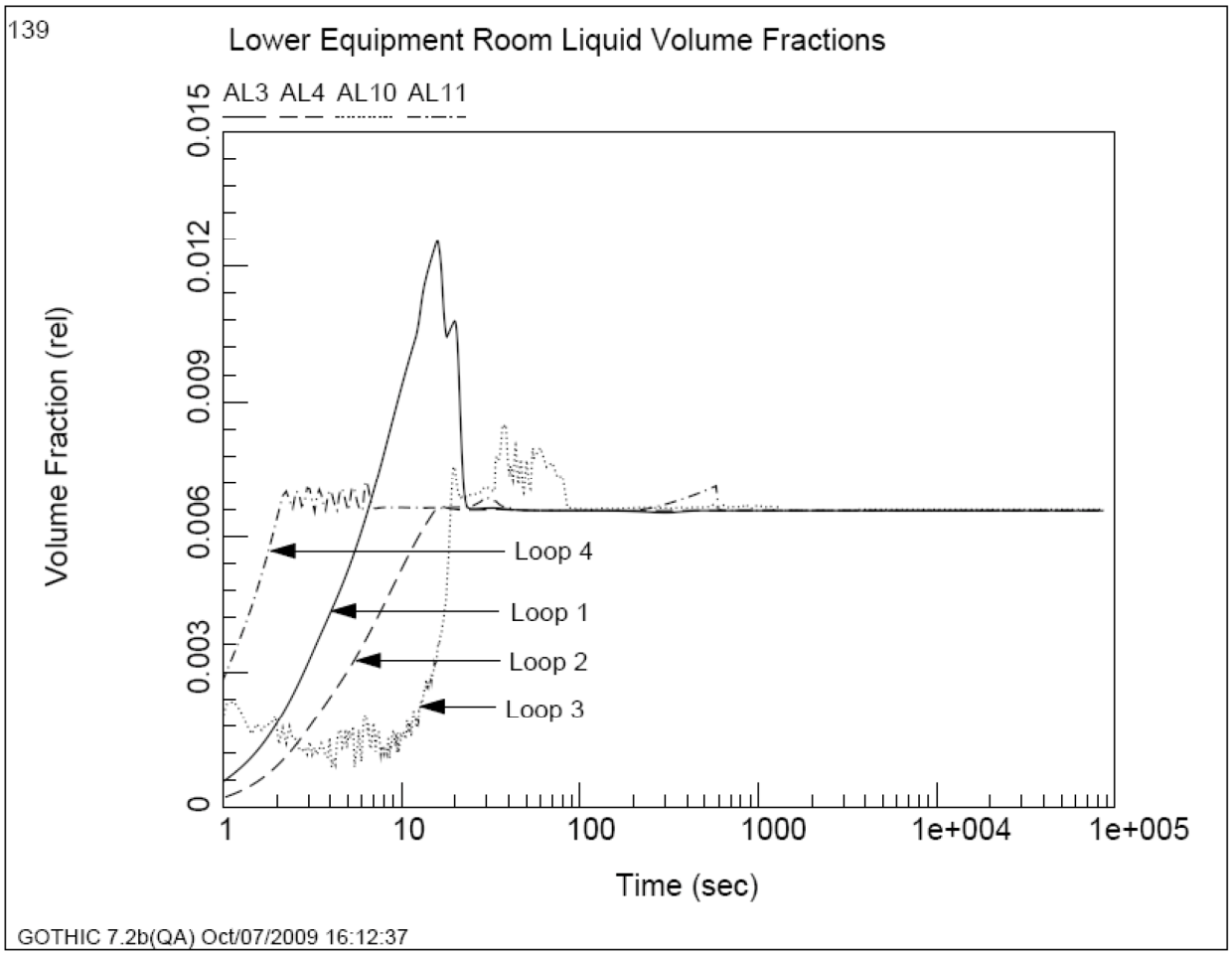

Figure 06.02.01-53–81—Liquid Volume Fraction in the Middle Equipment Rooms

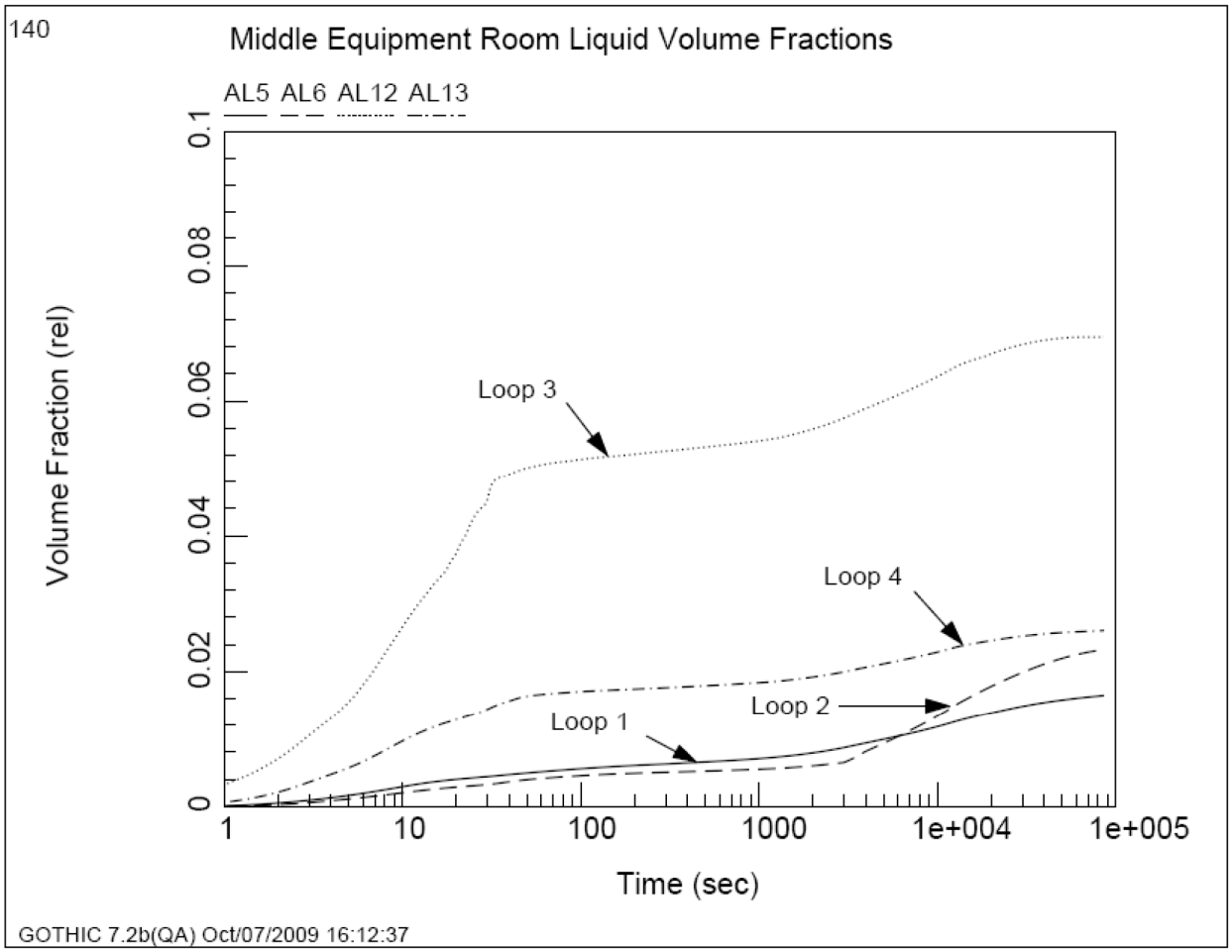

Figure 06.02.01-53–82—Liquid Volume Fraction in the Upper Equipment Rooms

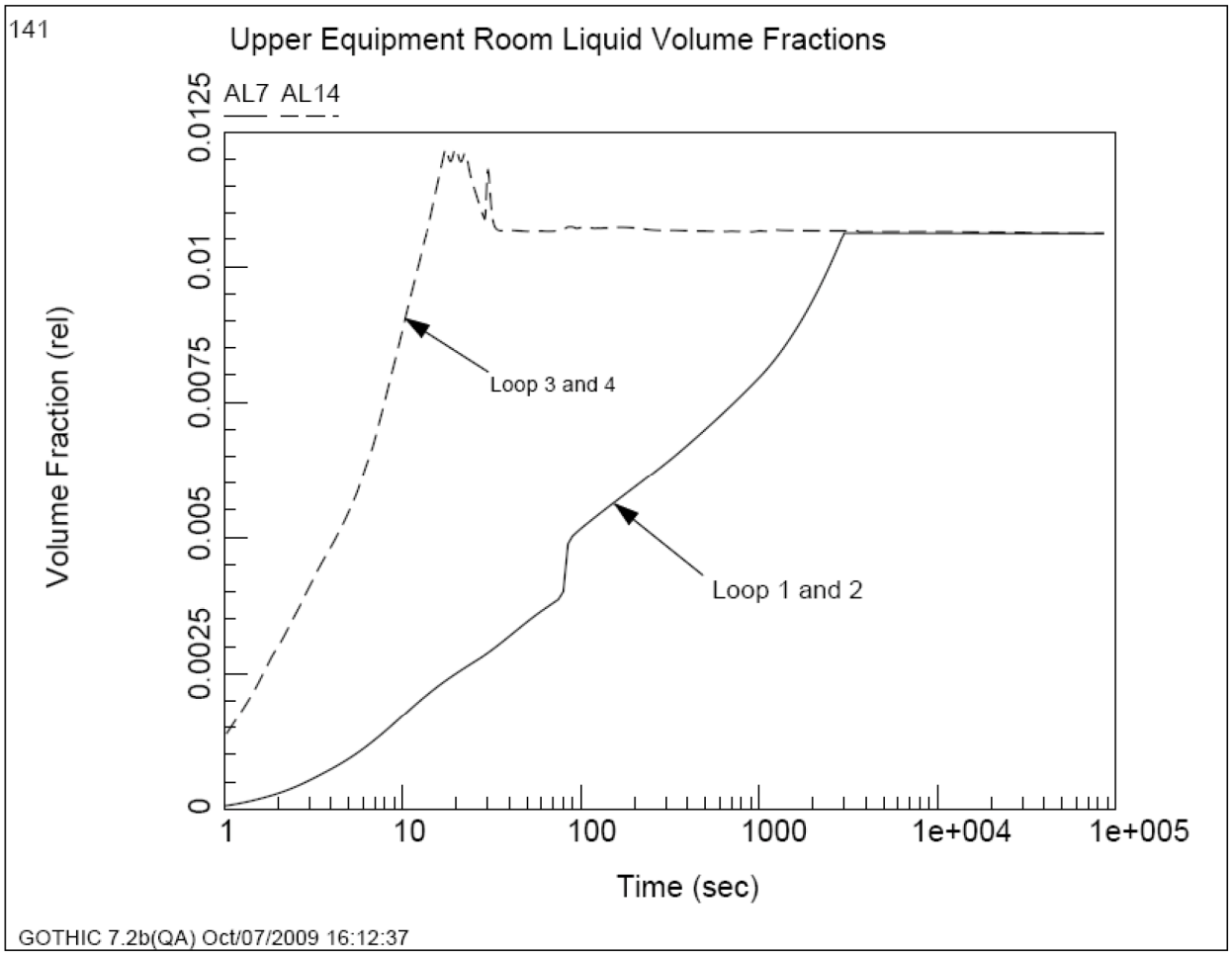

Figure 06.02.01-53–83—Liquid Volume Fraction in the Reactor Pressure Vessel Pit and Reactor Cavity

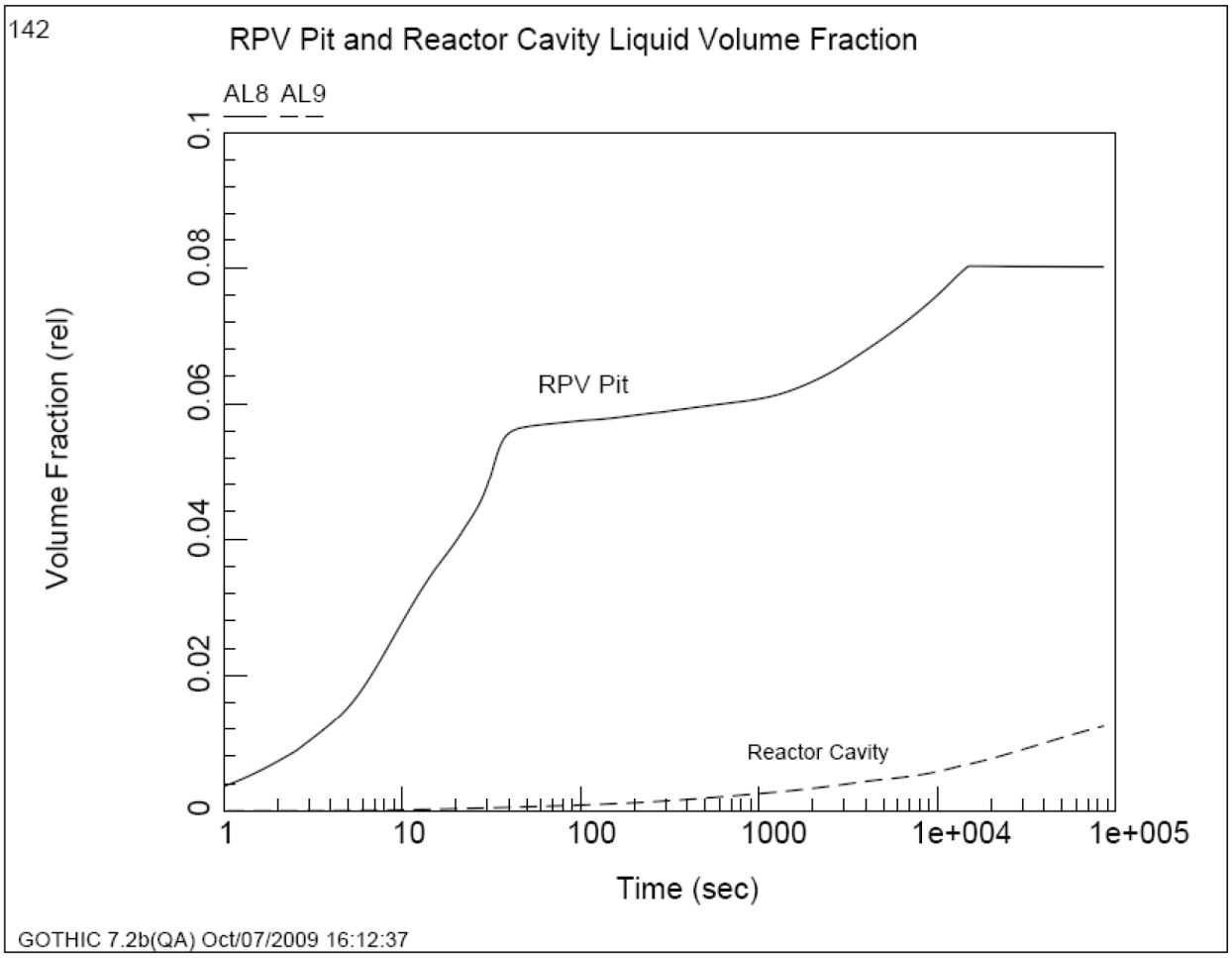

Figure 06.02.01-53–84—Liquid Volume Fraction in the Pressurizer and Surge Line Rooms

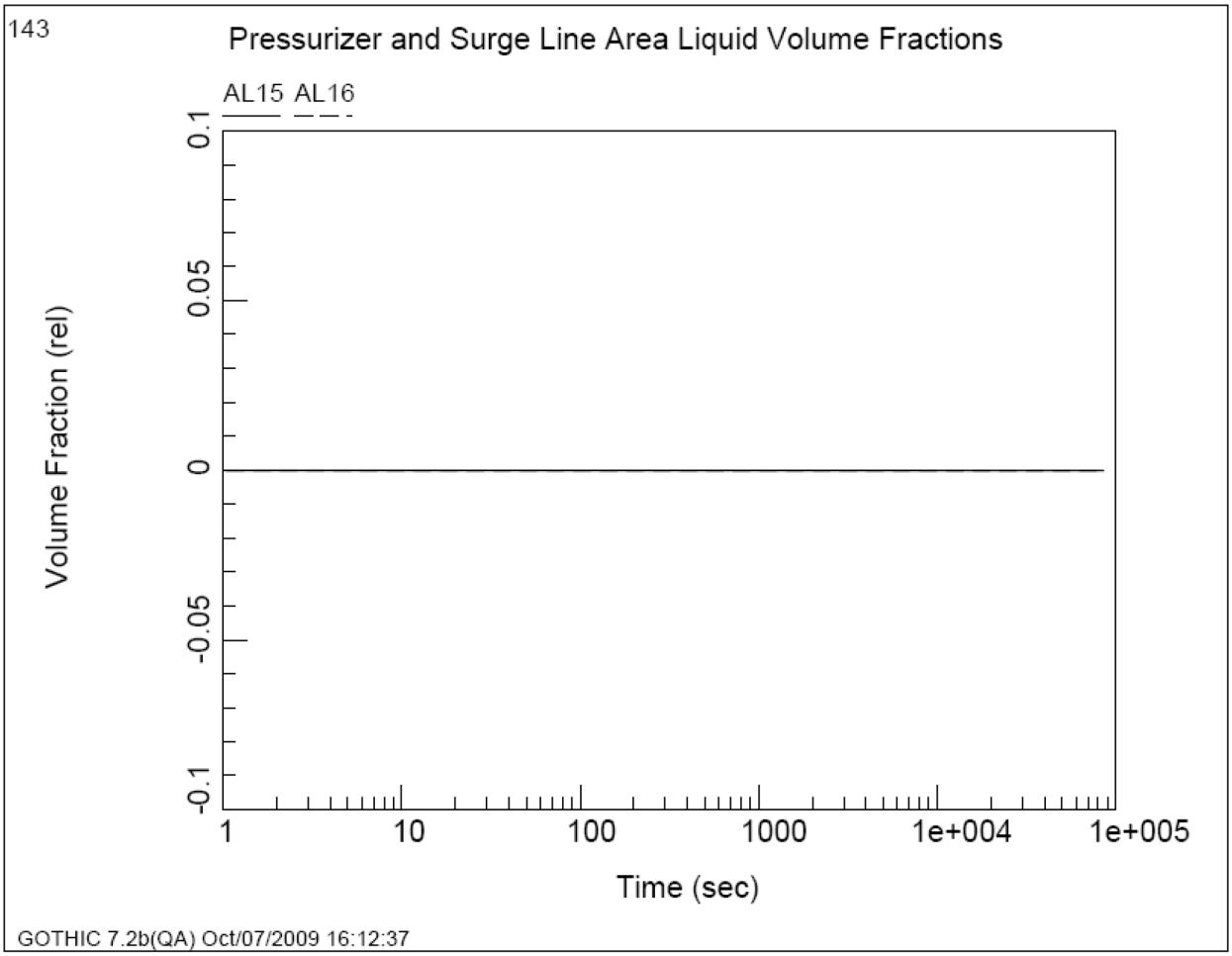

Figure 06.02.01-53–85—Liquid Volume Fraction in the CVCS and Steam Generator Blowdown Heat Exchanger Rooms

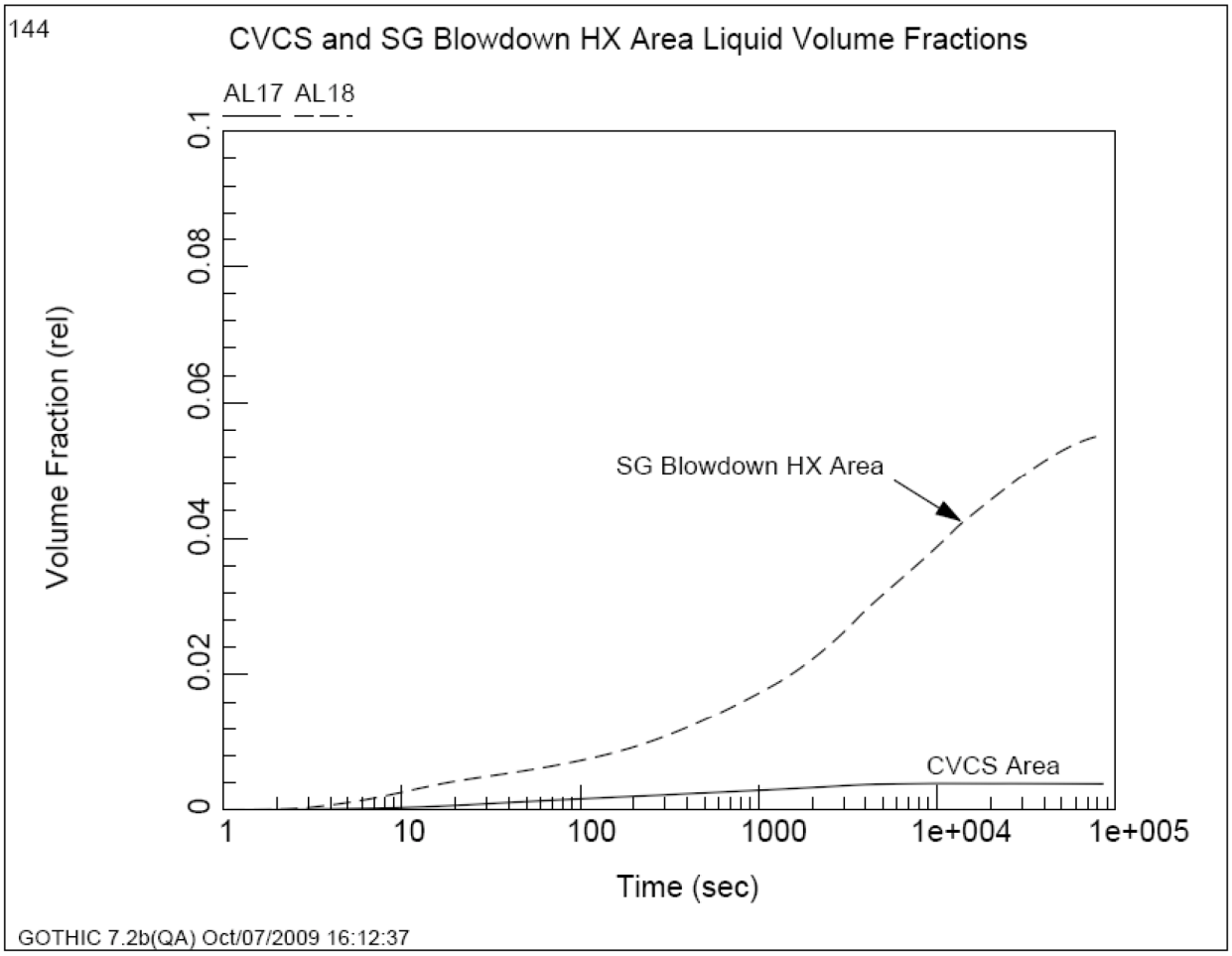

Figure 06.02.01-53–86—Liquid Volume Fraction in the Lower Annulus Rooms

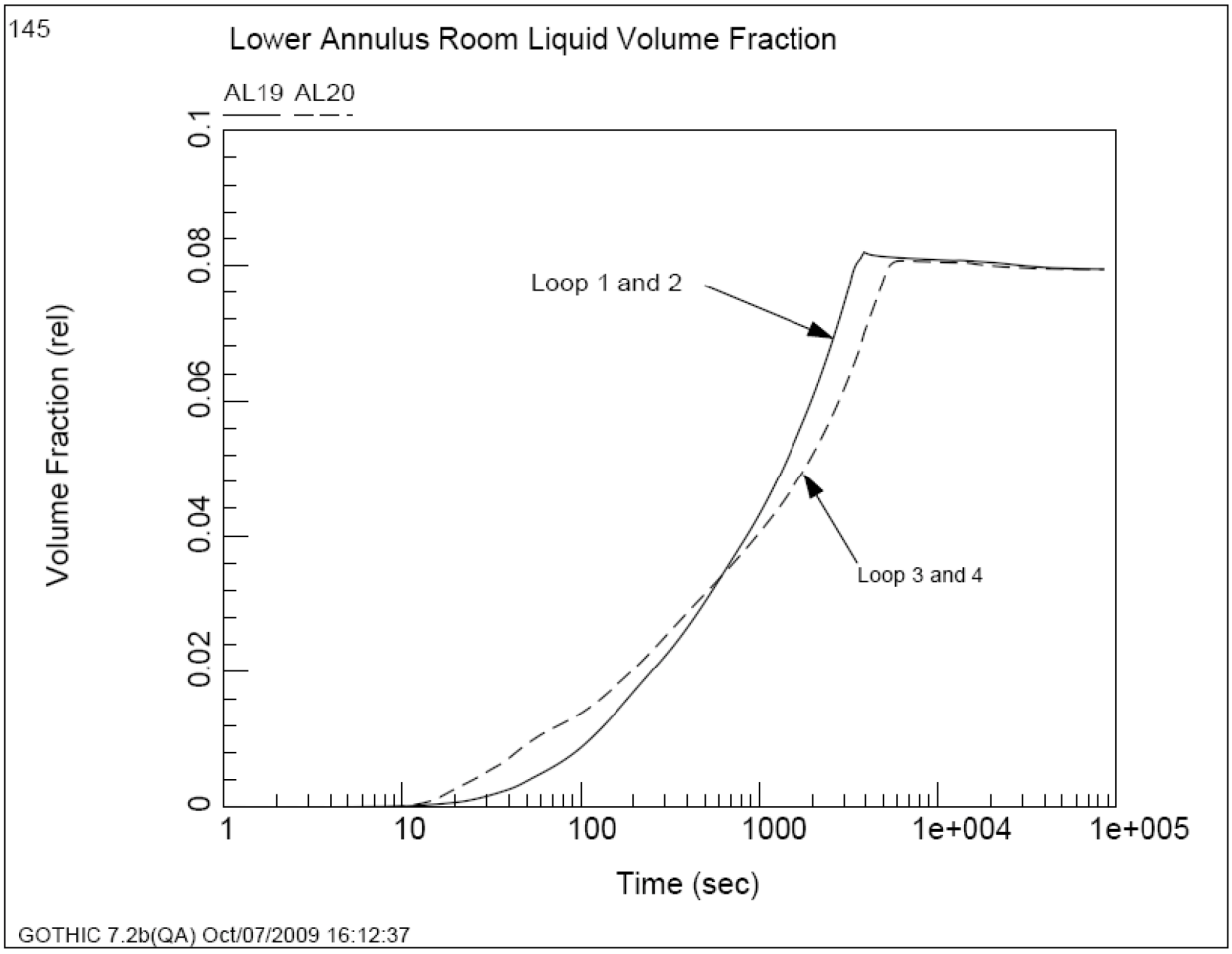

Figure 06.02.01-53–87—Liquid Volume Fraction in the Middle Annulus Rooms

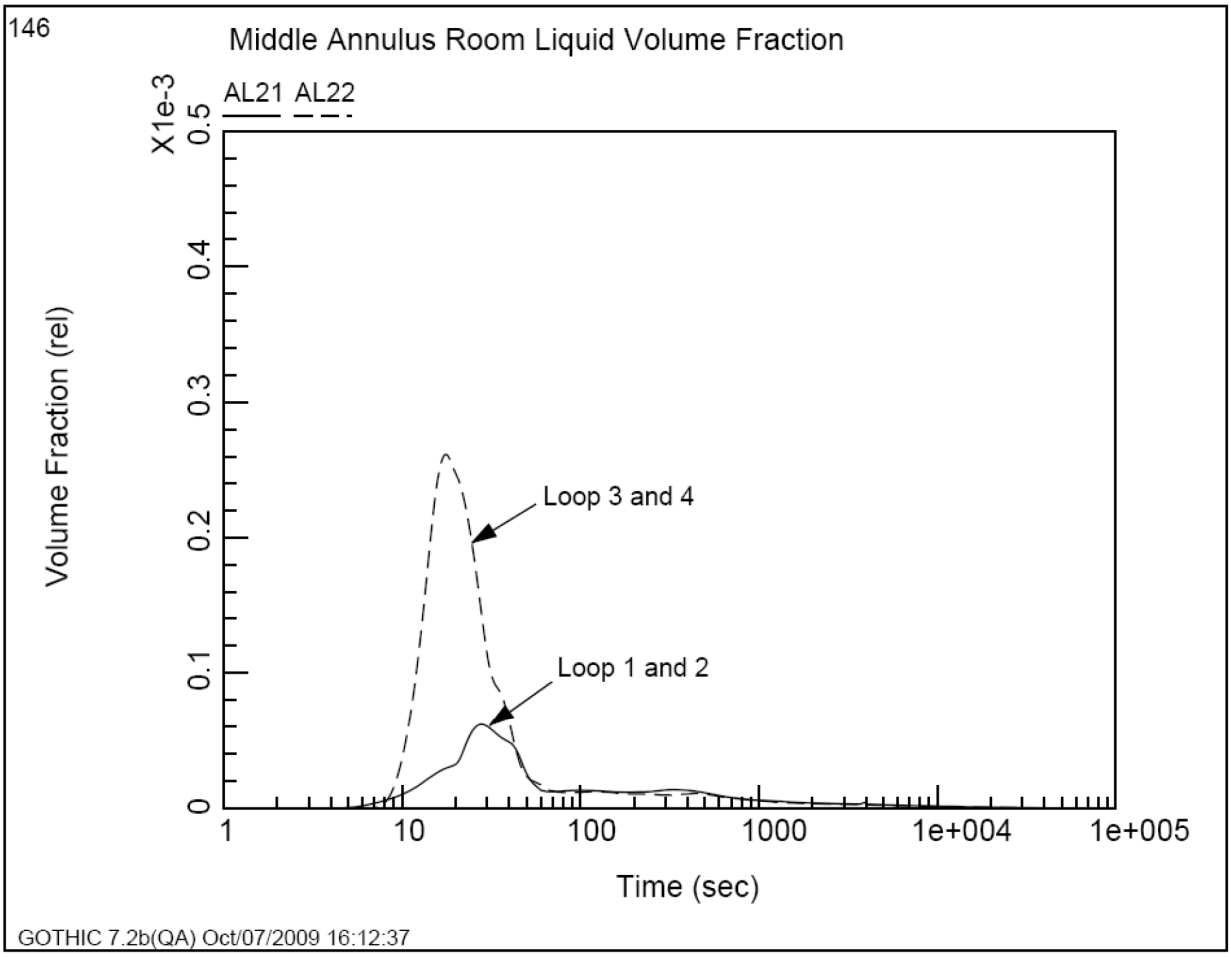

Figure 06.02.01-53–88—Liquid Volume Fraction in the Upper Annulus Rooms

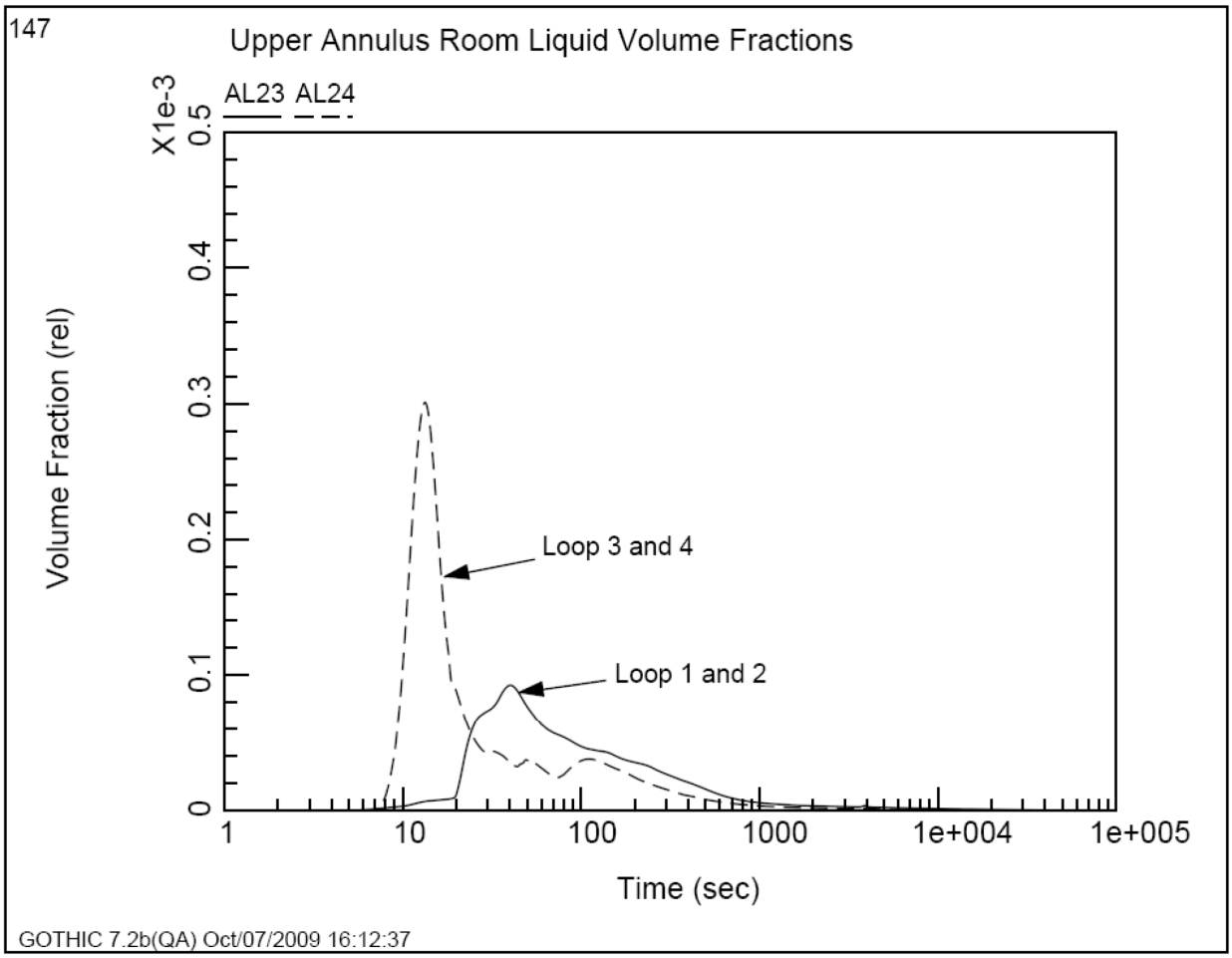

Figure 06.02.01-53–89—Liquid Volume Fraction in the Access and Hot Piping Penetration Rooms

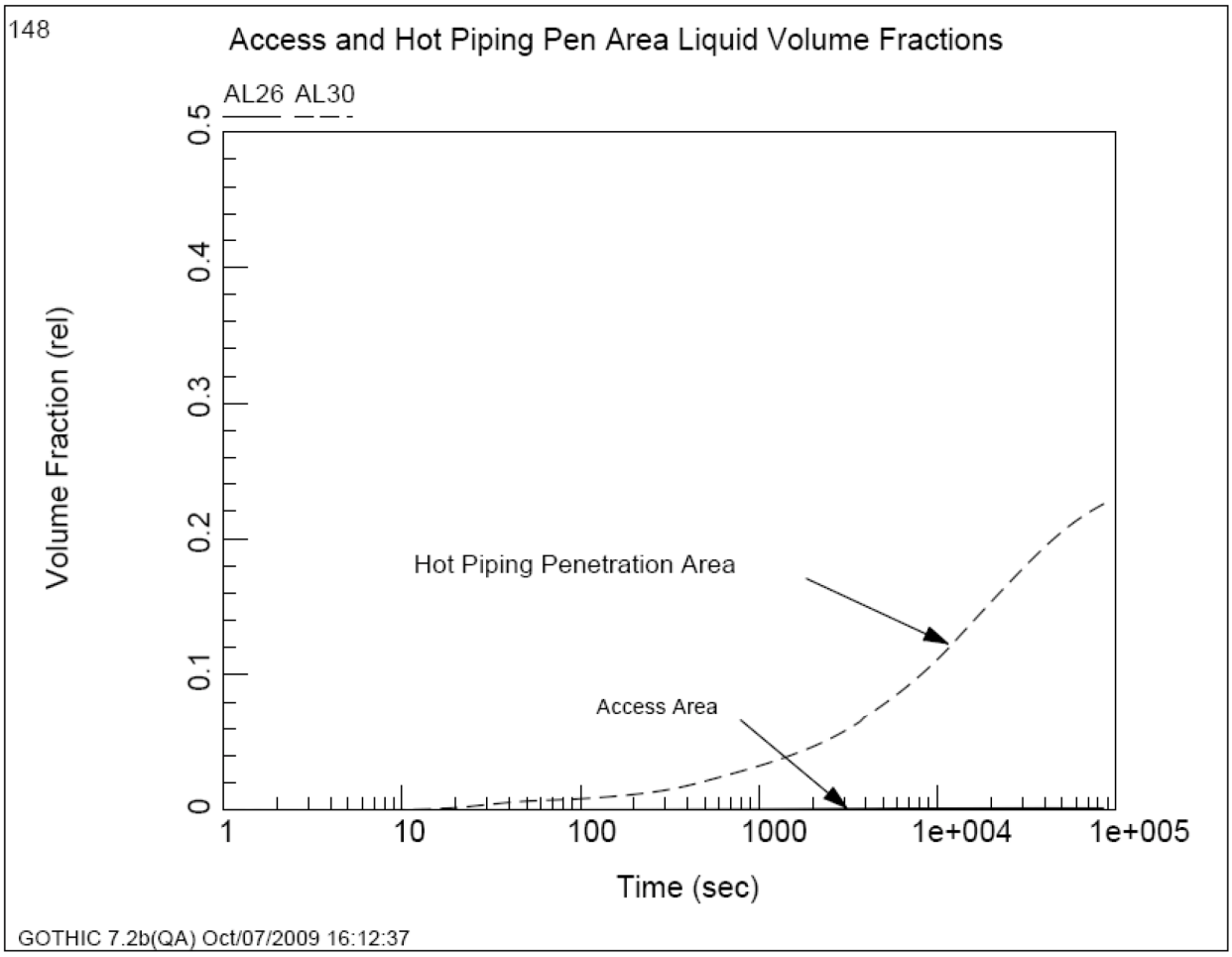

Figure 06.02.01-53–90—Liquid Volume Fraction in the North and South Staircases and in the Elevator

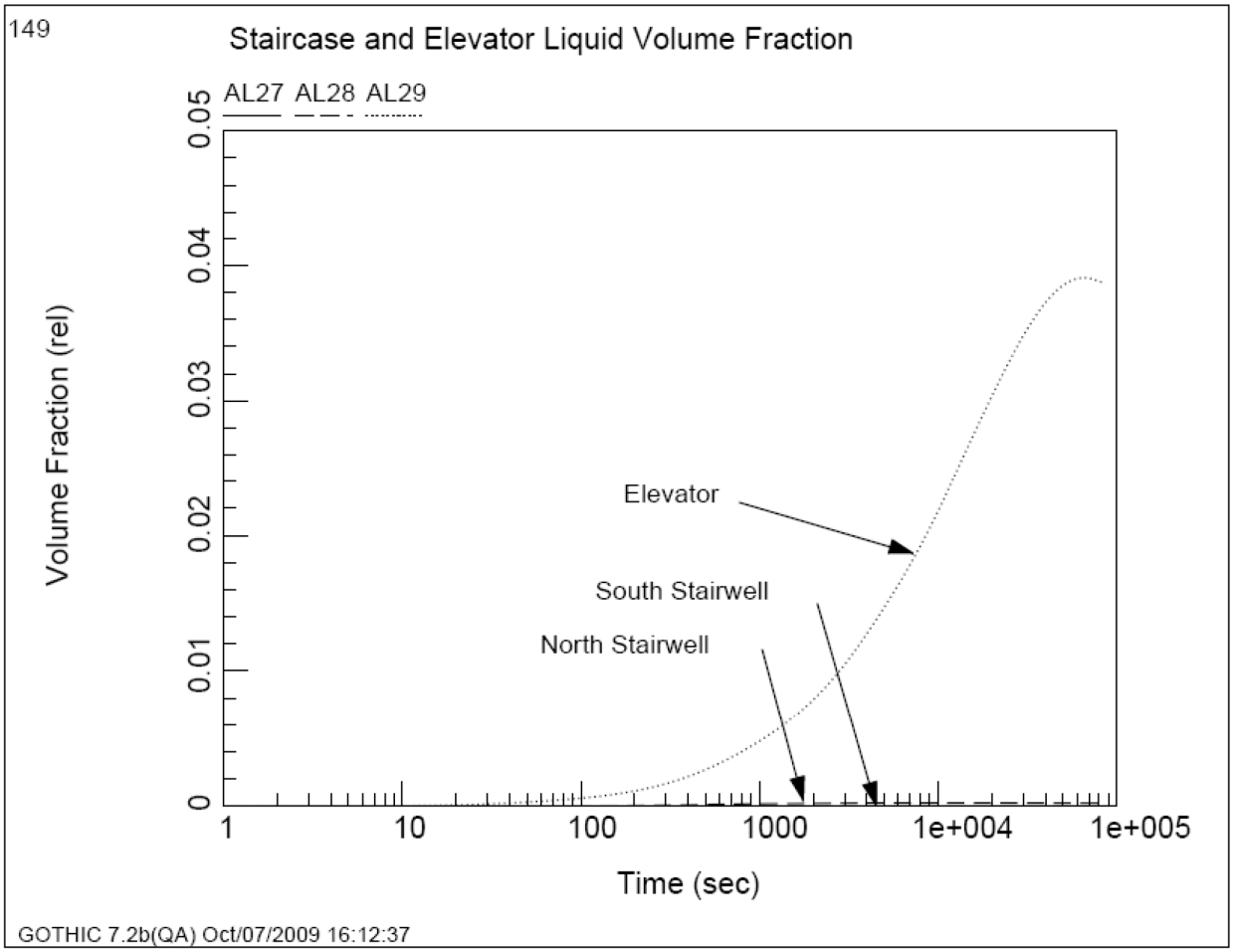

Figure 06.02.01-53–91—Air and Steam Volume Fraction in the Spreading Room and IRWST

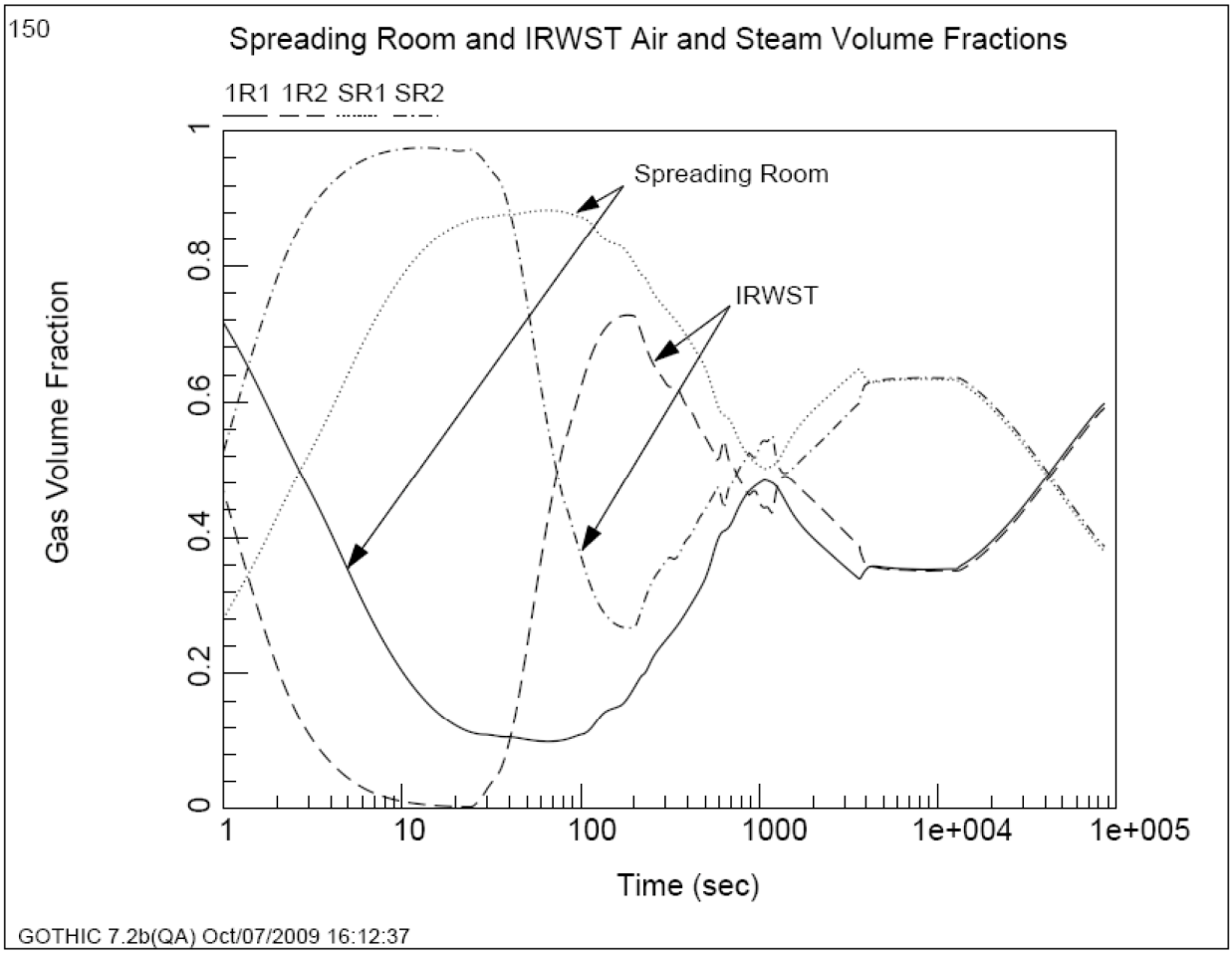

Figure 06.02.01-53–92—Nitrogen Volume Fraction in the Spreading Room and IRWST

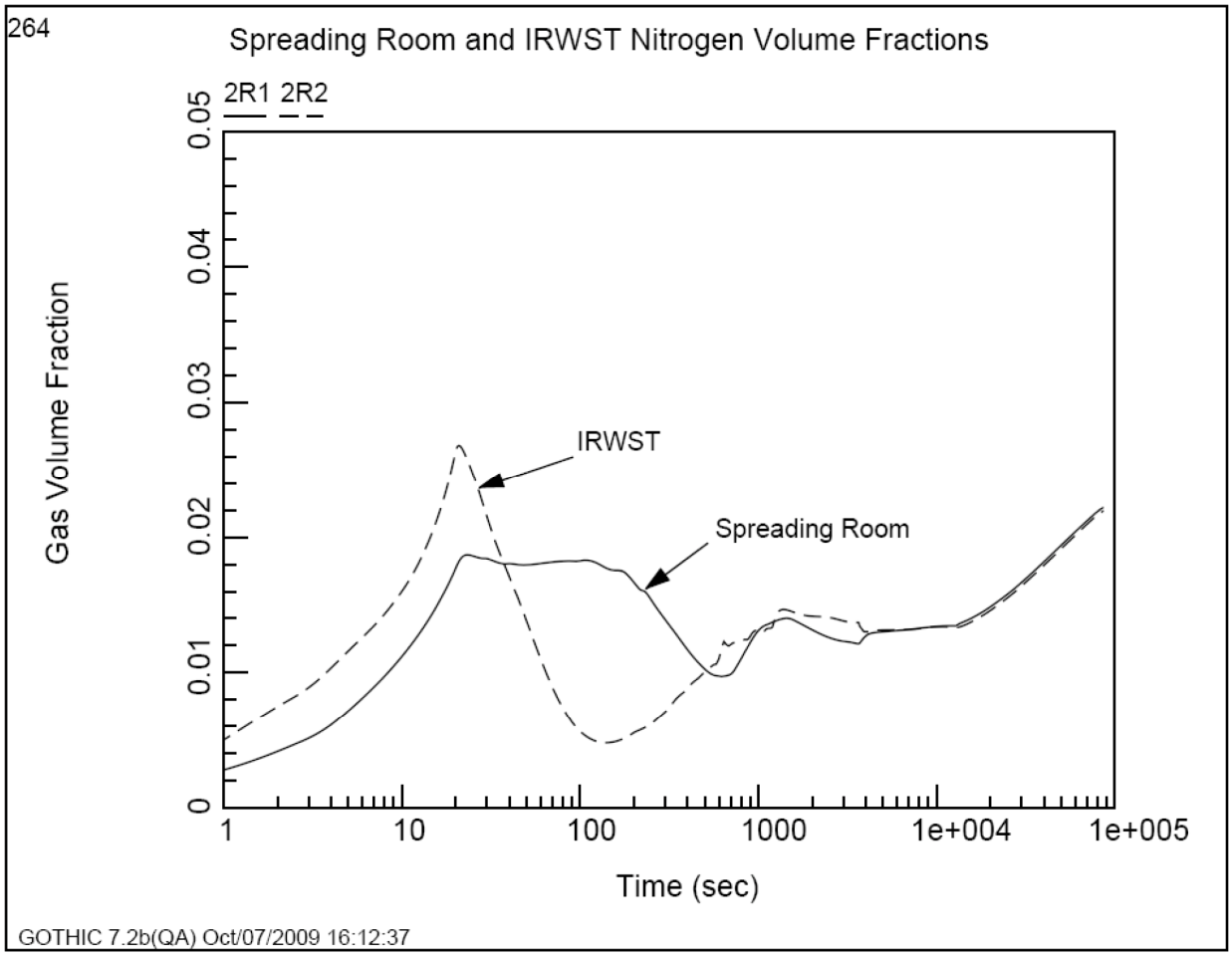

Figure 06.02.01-53–93—Air Volume Fraction in the Lower Equipment Rooms

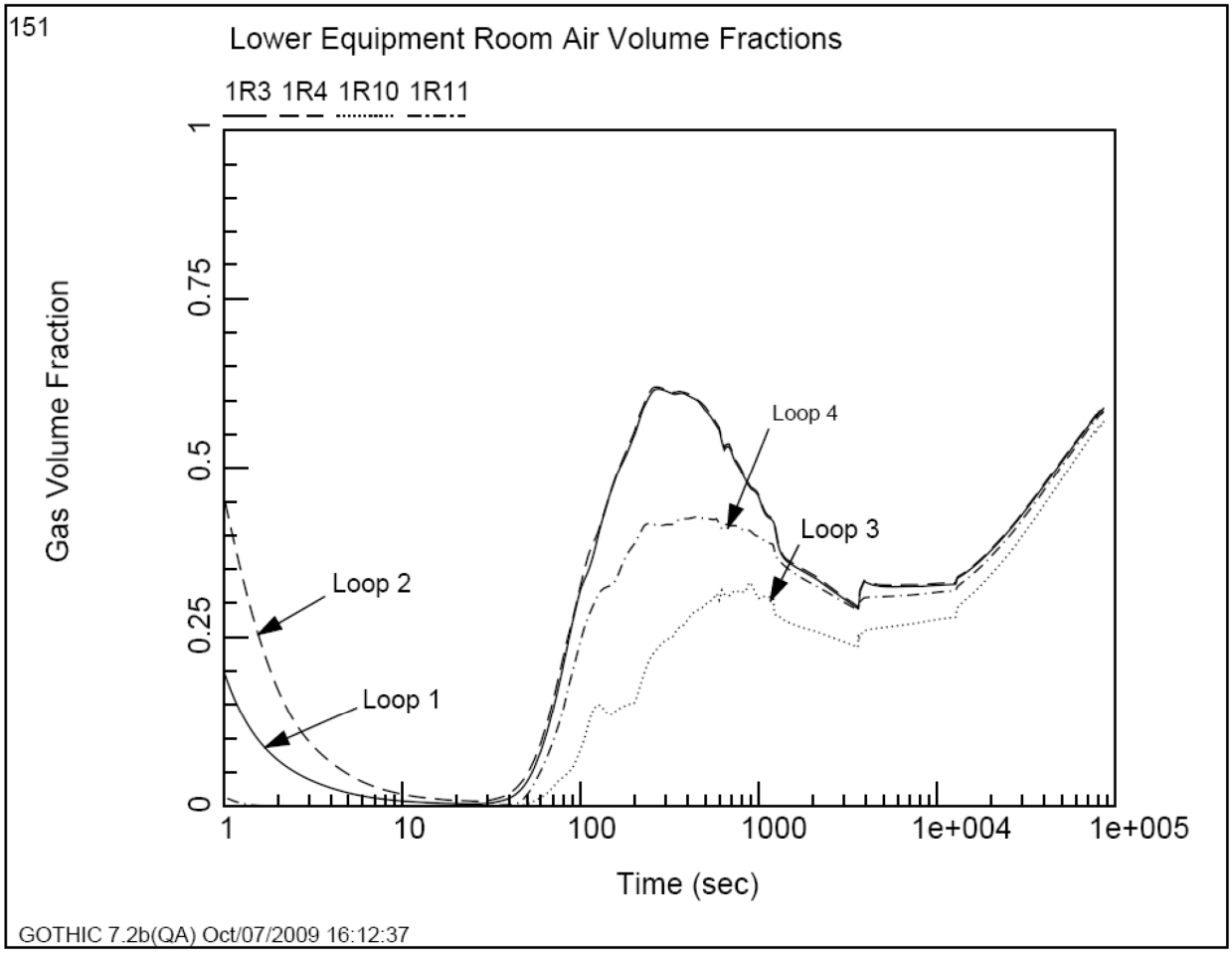

Figure 06.02.01-53–94—Steam Volume Fraction in the Lower Equipment Rooms

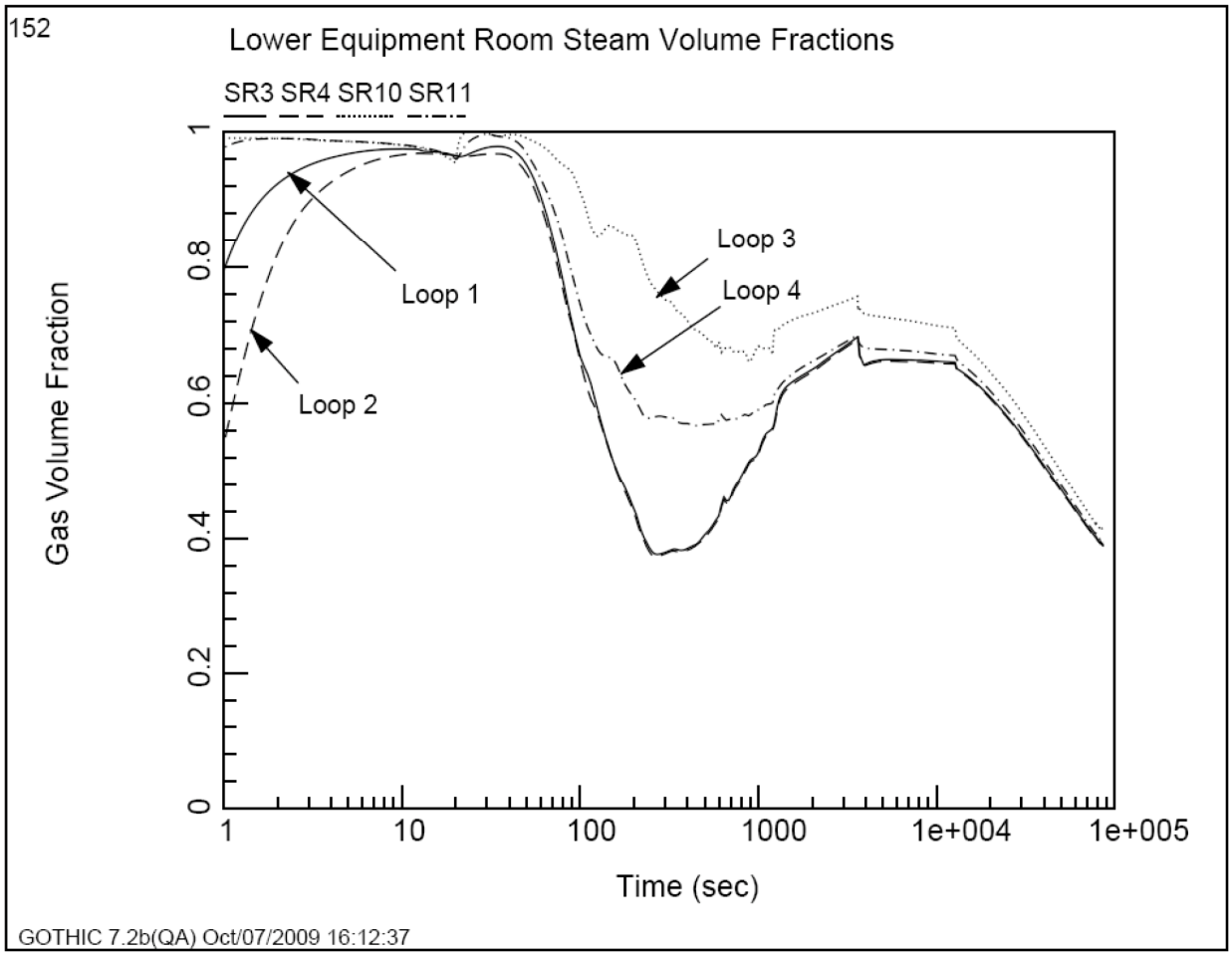

Figure 06.02.01-53–95—Nitrogen Volume Fraction in the Lower Equipment Rooms

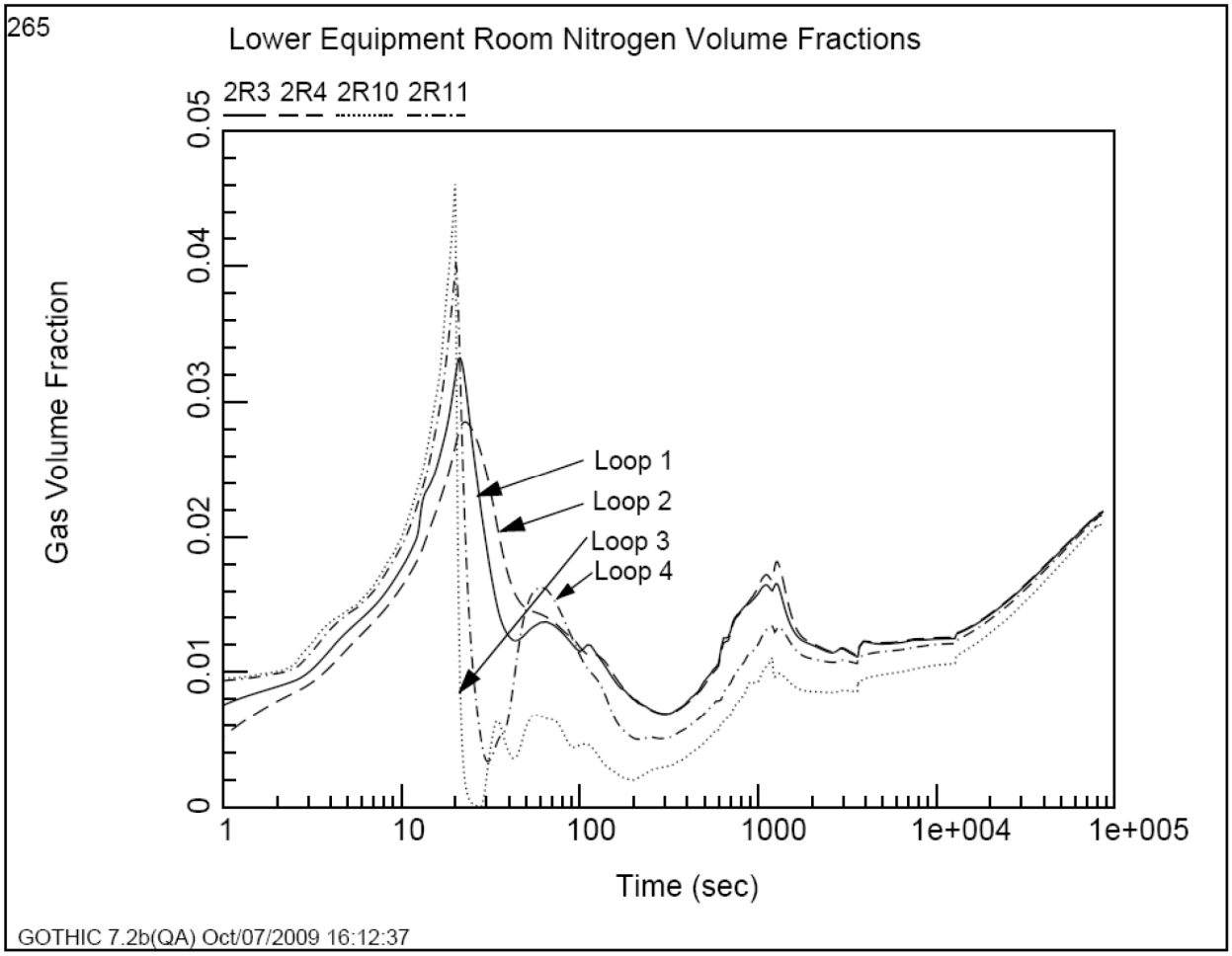

Figure 06.02.01-53–96—Air Volume Fraction in the Middle Equipment Rooms

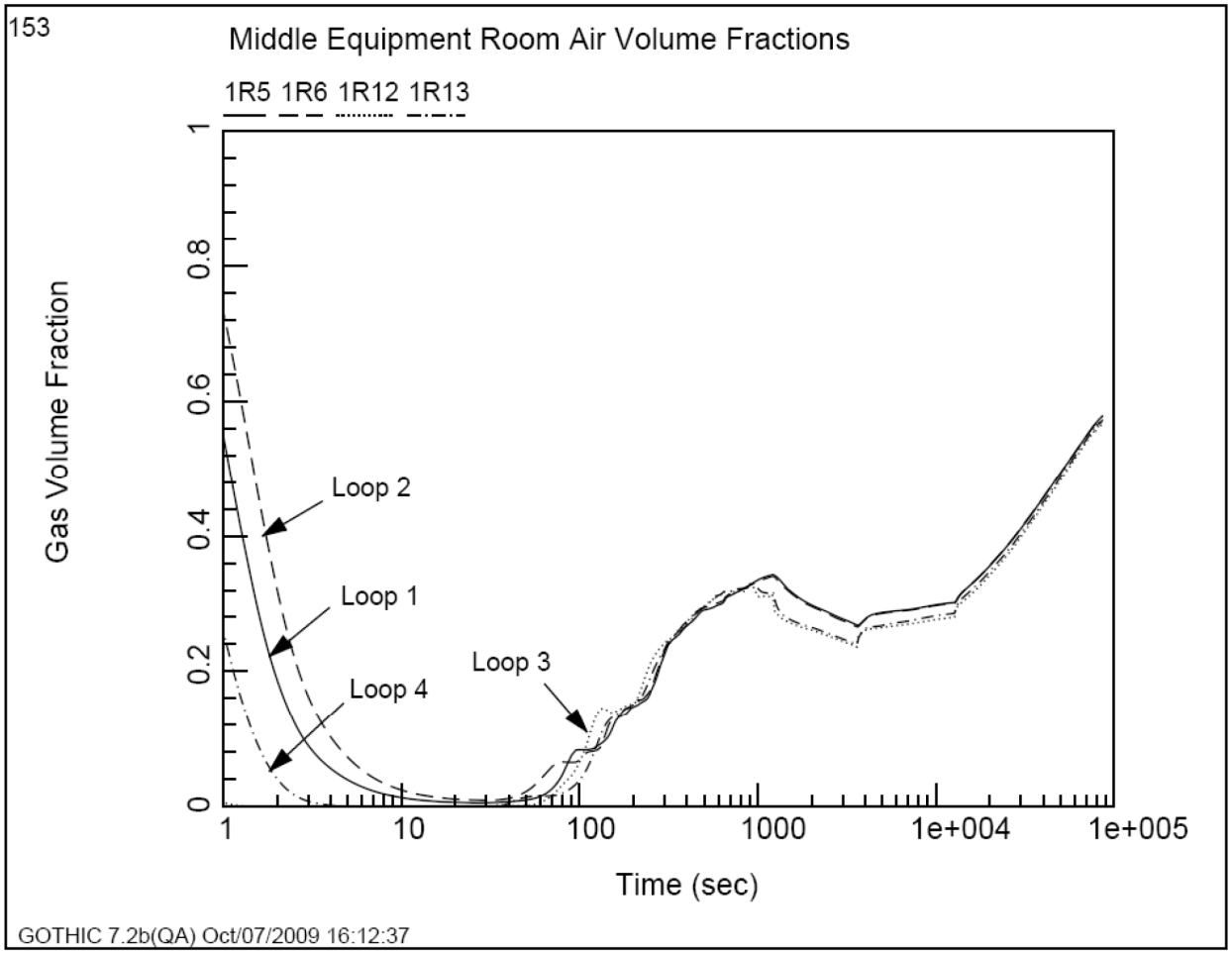

Figure 06.02.01-53–97—Steam Volume Fraction in the Middle Equipment Rooms

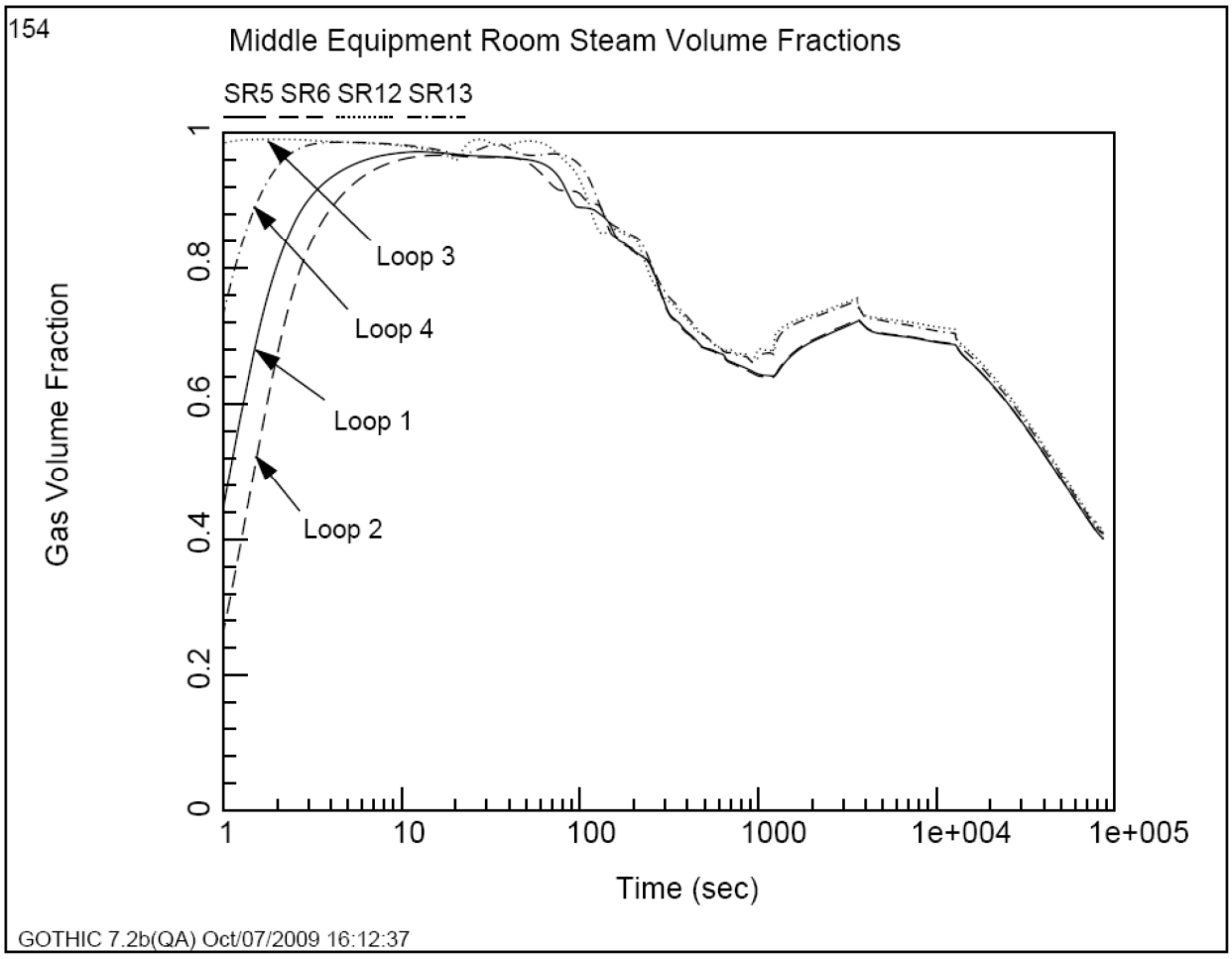

Figure 06.02.01-53–98—Nitrogen Volume Fraction in the Middle Equipment Rooms

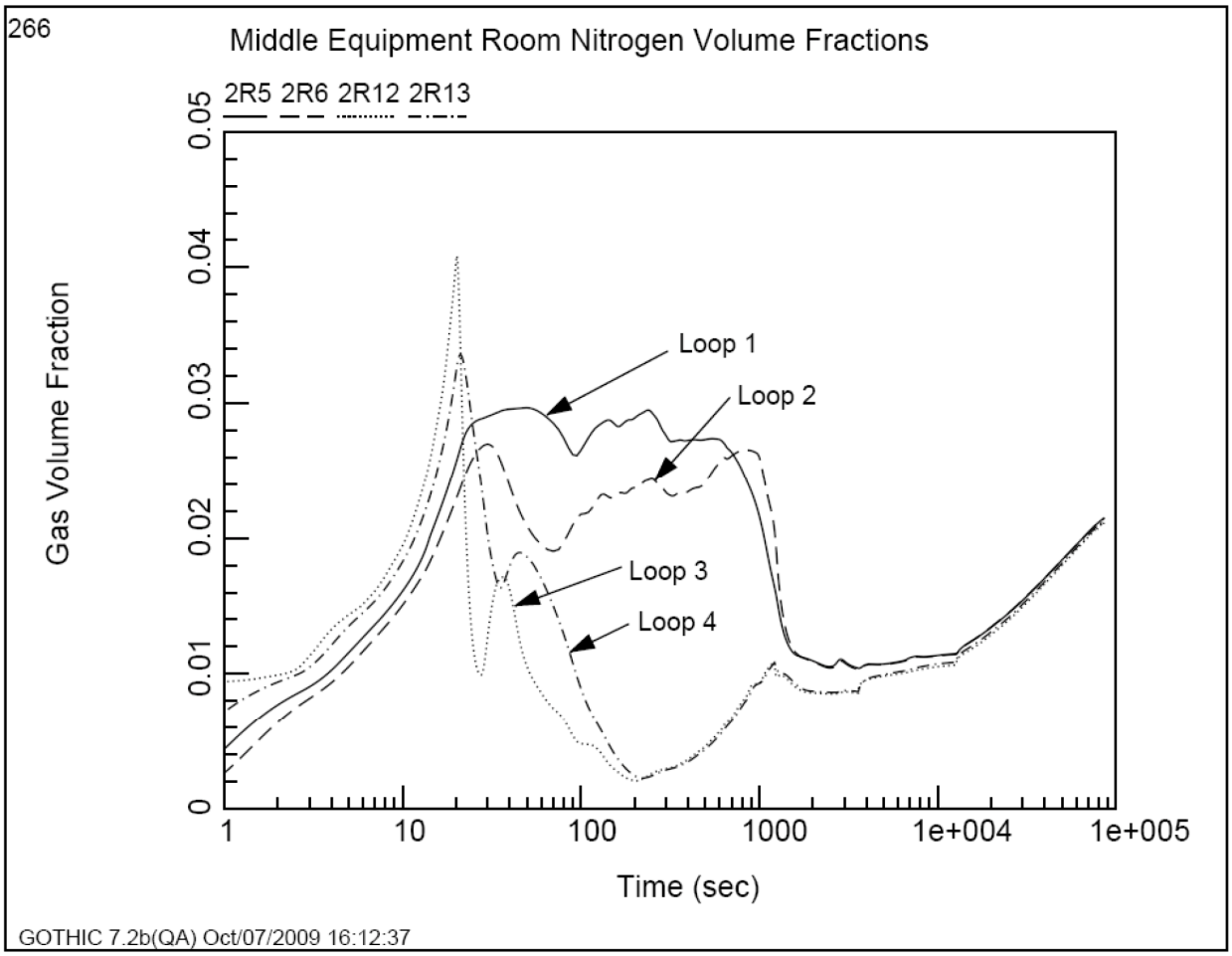

Figure 06.02.01-53–99—Air and Steam Volume Fraction in the Upper Equipment Rooms

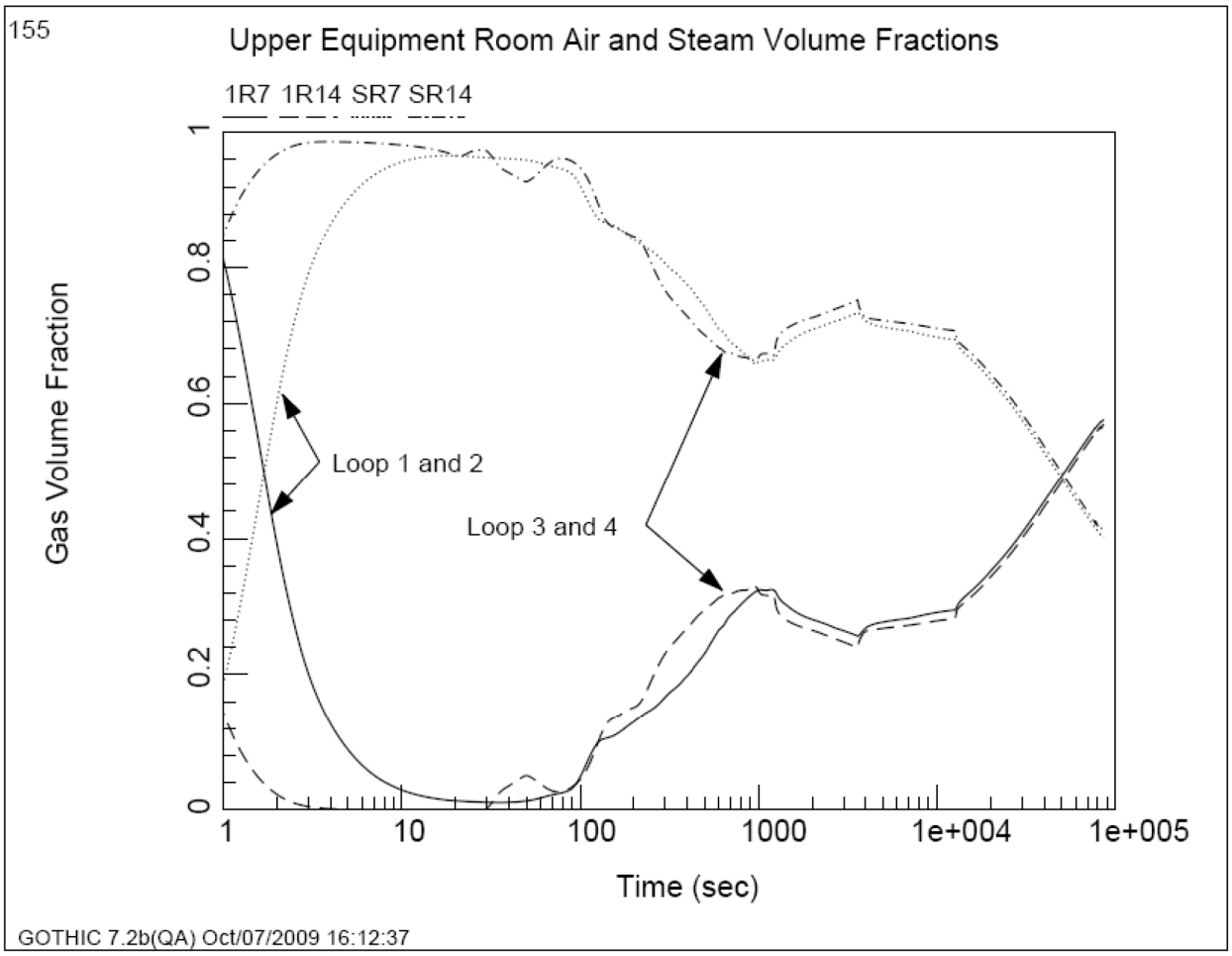

Figure 06.02.01-53–100—Nitrogen Volume Fraction in the Upper Equipment Rooms

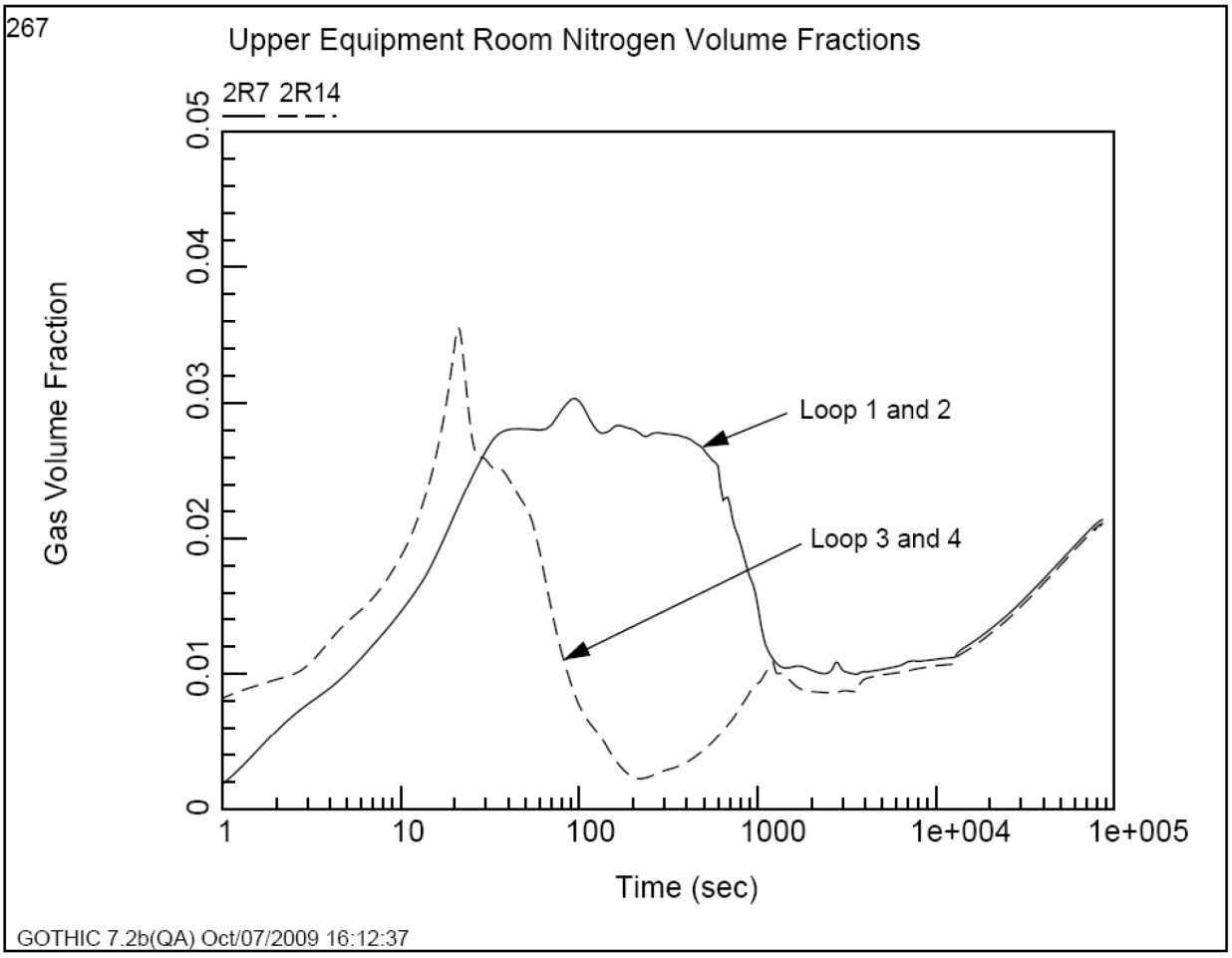

Figure 06.02.01-53–101—Air and Steam Volume Fraction in the Reactor Pressure Vessel Pit and Reactor Cavity

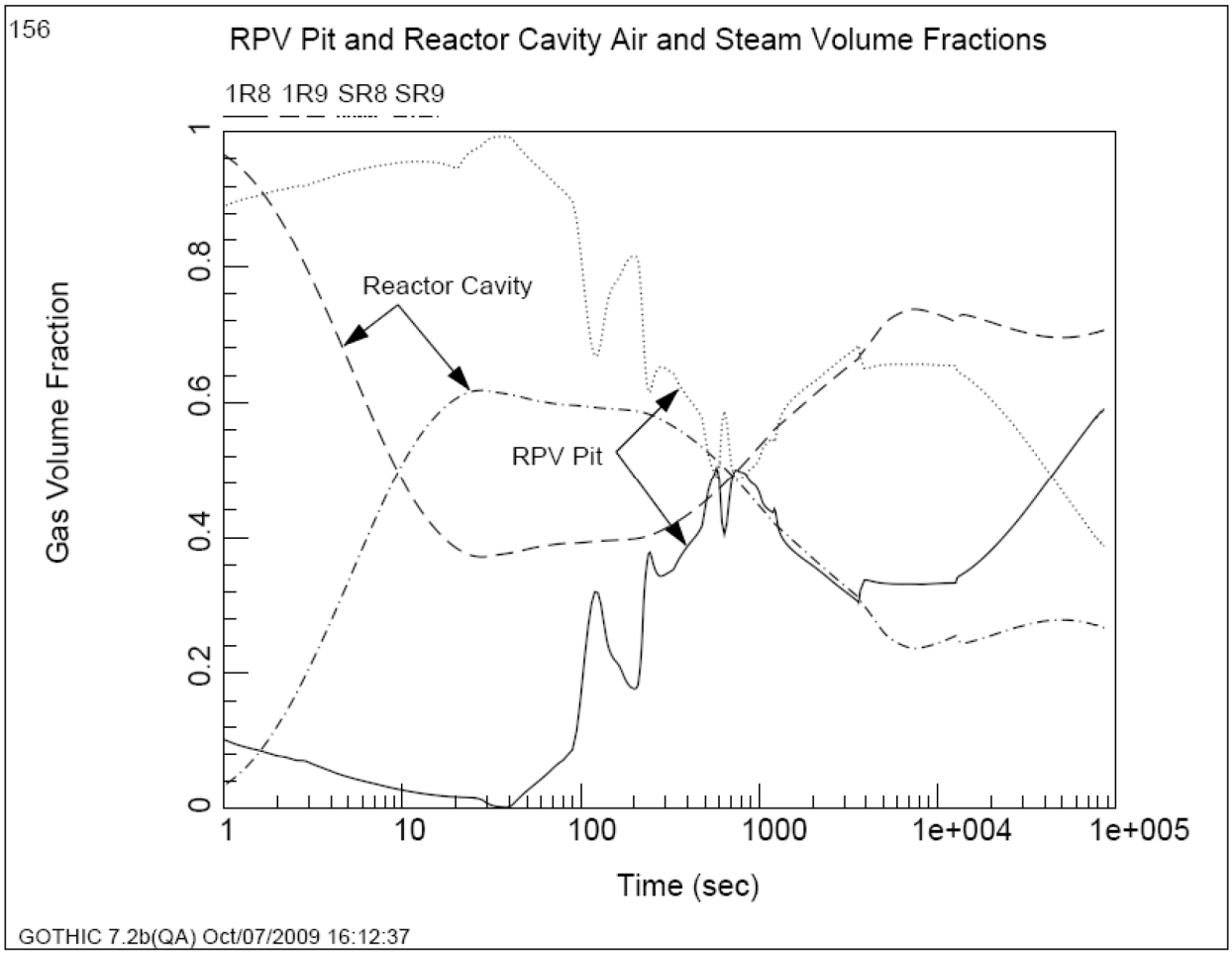

Figure 06.02.01-53–102—Nitrogen Volume Fraction in the Reactor Pressure Vessel Pit and Reactor Cavity